



**3.2.2 - Number of workshops/seminars conducted on
Research Methodology, Intellectual Property Rights (IPR)
and entrepreneurship during the year 2023-24**

| Sl. No. | Department | No. of events conducted | Page No. |
|---|---|-------------------------|----------|
| 1 | Civil Engineering | 10 | 02 |
| 2 | Computer Science & Engineering | 21 | 51 |
| 3 | Electronics & Communication Engineering | 14 | 141 |
| 4 | Electrical & Electronics Engineering | 18 | 231 |
| 5 | Mechanical Engineering | 24 | 315 |
| 6 | Science & Humanities | 05 | 418 |
| 7 | Centre for Promotion of Research | 04 | 435 |
| 8 | Institution's Innovation Cell | 09 | 457 |
| 9 | IEEE | 81 | 490 |
| 10 | Entrepreneurship Development Cell | 04 | 537 |
| Total number of events conducted | | 190 | |

[Signature]

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PRINCIPAL
Kings College of Engineering,
PUNALKULAM - 613 303.



3.2.2 -Number of Workshop/ Seminars Conducted on Research Methodology, Intellectual Property Rights (IRT) and Entrepreneurship during the year (2023-2324)

Department of Civil Engineering

| S.No. | Year | Name of the Workshop/Seminar | Number of Participants | Date From - To | Page No. |
|-------|-------------|---|------------------------|----------------|----------|
| 1. | 2023 - 2024 | Internal seminar on “Wireless sensor networks for bridge structural health monitoring: A novel approach”. | 6 | 17.08.2023 | 2 |
| 2. | 2023 - 2024 | Internal staff seminar on “The use of RobiniapseudoacaciaL fruit extract as a green corrosion inhibitor in the protection of copper based objects”. | 8 | 19.02.2024 | 6 |
| 3. | 2023 - 2024 | Internal staff seminar on “Transforming the civil engineering sector with generative artificial intelligence” on 23.02.2024. | 6 | 23.02.2024 | 10 |
| 4. | 2023 - 2024 | Internal staff seminar on “Guided approach for utilizing concrete robotic 3D printing for the architecture”. | 5 | 28.02.2024 | 14 |
| 5. | 2023 - 2024 | Internal staff seminar on “Effects of Corn Cob Ash as Partial Replacement of Cement”. | 7 | 06.03.2024 | 18 |
| 6. | 2023 - 2024 | Internal staff seminar on “Cellular concrete: Utilization of plastic and glass waste as a replacement of fine aggregate”. | 7 | 08.03.2024 | 22 |
| 7. | 2023 - 2024 | Internal staff seminar on “Advancements in sensors and actuators technologies for smart cities: A comprehensive review”. | 6 | 14.03.2024 | 26 |
| 8. | 2023 - 2024 | Alumni interaction on “Job opportunity” | 50 | 14.03.2024 | 30 |
| 9. | 2023 - 2024 | Alumni interaction on “Career guidance & Job opportunities” | 40 | 01.04.2024 | 36 |
| 10. | 2023 - 2024 | One day workshop on Tekla structures (building information modeling)” | 30 | 27.03.2024 | 41 |

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024
CIRCULAR

DATE: 07.08.2023

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mr.K.ARUN

Date : 17.08.2023

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM

an


DRC MEMBER 07/08/23


HOD/CIVIL 07/08/2023

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/ODD SEMESTER
INTERNAL STAFF SEMINAR – REPORT

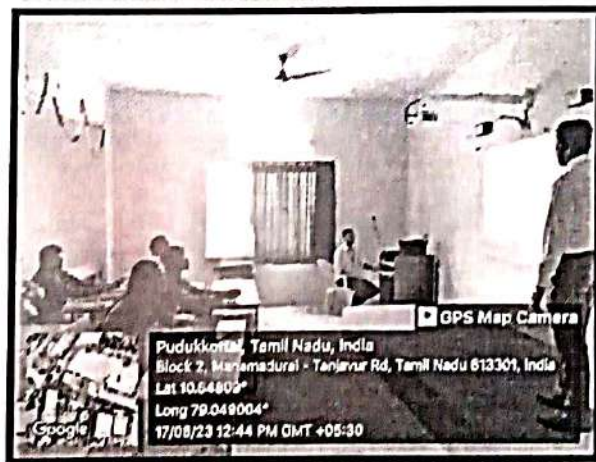
18/08/2023

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 17th August, 2023 at 12:30 PM. Mr.K.Arun /AP delivered his seminar talk on “Wireless sensor networks for bridge structural health monitoring: A novel approach”. The paper was referred from SPRINGER Journal, Asian Journal of Civil Engineering (2023).



Internal Seminar Session by Mr.K.Arun /AP CIVIL

Theme:

This work presents the ML model in which data collected from the open access repository where experiments conducted on steel structure bridge data for 1-year duration are analyzed. The model combines data from sensors, applications statistics and induced load while monitoring structure. Experiments conducted have tested the ambient vibration test, explored different load condition for vibration test, and artificial damage conditions on bridge structure at different positions to collect enough data for real-time analysis at different environment condition. Five different damage scenarios were considered as a case A with no damage, in case B the vertical section was cut half at the mid-span, case C with fully cut mid-span, in case D damage was recovered by welding the vertical section, in case E 5/8th part of vertical section was cut. Ambient and load-induced vibration data are structured based on different cases using panda's data frame. The model shows the high accuracy of deformation caused due to load induced. Results show accelerometer measurement as very good feature vectors for real-time monitoring and SARIMAX as a perfect model to evaluate time series data and perform anomaly detection simultaneously.

Scope for future work:

- Here, the author has proposed the design architecture of the major components required in building a smart SHM system.
- This proposal can be extended and verified in real-time by considering certain structural health monitoring aspects.
- On the proposed model, wireless communication is used to transmit. However, latency of data transmission has been largely ignored. Hence future works can focus on that.

Outcome:

The Seminar clearly highlighted the machine learning anomaly detection using SARIMAX forecasting method. Staff members also got an idea about the proposed model from remote sensor network installed on steel truss bridge for continuous monitoring. This seminar proves to be effective in such a way that, it highlighted the model of SHM system. The future of the SHM system lies in the incorporation of Information Technology and Artificial Intelligence into the traditional health monitoring systems. Discussions were made among faculty members in various aspects of composite beams. Finally, Staff members shared their views regarding seminar and gave their valuable feedback.


HOD/CIVIL 15/05/2023


15/05/2023
PRINCIPAL

DEPARTMENT OF CIVIL ENGINEERING

17/08/2023

INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

| S.NO | NAME | FEEDBACK | SIGN |
|------|--------------------|---|--------------------------------|
| 1 | Dr.R.Saravanan | Very Excellent Presentation | R. Saravanan 17/08/2023 |
| 2 | Mr.R.Sundharam | New Topic and Usefull presentation | R. Sundharam 17/08/2023 |
| 3 | Mr.R.Ramchandrar | Innovative Trendy Topic | R. Ramchandrar 17/08/2023 |
| 4 | Mr.D.Nandhakumar | Excellent session. Queries are clearly Explained Interested interactions. | D. Nandhakumar 17/08/2023 |
| 5 | Ms.A.Suganya | Effective & interactive presentation | A. Suganya 17/08/2023 |
| 6 | Mr.A.Sagaya Albert | Nice presentation | A. Sagaya Albert 17/08/2023 |



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024
CIRCULAR

DATE: 16.02.2024


This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : D.NANDAKUMAR.

Date : 19.02.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


DRC MEMBER 16/02/2024


HOD/CIVIL 16/02/2024

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR – REPORT

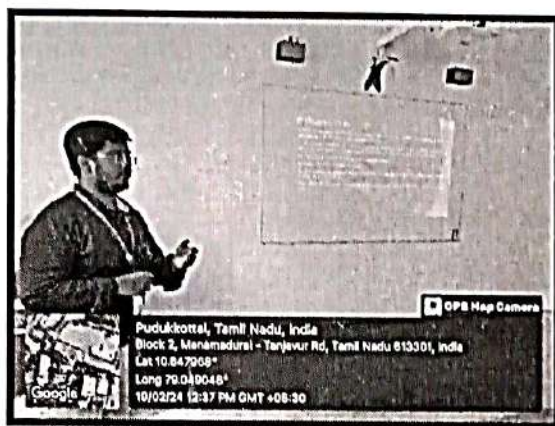
19/02/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 19th February, 2024 at 12:30 PM. Mr.D.Nandakumar/AP delivered his seminar talk on “*The use of RobiniapseudoacaciaL* fruit extract as a green corrosion inhibitor in the protection of copper-based objects”. The paper was referred from SPRINGER Journal, Heritage science(2021).



Internal Seminar Session by Mr.D.NANDAKUMAR /AP CIVIL

Theme:

This work presents the the acacia fruit extract (200 ppm to 1800 ppm) was used to the prevention of corrosion inhibition of bronze alloy in corrosive sodium chloride solution 0.5 M, for 4 weeks consecutively. The Bronze alloy used in this research, was made based on the same percentage as the ancient alloys (Cu-10Sn). $I_E\%$ was used to obtain the inhibitory efficiency percentage and R_p can be calculated from the resistance of polarization. SEM-EDX was used to evaluate the surfaces of alloy as well as inhibitory. The experiment was conducted in split plot design in time based on the RCD in four replications.

Scope for future work:

- The use of this type of green inhibitors allows low-cost carbon steel to be used as a structural material.
- These corrosion inhibitors are prevent the corrosion in the way of eco-friendly.
- The alternative solution for the toxic with more costly inorganic inhibitors in future.

Outcome:

- The Seminar clearly highlighted the comparison of test results has been done through the corrosion studies (weight loss, Half-cell, Accelerated corrosion test), surface studies (SEM, EDX, AFM test) and spectroscopic studies (FTIR test).
- These test results show the formation of the Inhibition thin layer above the steel surface that contains S, N, O and P as well as phytochemical Compounds like alkaloids, tannins, flavonoids and steroids.
- Finally, Staff members shared their views regarding seminar and gave their valuable feedback.


24/02/2024
HOD/CIVIL


24/2/2024
PRINCIPAL

19/02/2024



DEPARTMENT OF CIVIL ENGINEERING
INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

| S.NO | NAME | FEEDBACK | SIGN |
|------|--------------------|---|--------------------------------|
| 1 | Dr.R.Saravanan | Excellent presentation | <i>[Signature]</i> 19/02/24 |
| 2 | Mr. R.Sundharam | Nice presentation | <i>[Signature]</i> 19/02/24 |
| 3 | Mr.K.Arun | Innovative topic with good explanation | <i>[Signature]</i> 19/02/24 |
| 4 | Mr.R.Ramchandrar | Good presentation | <i>[Signature]</i> 19/02/24 |
| 5 | Mrs.A.Suganya | Informative presentation | <i>[Signature]</i> 19/02/24 |
| 6 | Mr.A.Sagaya Albert | Very good presentation with informative content | <i>[Signature]</i> 19/02/24 |
| 7 | Mr.K.Sriram gopal | Good communication skills, presentation was Excellent | <i>[Signature]</i> 19/02/24 |
| 8 | Mrs.K.Kanimozhi. | Good presentation with innovative content | <i>[Signature]</i> 19/02/24 |

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024
CIRCULAR

DATE: 19.02.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mrs.K.KANIMOZHI

Date : 23.02.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


19/02/2024
DRC MEMBER


19/02/2024
HOD/CIVIL

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR – REPORT

23/02/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, ELSEVIER etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 23rd February, 2024 at 12:30 PM. Mrs.K.KANIMOZHI/AP delivered his seminar talk on “Transforming the civil engineering sector with generative artificial intelligence”. The paper was referred from ELSEVIER Journal, SSRN(2024).



Internal Seminar Session by Mrs.K.KANIMOZHI /AP CIVIL

Theme:

This work presents the The infusion of generative artificial intelligence (AI) stands out as a transformative influence in civil engineering, reshaping conventional methodologies and

elevating the effectiveness and precision across various domains. This study delves into the nuanced impact of ChatGPT, a potent language model, in key realms within civil engineering: Structural Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering, Water Resources Engineering, Urban and Regional Planning, Materials Engineering, Coastal Engineering, and Earthquake Engineering. Within Structural Engineering, ChatGPT assumes a central role in formulating and refining structural designs. By deciphering intricate engineering concepts and proposing inventive solutions, ChatGPT assists engineers in crafting structures that not only exhibit resilience but also optimize resource utilization. Its proficiency in scrutinizing extensive datasets and delivering insights positions it as an invaluable tool for augmenting structural integrity and safety.

Scope for future work:

- ✚ By using GenAI we can develop software for each and every stage of construction management.
- ✚ In future, the improvement of AI will lead to save more time and ensure safety at most.
- ✚ Accuracy of the project can be predicted earlier by using AI software.

Outcome:

- ✚ The Seminar clearly spotlights the infusion of AI in the civil engineering sector. From structural engineering to all other departments, ChatGPT will play a vital role in the future.
- ✚ In structural engineering, ChatGPT assumes a pivotal role. Its aptitude for comprehending intricate structural designs, analyzing load-bearing capacities, and proposing optimized solutions positions it as a collaborative ally for engineers. The ability to generate design alternatives and conduct virtual simulations facilitates swift iteration and optimization, resulting in cost-effective and resilient structures.
- ✚ The journey towards a smarter, safer, and more efficient civil engineering sector is well underway, driven by the synergies between human expertise and the capabilities of generative AI.
- ✚ The advent of generative artificial intelligence, as illustrated by technologies such as ChatGPT, has inaugurated a new era of ingenuity and efficacy in civil engineering.


24/02/2024
HOD/CIVIL


24/2/2024
PRINCIPAL

23/02/2024



DEPARTMENT OF CIVIL ENGINEERING
INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

| S.NO | NAME | FEEDBACK | SIGN |
|------|--------------------|---|-------------------------|
| 1 | Mr. R.Sundharam | Recent topic and Nice presentation | R. Sundharam 23/2/24 |
| 2 | Mr.R.Ramchandar | Trendy Presentation | R. Ramchandar 23/2/24 |
| 3 | Mrs.A.Suganya | Effective & useful presentation | A. Suganya 23/2/24 |
| 4 | Mr.A.Sagaya Albert | Nice content, Advanced topic Good presentation | Sagaya Albert 23/2/24 |
| 5 | Mr.D.Nandakumar | Excellent Presentation. | D. Nandakumar 23/2/24 |
| 6 | Mr.K.Sriram gopal | Innovative topic selection, Nice presentation, Worthy | K. Sriram gopal 23/2/24 |



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024
CIRCULAR

DATE: 24.02.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mrs.A.SUGANYA

Date : 28.02.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


DRC MEMBER 24/02/2024


24/02/2024
HOD/CIVIL



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR – REPORT

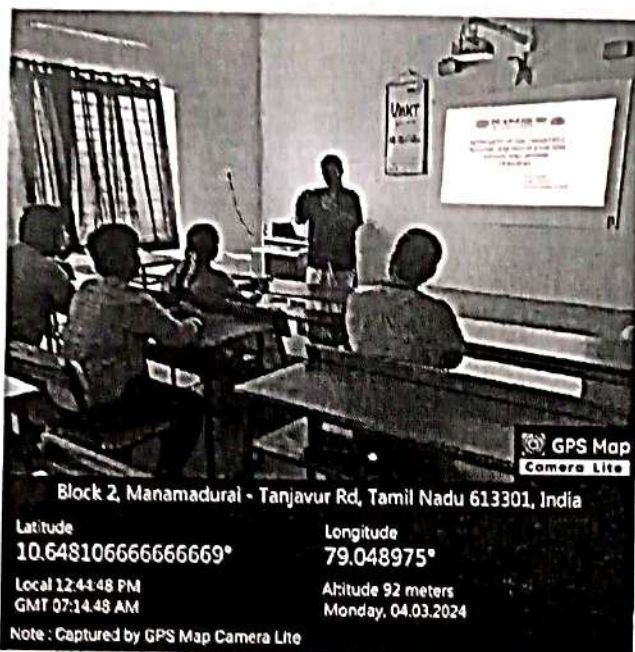
04/03/2023

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 04th March, 2024 at 12:30 PM. Mrs.A.Suganya/AP delivered his seminar talk on “Guided approach for utilizing concrete robotic 3D printing for the architecture, engineering and construction industry. The paper was referred from SPRINGER Journal, Asian Journal of Civil Engineering (2023).



Internal Seminar Session by Mrs.A.Suganya /AP CIVIL

Theme:

In this study the emerging field of robotic 3D printing offers practical alternatives to conventional building methods that are currently used in the Architecture, Engineering, and Construction (AEC) industry. Robotic 3D printing has many advantages over the conventional construction as it reduces human error, is relatively inexpensive, and opens the door to the creative complex designs while reducing the amount of expertise required to complete the construction process. At present, there is a shortage of resources offering guidance on how to utilize the available technology. In this paper, which paves the way for accessing the most recent information regarding the robotic 3D printing technology of interest. We also use the resulting classification methods to present a decision-making workflow to streamline the process of selecting the most appropriate approach. We also examined and performed a detailed analysis on three case studies of prominent buildings that have been constructed using 3D printing technology. The categorical parameters were selected carefully to form a clear, informative distinction between the buildings. Printing method and motion type were the most important parameters when it comes to robotic 3D printing. A new database was created and demonstrated to elucidate the types of the additive manufacturing that can be used. By analyzing the data, we hope to facilitate the development of new structures as they relate to 3D printing in the AEC industry.

Scope for future work:

- Here, the author has proposed 3D printing in architecture Construction is very well suited to 3D printing because most of the information that is required to create an item will exist as a result of the design process.
- Also, the industry is a lot experienced and keen in using computer aided manufacturing

Outcome:

The taxonomical categorization is dependent on several parameters that particularly distinguish categories of 3D printed buildings based on the potential impact that they may have on the AEC industry. It is important to note that in line with the inclusion criteria that requires the building process be consistent with robotic 3D printing methods being used in the AEC industry, the taxonomy considered only buildings that utilized materials that can withstand high stresses. In addition, four parameters were selected to achieve a clear classification for the 3D printed construction. The criteria for selecting each parameter to classify the constructions that used the 3D printing technology were determined to demonstrate the methodology of each structure.

R. Sankaran
09/03/2024
HOD/CIVIL

J. Ramesh
09/03/2024
PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING 04/03/2024
INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

| S.NO | NAME | FEEDBACK | SIGN |
|------|--------------------|--|----------------------------|
| 1 | Dr.R.Saravanan | Excellent Presentation. | R. Saravanan 04/03/24. |
| 2 | Mr.D.Nandhakumar | Informative session | D. Nandhakumar 04/03/2024. |
| 3 | Mr.A.Sagaya Albert | Excellent presentation. for advancement in structural Engineering. | Sagaya Albert 04/03/24 |
| 4 | Mrs.Kanimozhi | Excellent and innovative Presentation | K. Kanimozhi 4/3/24 |
| 5. | Mr.A.Sriram Gopal | Informative Session | A. Sriram Gopal 04/3/24 |

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024
CIRCULAR

DATE: 04.03.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mr. K.SRI RAM GOPAL, AP/CIVIL

Date : 06.03.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


DRC MEMBER


HOD/CIVIL

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR – REPORT

08/03/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

This Seminar session was held at the Department of Civil Engineering on 06th March, 2024 at 12:30pm. **Mr. SRI RAM GOPAL. K , AP/CIVIL** was delivered his seminar talk on **Effects of Corn Cob Ash as Partial Replacement of Cement for Stabilization of an Expansive Clay by Worku Yifru et al .** The paper was referred from Hindawi Journal, Advances in Civil Engineering Volume 2022, Article ID 6788120, 13 pages, Heritage science (2021) published on NOV 2022.



Internal Seminar Session by Mr. SRI RAM GOPAL. K AP/CIVIL

Theme:

In this study, an attempt has been made to assess the effects of corn cob ash (CCA) as a partial replacement of cement for the stabilization of expansive clay to be used as road

subgrade material. Corn cob is a waste agricultural product obtained during the production of corn. After it has been converted to ash, tests are carried out on the pozzolanic property and elemental composition of corn cob ash (CCA).

Scope for future work:

- ❖ Preliminary tests were performed on the natural soil sample for purposes of classification and identification of some required properties of the sample.
- ❖ Following the required preliminary laboratory analysis, the clay was stabilized with cement and CCA in varying proportions of 2, 4, 6, and 8%, separately.
- ❖ The maximum stabilization effect occurs at 8 and 4% of cement and CCA, respectively.
- ❖ With this percentage, the CBR of the sample increased from 2.62% at 0% to 10.47% and 3.31% at 8 and 4% of cement and CCA, respectively.
- ❖ As a result, 8% of cement was taken as the total amount for different cement and corn cob ash (C: CCA) ratios of 1: 1, 1: 2, 1: 3, and 1: 4 in the blending stabilization.

Outcome:

- ❖ When the mix ratio was at its ideal, the plasticity index (PI) reduced from 57.11% to 27.65% in the soil sample (1: 2 C: CCA).
- ❖ When treating expansive soil with CCA-cement addition agents, the MDD shows a modest rise while the OMC is reduced. When the mix ratio is at its ideal level, MDD rises from 1.385 g/cm³ to 1.40 g/cm³ and OMC reduces from 36.5% to 30.5% (1:2, C:CCA). Increasing the cement in a CCA-cement mix ratio often causes the maximum dry density and optimal moisture content to increase and decrease, respectively.
- ❖ The initial rise for the CBR test was from the control value of 2.62% to 6.72%, at an optimal mix ratio of at (1:2 C: CCA). This was followed by a reduction in the CCA-cement mix ratio as CCA dosage was increased.
- ❖ Finally, Staff members shared their views regarding seminar and gave their valuable feedback.


HOD/CIVIL 21/03/2024

Good.

J. Moni
21/3/2024
PRINCIPAL



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DEPARTMENT OF CIVIL ENGINEERING
INTERNAL STAFF SEMINAR – ATTENDANCE AND FEED BACK

| S.NO | NAME | FEEDBACK | SIGN |
|------|--------------------|--|------------------------------|
| 1 | Dr.R.Saravanan | EXcellent Presentation. | R. Sundharam 06/03/24. |
| 2 | Mr. R.Sundharam | Good Presentation. clear Information received. | R. Sundharam 06/03/24 |
| 3 | Mr.K.Arun | Very good topic with clear Explanation | K. Arun 06/03/24 |
| 4 | Mr. D.Nandha Kumar | Excellent Presentation. | D. Nandha Kumar 06/03/24 |
| 5 | Mrs.A.Suganya | Innovative and conceptual presentation | A. Suganya 06/03/24. |
| 6 | Mr.A.Sagaya Albert | Very nice presentation with informative content | A. Sagaya Albert 06/03/24 |
| 7 | Mrs.K.Kanimozhi. | Innovative content with Excellent performance | K. Kanimozhi 06/03/24. |

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024(even)
CIRCULAR

DATE: 07.03.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mr.A.SAGAYA ALBERT

Date : 08.03.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


DRC MEMBER 07/03/2024


HOD/CIVIL 07/03/2024

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR – REPORT

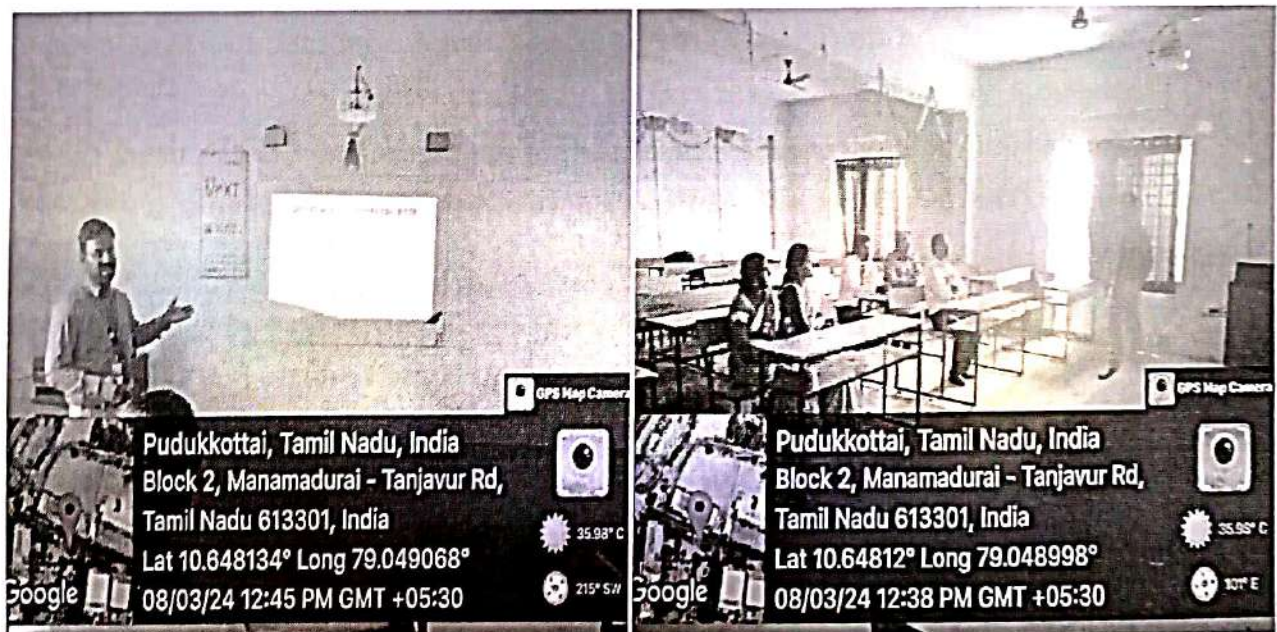
08/03/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

This Seminar session was held at the Department of Civil Engineering on 08th March, 2024 at 12:30pm. Mr. SAGAYA ALBERT A, AP/CIVIL was delivered his seminar talk on Cellular concrete: Utilization of plastic and glass waste as a replacement of fine aggregate. The paper was referred from Construction and Building Materials, Volume 200 Pages 637-647.



Internal Seminar Session by Mr. SAGAYA ALBERT AP/CIVIL

Theme:

This article presents a complete review with the main aspects that influence the application of cellular concrete: raw materials, production methods and expected properties based on density. This paper aims at identifying the possibility of using recycled materials such as crushed glass and plastic wastes in foam concrete as substitute filler material for fine river sand. A protein based foaming agent was adopted for this study. In this research study foam concrete blocks were prepared according to the designed proportions to attain the maximum density of 1900kg/m^3 . In this project, the mixing of recycled glass wastes 5%, 10%, 15% and recycled plastic wastes 1%, 3% & 5% were added as a filler in foam concrete. The 7, 14 and 28 days compressive strength, flexural strength, split tensile strength of each batch of concrete were studied and compared with conventional foam concrete. The study showed that the incorporation of recycled glass and plastic waste in conventional foam concrete is effective and it will be useful for load bearing wall applications.

Scope for future work:

- ❖ In this study, the concept of foam concrete has been studied. The fabrication technique of foam concrete has been studied.
- ❖ The physical and mechanical properties, advantage, application of foam concrete has been studied.
- ❖ The density value decreased with increasing the percentage of PET content. The decreasing ratio of density is close to 14% especially at 10% of PET.

Outcome:

- ❖ From this study, the compressive strength and durability of foam concrete increases with the age. But the compressive strength of this concrete mixes (i.e. CFPG-1, CFPG-2 & CFPG-3) was 41 to 44% lower than conventional concrete at 28 days.
- ❖ The tensile strength and flexural strength of this concrete mixes increase with age.
- ❖ Finally, staff members shared their views regarding seminar and gave their valuable feedback.


HOD/CIVIL


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DEPARTMENT OF CIVIL ENGINEERING

INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

| S.NO | NAME | FEEDBACK | SIGN |
|------|----------------------|---|---------------------------|
| 1 | Dr.R.Saravanan | Excellent Presentation. | R. Saravanan 08/03/24. |
| 2 | Mr. R.Sundharam | Informative and Innovative session | R. Sundharam 08/03/24. |
| 3 | Mr.K.Arun | Much needed topic with excellent presentation | K. Arun 8/3/24 |
| 4 | Mr. D.Nandha Kumar | Excellent Presentation. | D. Nandha Kumar 8/3/24 |
| 5 | Mrs.A.Suganya | useful presentation | A. Suganya 8/3/24. |
| 6 | Mr. A .Sri Ram Gopal | Nice communication, Topic is innovative | A. Sri Ram Gopal 08/03/24 |
| 7 | Mrs.K.Kanimozhi. | Excellent presentation with innovative topic. | K. Kanimozhi 08/03/24 |



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DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024
CIRCULAR

DATE: 12.03.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mr. K.ARUN, AP/CIVIL

Date : 14.03.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


D. Nandakumar
12/03/24
DRC MEMBER


K. Arun
12/03/24
HOD/CIVIL

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR – REPORT

14/03/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 14th March, 2024 at 01:10 PM. Mr.K.Arun /AP delivered his seminar talk on “Advancements in sensors and actuators technologies for smart cities: A comprehensive review”. The paper was referred from SPRINGER Journal, Smart Construction and Sustainable Cities (November 2023).



Internal Seminar Session by Mr.K.Arun /AP CIVIL

Theme:

This review explores advancements in sensors and actuator technologies for smart cities, highlighting the importance of precision and longevity in infrastructure. The dynamic role of actuators in real-time adjustments facilitates responsive urban management. Data security within these systems is crucial, and robust information-sharing mechanisms are needed. The case study on Bengaluru's Smart Traffic Management System demonstrates how the fusion of actuator technology and sensor arrays can enhance urban transportation and sustainability efforts. Prospects include blockchain technology and AI-driven urban management. The objective of this review is to provide a comprehensive analysis of recent developments in sensors and actuators for smart cities, with a particular emphasis on their implications for urban planning, data security, legal issues, and the potential for transformative innovation in urban management.

Scope for future work:

- Here, the author has proposed the framework for smart transportation using sensors and actuators. In addition the review can be extended for waste management and energy efficiency also.
- On the proposed review, blockchain technology has been explained. More clarifications can be given on AI and ML technologies for smart cities.

Outcome:

The Seminar clearly highlighted the importance of sensors and actuators in the Internet of Things (IoT) connections that serve as the framework for smart cities. Additionally, it sheds light on the wide range of sensors designed for different IoT applications as well as the variables affecting their service life, highlighting how crucial precision and durability are. This review discusses data security in big data exchange among actuators, legal foundations for smart city development, and key elements for creating a smart city. It highlights the benefits of advanced actuator technology and sensor integration, and emerging trends like AI driven urban management and block chain-enhanced data security.


14/03/2024.
HOD/CIVIL


14/3/2024.
PRINCIPAL



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COLLEGE OF ENGINEERING
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DEPARTMENT OF CIVIL ENGINEERING

14/03/2024

INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

| S.NO | NAME | FEEDBACK | SIGN |
|------|--------------------|--|------------------------------|
| 1 | Dr.R.Saravanan | Excellent presentation. | R. Saravanan 14/03/2024. |
| 2 | Mr.R.Sundharam | Innovative Presentation | R. Sundharam 14/03/24. |
| 3 | Ms.A.Suganya | Nice & effective present - atern | A. Suganya 14/03/24. |
| 4 | Mr.A.Sagaya Albert | Excellent presentation Trendy topic | A. Sagaya Albert 14/03/24 |
| 5 | Mr.K.Sriram Gopal | Innovative Topic, Nice Presentation | K. Sriram Gopal 14/03/24 |
| 6 | Ms.K.Kanimozhi | Excellent Presentation with detailed content. | K. Kanimozhi 14/3/24. |

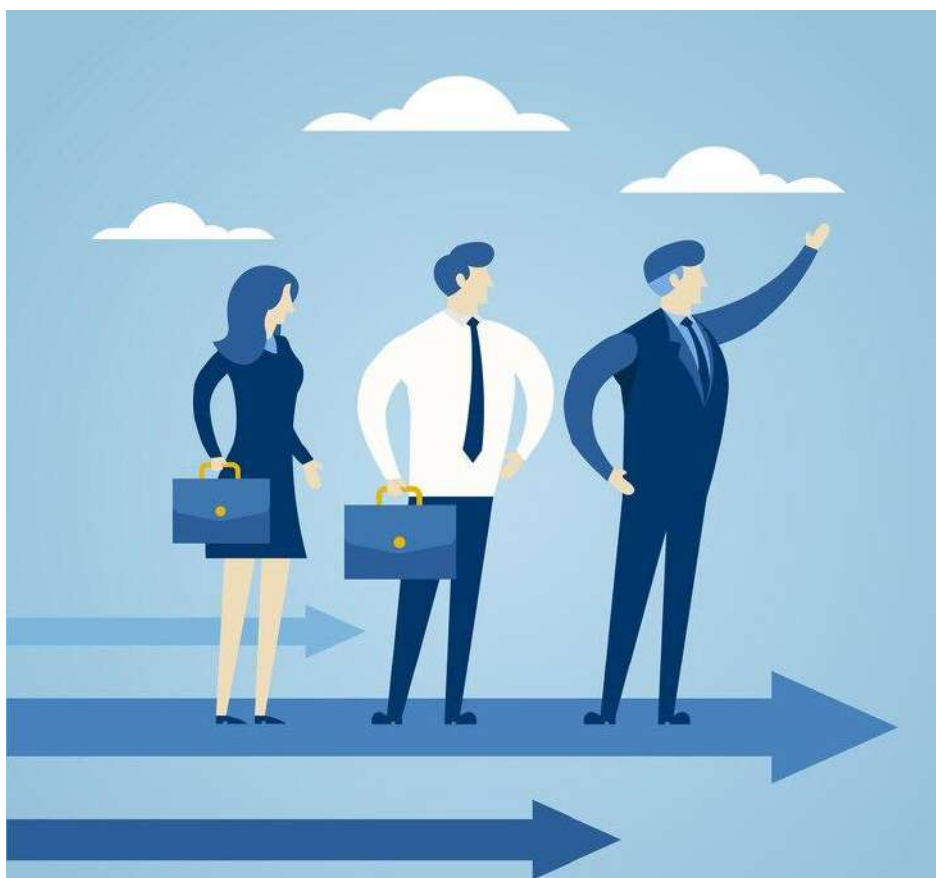
**DEPARTMENT OF CIVIL
ENGINEERING
ACADEMIC YEAR
2023-2024**



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2023-2024

CAREER GUIDANCE PROGRAMMES





DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2023-2024

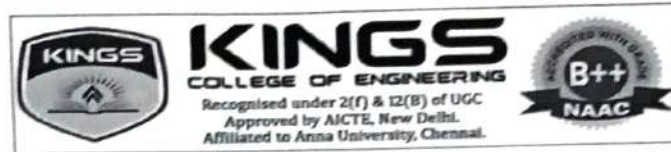
NUMBER OF STUDENTS BENEFITTED BY CAREER GUIDANCE PROGRAMS

| S.No | DESCRIPTION | BENEFICIARIES COUNT |
|------|--|---------------------|
| 1. | Alumni Interaction on job opportunity 14.03.2024 | 50 |
| 2. | Alumni Talk on career guidance and Job opportunities on 01.04.2024 | 40 |

[Signature]
14/08/2024
FACULTY INCHARGE

[Signature]
14/08/2024
HOD/CIVIL
Dr. R. Saravanan
HOD - Civil
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303


[Signature]
14/8/2024
PRINCIPAL
Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEM)

CIRCULAR

This is to inform you that department of Civil Engineering has planned to organize an Alumni interaction on job opportunity on 14.03.2024 by our renowned alumni **MS.S.ABIRAMI** of 2019-2023 who is currently working as **Detailer** at **AGF TECHNIK, THANJAVUR** to create an awareness about Job opportunities in civil industry. All the II Yr, III Yr and IV Yr students should attend the event without fail.


HOD/CIVIL
Dr. R. SARAVANAN, M.E., Ph.D.,
Professor and Head,
Department of Civil Engineering,
Kings College of Engineering,
Punalikulam, Pudukkottai Dt-613 303

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)
ALUMNI INTERACTION ON JOB OPPORTUNITY

Venue: CIVIL SMART CLASS ROOM

Date: 14.03.2024

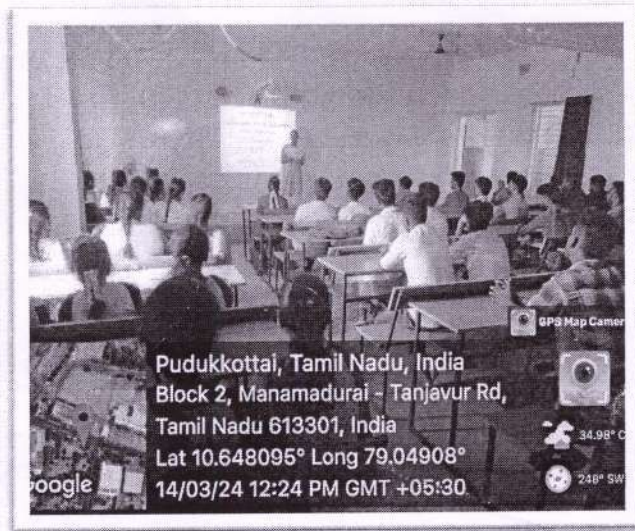
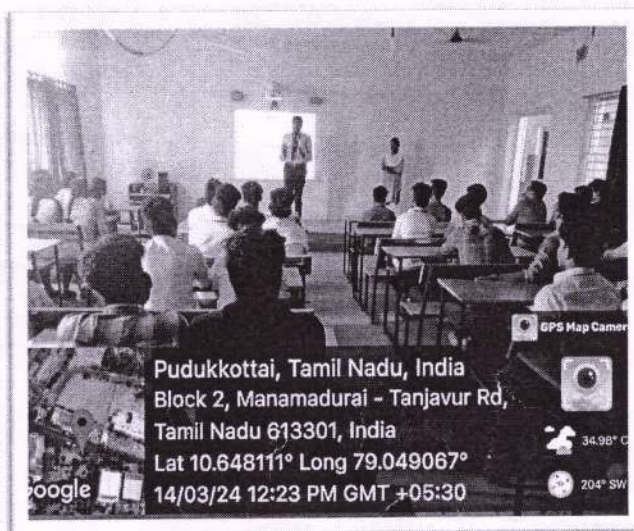
Time: 12:00 – 01:00 PM

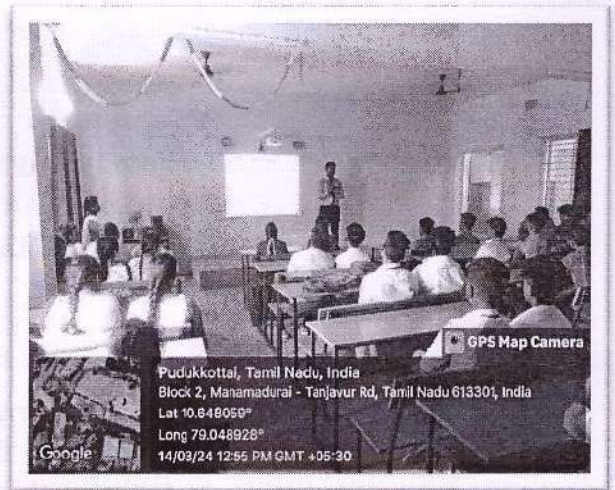
Background & Objective

Every semester Alumni interaction is arranged in department of Civil Engineering to share the experience of passed out students with the juniors. It is a platform for the alumni students to share their experience and ideas in their profession, after stepping out of the college. It is a great moment, where the institution feels proud on seeing its successful alumni. The session also creates a stage to identify the department's most distinguished alumni.

Alumni Session

We are delighted to have organized an outstanding Alumni speech on 14th March 2024 at the Department of Civil Engineering. Mr.R.Sundharam, AP/Civil, delivered welcome address and introduced the resource person. **Ms.S.Abirami** of 2019-2023 batch graced the occasion. She is our renowned alumni of the 2023 batch who are currently working as **Detailer** at **AGF TECHNIK, THANJAVUR**. She is working in the company for the past one year. She highlighted the scope for Civil Engineers in rebar detailing works and also added valuable information regarding job opportunities. Finally she concluded their speech by giving various ideas about the preparations to be made for working in civil engineering industry. Vote of Thanks proposed by Mr.K.Arun, AP/Civil, also he encouraged our students to become a renowned alumni by their profession.





Alumni Interaction on "Job Opportunity" for Civil Engineering students

Outcome

The Alumni Interaction is a platform for the renowned alumni to share their views with the junior students. It is the stage for relishing and encouraging the students and to guide them forward with a sense of purpose and anticipation. Around 50 students of Civil Engineering department were benefitted by the Alumni speech.


18/3/2024
ALUMNI COORDINATOR


19/03/2024
HOD/CIVIL


21/3/2024
PRINCIPAL

**DEPARTMENT OF CIVIL
ENGINEERING
ACADEMIC YEAR
2023-2024**



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2023-2024

CAREER GUIDANCE PROGRAMMES





DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2023-2024

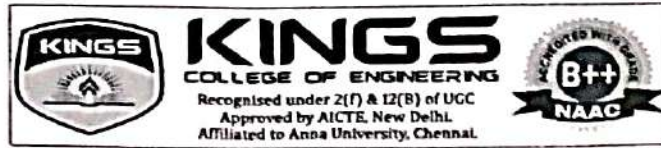
NUMBER OF STUDENTS BENEFITTED BY CAREER GUIDANCE PROGRAMS

| S.No | DESCRIPTION | BENEFICIARIES COUNT |
|------|--|---------------------|
| 1. | Alumni Interaction on job opportunity 14.03.2024 | 50 |
| 2. | Alumni Talk on career guidance and Job opportunities on 01.04.2024 | 40 |

[Signature]
14/08/2024
FACULTY INCHARGE

[Signature]
14/08/2024
HOD/CIVIL
Dr. R. Saravanan
HOD - Civil
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303

[Signature]
14/8/2024
PRINCIPAL
Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEM)

CIRCULAR

This is to inform you that department of Civil Engineering has planned to organize an Alumni talk on career guidance and job opportunities on 01.04.2024 by our renowned alumni **Mr.M.JAYASEELAN** and **Mr.N.JAYACHANDRAN** of 2019-2023 batch, to create an awareness about Job opportunities in civil industry. All the II Yr, III Yr and IV Yr students should attend the event without fail.

R. Saravanan
28/03/2024

HOD/CIVIL

Dr R.SARAVANAN, M.E, Ph.D.,
Professor and Head,
Department of Civil Engineering,
Kings College of Engineering,
Punakkulam, Pudukkottai Dt-613 303.

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)

ALUMNI TALK ON CAREER GUIDANCE AND JOB OPPORTUNITIES

Venue: CIVIL SMART CLASS ROOM

Date: 01.04.2024

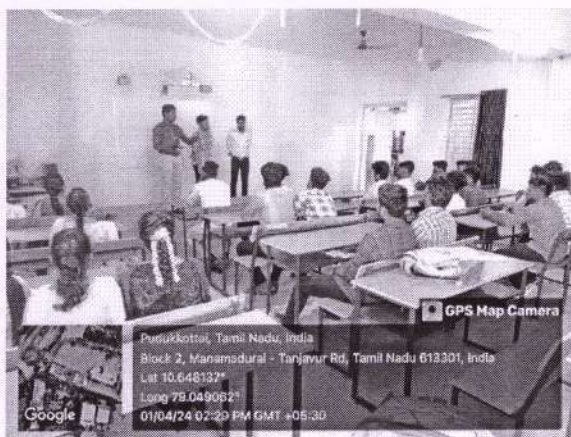
Time: 02:00 – 03:00 PM

Background & Objective

Every semester Alumni interaction is arranged in department of Civil Engineering to share the experience of alumni students with the juniors. It is a platform for the alumni students to share their experience and ideas in their profession, after stepping out of the college. It is a great moment, where the institution feels proud on seeing its successful alumni. The session also creates a stage to identify the department's most distinguished alumni.

Alumni Session

We are delighted to have organized an outstanding Alumni interaction on 1st April 2024 at the Department of Civil Engineering. Mr.K.ARUN, IQAC Member of Civil department organized the event. **Mr.M.JAYASEELAN** and **Mr.N.JAYACHANDRAN** of 2019-2023 batch graced the occasion. They are our renowned alumni of the 2023 batch who are currently working as **Assistant Project Engineer** at **TOUCHSTONE INFRA STRUCTURES, ANDRAPRADESH**. They highlighted the scope for civil engineers in site execution and also added valuable information regarding job opportunities. Finally they concluded their speech by giving various ideas about the preparations to be made for working in civil engineering industry.




Alumni talk on "Career Guidance" for Civil students

Outcome

The Alumni Speech is a platform for the renowned alumni to share their views with the junior students. It is the stage for relishing and encouraging the students and to guide them forward with a sense of purpose and anticipation. Around 40 students of Civil Engineering department were benefitted by the Alumni speech.


 05/04/24
IQAC MEMBER


 05/04/2024
HOD-CIVIL


 05/4/2024
PRINCIPAL

23.03.2024,
PUNALKULAM.

From

Mr. K. SRI RAM GOPAL,
Assistant Professor,
Department of Civil Engineering,
Kings College of Engineering,
Punalkulam.

To

THE PRINCIPAL,
Kings College of Engineering,
Punalkulam.

Through HOD/ Civil

J. Mani
23/3/2024.

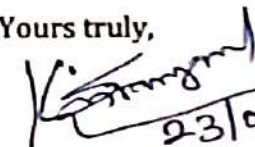
Respected Madam,

Sub: Requisition for conducting a One Day Workshop-Reg.

We are planned to conduct a One Day Workshop on "TEKLA STRUCTURES (BUILDING INFORMATION MODELLING)" by the resource person Mr.N.SANTHANAM CENTRE DIRECTOR TCIL IT EDUCATION & TRAINING, TRICHY. In this regard we seek your permission to conduct the workshop on 27.03.2024 at our department.

Thanking you,

Submitted to the Principal Mam,
Q. Santanan
23/03/2024
HOD/CIVIL

Yours truly,

23/03/24
(Mr. K. SRI RAM GOPAL)

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)

CIRCULAR

We are organising a one day workshop on “**TEKLA STRUCTURES (BUILDING INFORMATION MODELLING)**” on 27.03.2024 (Wednesday). I request all civil students to take participate in this workshop.


26/03/24
CO-ORDINATOR

(Mr. K. SRI RAM GOPAL)


26/03/2024
HOD/CIVIL

(Dr. R. SARAVANAN)

Copy to:

- II year Civil
- III year Civil



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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)

"ONE DAY WORKSHOP ON TEKLA STRUCTURES " ORGANISED BY TCIL IT EDUCATION
AND TRAINING, TRICHY ON 27.03.24
PARTICIPANT LIST

| S.No. | NAME OF THE STUDENT | CLASS | SIGNATURE |
|-------|---------------------|----------------------------------|-----------|
| 1 | S. Mathan Kumar | III rd -Year Civil | |
| 2 | Surya.V | III rd -rd year | |
| 3 | J. Mohamed Riyas | III rd -rd year | |
| 4 | S. Mohan | III rd -rd year | |
| 5 | A. Arul pandyan | " | |
| 6 | M. Arunkumar | " | |
| 7 | S. SNEHA | IV - year | |
| 8 | P. KATHIRESHWART | IV - year | |
| 9 | T. Akalya | III - year | |
| 10 | G. Sindhee | III Year | |
| 11 | M. Shrinidhi | II year | |
| 12 | C. Ananthavali | II Year | |
| 13 | R. Rubika | II year | |
| 14 | S. Ananthi | II year | |
| 15 | S. Amutha Nilavan | II Year | |
| 16 | Y. Jerald Ruban Roy | II year | |
| 17 | S. Vijay | II year | |
| 18 | R. Aravindh | II year | |
| 19 | A. Archane | II - year | |
| 20 | K. Abinaya sri | II - year | |

27/03/24
CO-ORDINATOR

27/03/2024.
HOD/CIVIL



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DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)

"ONE DAY WORKSHOP ON TEKLA STRUCTURES " ORGANISED BY TCIL IT EDUCATION
AND TRAINING, TRICHY ON 27.03.24
PARTICIPANT LIST

| S.No. | NAME OF THE STUDENT | CLASS | SIGNATURE |
|-------|---------------------|--------------|-----------------|
| 1 | B. Anitha | III yr Civil | B. Anitha |
| 2 | A. Suresh | III - CIVIL | A. Suresh |
| 3 | G.V. Naavinayaa | " | G.V. Naavinayaa |
| 4 | | | |
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27/03/24
CO-ORDINATOR


27/03/2024
HOD/CIVIL



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DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)
"ONE DAY WORKSHOP ON TEKLA STRUCTURES" ORGANISED BY TCIL IT EDUCATION AND
TRAINING, TRICHY ON 27.03.24
FEED BACK FORM

| S.No. | NAME OF THE STUDENT | FEED BACK | SIGNATURE |
|-------|---------------------|----------------|-----------------|
| 1 | Surya.v | Good | Surya |
| 2 | S. Nathan Kumar | Excellent | S. Nathan |
| 3 | R. NITHISH KUMAR | Good | R. Nithish |
| 4 | G. Vinodh | Good | G. Vinodh |
| 5 | J. Mohamed Riyas | Very Useful | J. Mohamed |
| 6 | S. Mohan | Grateful | S. Mohan |
| 7 | A. ARUL Pandiyan | Good | A. Arul |
| 8 | M. ARUN KUMAR | Good | M. Arun |
| 9 | S. VIJAY | Good | S. Vijay |
| 10 | R. ARAVINTH | Good | R. Aravinth |
| 11 | S. Amutha Nilavan | Very useful | S. Amutha |
| 12 | Y. Terald Ruben Raj | very useful | Y. Terald |
| 13 | P. Kathireswari | Excellent | P. Kathireswari |
| 14 | J. AKALYA | Very Excellent | J. Akalya |
| 15 | G. Sindhu | Useful | G. Sindhu |
| 16 | C. Anantharavi | Very useful | C. Anantharavi |
| 17 | M. Shanmugha | Good | M. Shanmugha |
| 18 | S. SNEHA | EXCELLENT | S. Sneha |
| 19 | S. Ananthu | USEFUL | S. Ananthu |
| 20 | R. Rubika | Very useful | R. Rubika |

N. Santharav
RESOURCE PERSON
27.3.2024,

27/03/24
CO-ORDINATOR

27/03/2024
HOD/CIVIL



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COLLEGE OF ENGINEERING
An Autonomous Institution
Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)
"ONE DAY WORKSHOP ON TEKLA STRUCTURES " ORGANISED BY TCIL IT EDUCATION AND
TRAINING, TRICHY ON 27.03.24
FEED BACK FORM


| S.No. | NAME OF THE STUDENT | FEED BACK | SIGNATURE |
|-------|---------------------|------------------------|-----------------|
| 1 | A. Suresh | Good Session | A. Suresh |
| 2 | G.V. Naaveniyaa | This session is useful | G.V. Naaveniyaa |
| 3 | B. Anitha | More details given | B. Anitha |
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| 20 | | | |

N. Senthil Kumar

RESOURCE PERSON

27-03-24.


27/03/24
CO-ORDINATOR


27/03/2024
HOD/CIVIL



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DEPARTMENT OF CIVIL ENGINEERING ORGANIZES

A ONE DAY WORKSHOP ON

TEKLA STRUCTURES (BUILDING INFORMATION MODELLING)



Resource Person:
Mr. N. SANTHANAM
CENTRE DIRECTOR
TCIL IT EDUCATION & TRAINING,
TRICHY

Date : 27.03.2024

Venue : CIVIL DEPARTMENT
SMART CLASS ROOM

S. Perumal
23/3/2024

S. Perumal
23/03/2024
HOD/Civil

Mr. K. SRI RAM GOPAL
Mrs. K. KANIMOZHI
COORDINATORS

Dr. R. SARAVANAN
HOD/CIVIL

Dr. J. ARPUTHA VIJAYA SELVI
PRINCIPAL



ACADEMIC YEAR 2023-24 (EVEN SEMESTER)

WORKSHOP EVENT REPORT

Session Details:

Title of the Session:

"ONE DAY WORKSHOP ON TEKLA STRUCTURES (BUILDING INFORMATION MODELING)"

Date : 27.03.2024

Activity Category : Internal

Nature of the Session : Physical Mode

Speaker Details:

Name of the Resource Person : Mr. N. SANTHANAM

Designation : CENTRE DIRECTOR

Organization: TCIL- IT EDUCATION & TRAINING, TRICHY.

Programme Report:

Objective:

- To provide a brief and basic idea about "TEKLA STRUCTURES (BUILDING INFORMATION MODELING)" software and its career growth to the students.
- To provide a platform for the students to Know about "TEKLA STRUCTURES (BUILDING INFORMATION MODELING)" software.

About the workshop:

KINGS COLLEGE OF ENGINEERING in association with department of civil engineering organized "ONE DAY WORKSHOP ON TEKLA STRUCTURES (BUILDING INFORMATION MODELING)" on 27.03.2024. The session was started at 09.30am. Presently the event was addressed and the resource person was introduced by Mr. K. SRI RAM GOPAL, AP/CIVIL. The resource person Mr. N. SANTHANAM, CENTRE DIRECTOR, TCIL- IT EDUCATION & TRAINING, TRICHY, was started his presentation about the TEKLA STRUCTURES SOFTWARE. Also he broadly discussed about the career growth in civil engineering. The session was very useful and the participants have interacted with the resource person.

Valedictory Function:

The session was proposed a chance to know about Career Opportunities by knowing different softwares. The feedback of the event from the participants was collected. Mr. MOHAN, Third year CIVIL STUDENT delivered the vote of thanks.

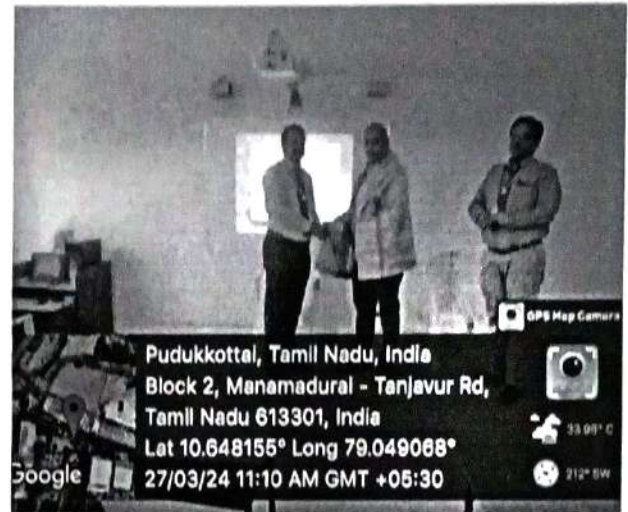
Outcome of the activity:

- All the participants have benefitted and gained knowledge on Fundamental concepts in "TEKLA STRUCTURES SOFTWARE" and its career skills.

Participants Details:

- Total Number of Students Participated: 30 Members
- Total Number of Staff (Teaching / Non-Teaching) Participated: 08 Members

Some Glimpses of the event
**"ONE DAY WORKSHOP ON TEKLA STRUCTURES
 (BUILDING INFORMATION MODELING)"**



K. Sri Ram Gopal
 27/03/24
EVENT CO-ORDINATOR
(K.SRI RAM GOPAL)

R. Saravanan
 27/03/2024
HOD/CIVIL
(Dr.R.SARAVANAN)

A. Arputha Vijaya Selvi
 27/3/2024
PRINCIPAL
(Dr.ARPUTHA VIJAYA SELVI)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

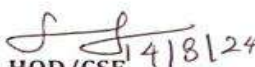
ACADEMIC YEAR 2023- 2024

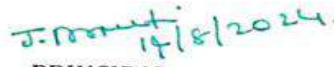


3.2.2- Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

| S.No | Date | Details | Beneficiaries | Page No |
|------|------------|--|---------------|---------|
| 1 | 03.08.2023 | Internal Staff Seminar on Emotional Intelligence | 12 | 1 |
| 2 | 11.08.2023 | Guest Lecture on Generative AI Adoption | 109 | 3 |
| 3 | 22.08.2023 | Internal Staff Seminar on FTOR-Mod PSO: A Fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO | 11 | 6 |
| 4 | 19/09/2023 | FDP on Microsoft Power BI , Anaconda Tools and IBM Congos Analytics for Business Analytics and Data Science | 33 | 8 |
| 5 | 18/10/2023 | IEEE Madras Section sponsored Three-Day National Level Workshop on Data Science & Machine Learning | 109 | 20 |
| 6 | 04.11.2023 | Internal Staff Seminar on Load Balancing framework for cross region tasks in cloud computing | 11 | 31 |
| 7 | 07.11.2023 | Internal Staff Seminar on Emerging Technologies | 12 | 33 |
| 8 | 14.11.2023 | Workshop on Cloud Computing (AWS) | 70 | 35 |
| 9 | 15.02.2024 | Workshop on Intellectual Property Rights and its Perspectives | 34 | 39 |
| 10 | 27.02.2024 | Internal Staff Seminar on Android basis with compose | 12 | 41 |
| 11 | 07.03.2024 | Webinar on AI tools for academic Research writing and Publishing | 77 | 43 |
| 12 | 14.03.2024 | Internal Staff Seminar on Deep Learning in Cloud Security | 11 | 46 |
| 13 | 14.03.2024 | Inter College Mini - Project Expo | 60 | 49 |
| 14 | 02.04.2024 | Internal Staff Seminar on Health Promotion Proposals & Obesity Prevention | 12 | 50 |
| 15 | 10.04.2024 | Workshop on Building and training AI model using TABLEAU | 60 | 52 |

| | | | | |
|----|------------|--|-----|----|
| 16 | 02.05.2024 | Organized International conference on Recent Trends in Engineering & Science | 228 | 57 |
| 17 | 03.05.2024 | Organized a Project Expo'2024 | 140 | 64 |
| 18 | 07.05.2024 | Internal Staff Seminar on Cloud Computing | 11 | 68 |
| 19 | 11.05.2024 | 2 Day workshop on Cyber Security: Safeguard your digital world | 65 | 69 |
| 20 | 25.05.2024 | 3 Day Workshop On From Design To Patent | 166 | 73 |
| 21 | 31.05.2024 | Webinar on How to write a Grant Proposal in an Effective Manner | 62 | 85 |


 HOD/CSE 14/8/24
 H.O.D of Computer Science & Engineering
 KINGS COLLEGE OF ENGINEERING
 Punalkulam, Gandarvakottai (Tk),
 Pudukottai (Dt) - 613 303.


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 Principal
 Kings College of Engineering
 (Autonomous)
 Punalkulam - 613 303



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 – 2024 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 3.8.23 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about Emotional Intelligence.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 3.8.23 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.N.Dhamayandhi and Ms.B.Bavithra explained the basics of Emotional Intelligence, factors that affect the human mind. They have described about DISC assessment tool which analyzes the behavior of a person. A DiSC assessment also measures the values of a person's prioritize. The results explain the percentage of each style of a person are and what that means for how the person handle challenges, interact with others, approach life and how others perceive that person. There are 4 types of personalities available,

1. Dominant
2. Influential
3. Complaint
4. Steady

Each personality is mapped with an animal. The animal symbolizes the behavior of that character. From that analysis, the person may enhance their good qualities and reduces their mistakes.

OUTCOME OF THE EVENT

- Got an idea about DISC assessment test
- Know which type of personality
- Enhance their good qualities



Ms.N.Dhamayandhi & Ms.B.Bavithra shared their concepts of DISC Assessment (part of Emotional Intelligence)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023 - 2024 / ODD SEMESTER

REPORT

1. Name of the event : Guest Lecture on "Generative AI Adoption"
2. Date & Session : 11.08.2023
3. Venue : Chera Hall
4. Name of the Organizer : Mr.S.Rajarajan, AP/ CSE
5. Resource Person : **Sammopath Chakravarthy**,
Solutions Architect, Cloud Adoption,
Amazon Web Services (AWS),
Dallas, USA.
6. Objective : To simplify the concept of using artificial intelligence to create content, such as text, images or videos. To help students understand how this technology works, its potential applications, and the impact it can have on various industries.

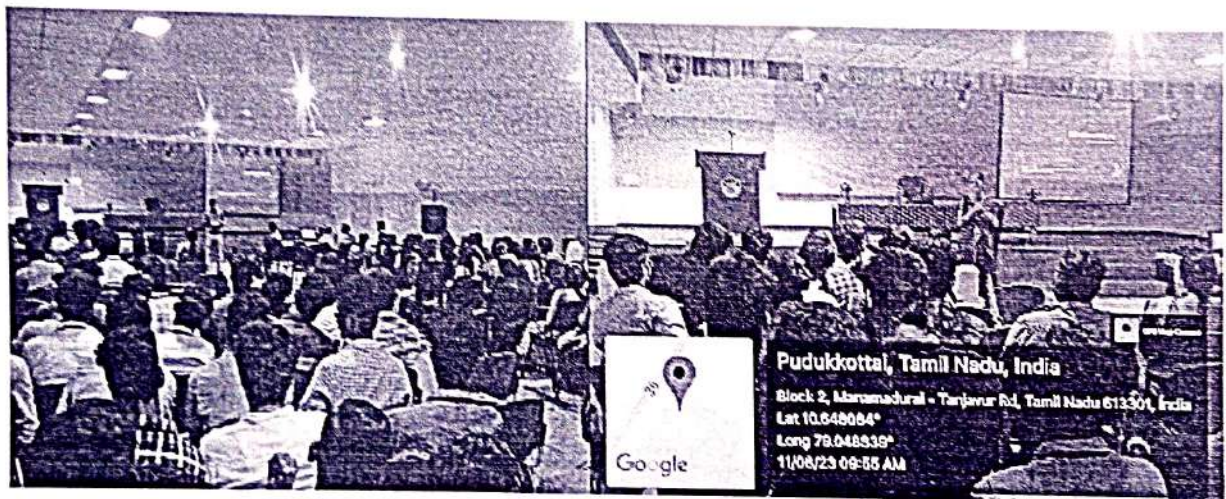
Department of Computer Science and Engineering organized a guest lecture on "Generative AI adoption" on August 11th of 2023 with the objective of generate creative content across different industries. The resource person C. Sammpath elaborated the basics in Generative AI and its applications in a well organized manner.

Key points Covered:

1. Introduction to Generative AI: Definition of Generative AI and its role in content creation.
2. Basic understanding of how neural networks and machine learning contribute to generative models.

3. Application of Text Generation: Discussion on how generative AI can create text for various purposes, and Examples of tools and platforms that utilize generative AI for text generation.
4. Video and Media Generation: Overview of how Generative AI can be used to produce videos, animations and multimedia content.
5. Industry- specific use cases: Shared real world examples of Generative AI adoption in fields like gaming and marketing etc.
6. Insight into potential career paths and opportunities in the field of AI.

Around 109 students from our department attended the session and got exposed to the topic which is widely used now.

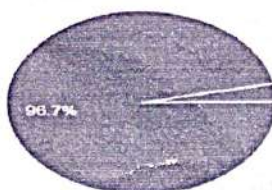


Glimpses of the Guest Lecture on "Generative AI adoption"

Feedback from Students

Does the session met your expectations?

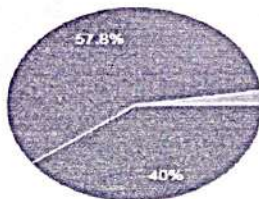
90 responses



Yes
No

The information shared in the session is useful

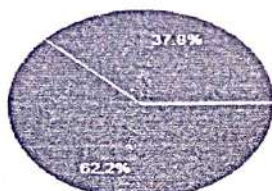
90 responses



Strongly Agree
Agree
Neutral
Disagree

The Content and delivery of resource person was

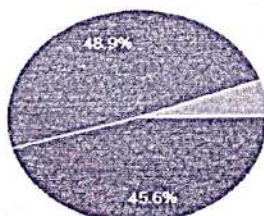
90 responses



Excellent
Good
Fair

The Lecture session was well organized

90 responses



Strongly agree
Agree
Neutral

Outcome:

The Generative AI adoption guest lecturer session provided an engaging and informative presentation on the current landscape of AI driven content creation. Students gained a clearer understanding of how Generative AI is transforming various industries and learned about the considerations necessary for responsible and effective adoption.

[Signature] 18/8/23
SIGNATURE OF COORDINATOR

[Signature] 18/8/23
HOD/ CSE

[Signature] 18/8/2023

PRINCIPAL



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 – 2024 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 22.8.23 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about fault tolerance algorithm for Wireless Sensor Networks.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 22.8.23 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.K.Abinaya explained the concepts of Wireless Sensor Networks (WSN), need of fault tolerance in WSN and discussed various algorithms to achieve the fault tolerance. She described the concept of fault tolerance and optimal relay node with modified particle swarm optimization (FTOR-mod PSO). From the results proved that the proposed method reduces delay to 0.15 s by reducing the routing overhead to 2.4%, thereby improving the network lifetime to 92.714%.

OUTCOME OF THE EVENT

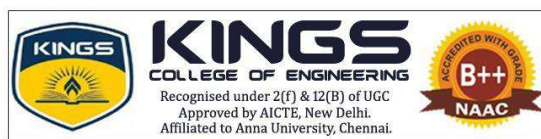
- Got an idea about relay node selection algorithm, modified PSO algorithm
- Understand the importance of those algorithms in WSN domain.
- Motivate the students to do project in this domain
- Faculty members may have a research idea in this domain

Journal Details:

- **FTOR-Mod PSO: A fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO**



Ms.K.Abinaya discussed about the concepts of relay node selection algorithm



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2023 - 2024/ ODD SEMESTER

5 DAY FDP ON MICROSOFT POWER BI , ANACONDA TOOLS AND IBM CONGOS ANALYTICS FOR BUSINESS ANALYTICS AND DATA SCIENCE REPORT

The Department of Computer Science & Engineering organized a Five Day Faculty Programme on Microsoft Power BI , Anaconda Tools and IBM Congos Analytics for Business Analytics and Data Science from **19.09.2023 - 23.09.2023** in Hybrid mode to enhance the knowledge on Business Analytics and Data Science. Totally 33 participants from various institutions actively participated in this event.

The five day FDP (Faculty Development Program) on Microsoft Power BI, Anaconda Tools, and IBM Congos Analytics for Business Analytics and Data Science provided a great way for educators and professionals to gain in-depth knowledge about these powerful tools.

Day 1: 19.09.23

Business Analytics and Data Science - Dr.K.Abhirami , HOD/CSE (i/c) , KCE

Microsoft Power BI Data Fundamentals - Ms.S.Abikayil Aarthi , AP/ CSE , KCE

The first day of FDP covered comprehensive overview of topics, including statistical analysis, machine learning, data visualization, and predictive modeling. Faculty members from various institutions have learned how to use these techniques to analyze data, identify patterns, and make informed decisions. Microsoft Power BI, a business analytics service that the participants learned about, enabled them to gain knowledge about interactive visualizations and business analytics which will be helpful for them to create their own reports and dashboards.

Day 2 & 3: 20.09.23 & 21.09.23

IBM Congos Analytics Tool

Ms.P.Kaviya , AP/IT ,Kamaraj College of Engineering & Technology,Virudhunagar

On day 2 and 3, the participants were delved to IBM Congos Analytics , a powerful tool that provides a wide range of functionalities including reporting, analysis, score carding, and monitoring. Also the participants had hands - on session that focused on analyzing the data and making informed decisions. In this session, the participants learned how to create reports, connect with data sources, build reports, and share them.

Day 4 : 22.09.23

Hands on Session - Anaconda Navigator - Mr.S.Rajarajan , AP/CSE

Hands on Session - Microsoft Power BI Tool - Ms.S.Abikayil Aarthi , AP/ CSE , Ms.N.Dhamayandhi , AP/CSE

The key features and tools including the Anaconda Navigator graphical user interface, the Jupyter Notebook environment, and the Spyder IDE of Anaconda Navigator were explored during the hands-on session on day 4. The attendee's hands-on experience with the powerful data analytics tool included topics such as data visualization, data modeling, and creation.

Day 5: 23.09.23

Hands on Session - Microsoft Power BI Tool

Case Study & Valedictory Function

Dr.K.Abhirami , HOD/CSE (i/c) , Ms.R.Sugantha Lakshmi , AP/CSE , Ms.S.Puvaneswari , AP/CSE

The fifth day of FDP featured a demonstration and hand-on session on how to create interactive dashboards, reports, and visualizations. The attendees also learned about the different types of visualizations available in Power BI and how to customize them to suit their needs. Additionally, they were shown how to publish and share their reports with others. The workshop provided the opportunity to work on real-world examples and projects. This

allowed the participants to apply what they had learned and gain practical experience in using Power BI.

The FDP helped the faculty members to understand the importance of Data Analytics tools used in the business world. Companies are using data science and analytics to gain insights into customer behavior, market trends, and operational efficiency. By understanding these tools, educators can help their students to develop the skills needed to succeed in the workforce.

Over the course of five days, participants in this FDP had the opportunity to learn about the various features and functions of each tool, as well as how they can be used in the context of business analytics and data science. They also learnt how to integrate these tools with other software and platforms, such as Excel, SQL Server, and Hadoop.

By the end of the program, participants were equipped with the skills and knowledge necessary to use the tools effectively and efficiently, and to create meaningful insights and reports for their organizations. Overall, this FDP served as a valuable investment for participants who looked for enhancing their skills in the field of business analytics and data science.

COORDINATORS

Ms.S.Puvaneswari

Ms.R.Sugantha Lakshmi

HOD(i/c)/CSE

PRINCIPAL

ANNEXURE - I

FDP POSTER



KINGS COLLEGE OF ENGINEERING
Recognized under 2(f) & 12(b) of UGC, Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai
Punalkulam, Gandarvakottai Taluk, Pudukkottai-613303

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

HYBRID MODE
19.09.2023 - 23.09.2023

5 DAY

FACULTY DEVELOPMENT PROGRAMME
ON
MICROSOFT POWER BI , ANACONDA TOOLS
AND IBM CONGOS ANALYTICS FOR BUSINESS
ANALYTICS AND DATA SCIENCE

REGISTER NOW
<https://forms.gle/bEHB4LLqpAuSn7Ps8>

MONDAY - FRIDAY
19.09.2023 - 23.09.2023

TIMING
10.00 AM- 03.30 PM

VENUE
Smart Class Room,
Department of CSE,
Kings College of Engineering.

REGISTRATION
RS . 300/-

Mode of Payment : Online Mode
Name : The Principal, Kings College of Engineering - Research & developments
IOB : Current Account No.136402000000661
IFSC : IOBA0001364,
MICR : 613020004

Note : Mention your name and Address while making payment

ANACONDA

Power BI

IBM Cognos Analytics

ANNEXURE – II

REGISTRATION FORM

Registration Form - Five Days FDP on Microsoft Power BI , Anaconda Tools and IBM Congos Analytics for Business Analytics and Data Science

19.09.2023 - 23.09.2023

Email *

Valid email

This form is collecting emails. [Change settings](#)

Faculty Name *

Short answer text

Department *

☐ CSE

☐ ECE

☐ EEE

☐ IT

ANNEXURE – III

SESSION DETAILS

| SESSION DETAILS | | |
|-------------------------|--|--|
| DATE | FN SESSION | AN SESSION |
| Tuesday 19.09.2023 | Inaugural & Introduction to Data Science & Business Analytics Dr.K.Abhirami , HOD/CSE (i/c) | Microsoft Power BI Data Fundamentals Ms.S.Abikayil Aarthi , AP/ CSE |
| Wednesday 20.09.2023 | IBM Congos Analytics Tool Ms.P.Kaviya , AP/IT Kamaraj College of Engineering & Technology, Virudhunagar | IBM Congos Analytics Tool Ms.P.Kaviya , AP/IT Kamaraj College of Engineering & Technology, Virudhunagar |
| Thursday 21.09.2023 | IBM Congos Analytics Tool Ms.P.Kaviya , AP/IT Kamaraj College of Engineering & Technology, Virudhunagar | IBM Congos Analytics Tool Ms.P.Kaviya , AP/IT Kamaraj College of Engineering & Technology, Virudhunagar |
| Friday 22.09.2023 | Hands on Session Anaconda Navigator Mr.S.Rajarajan , AP/CSE | Hands on Session Microsoft Power BI Tool Ms.S.Abikayil Aarthi , AP/ CSE Ms.N.Dhamayandhi , AP/CSE |
| Saturday 23.09.2023 | Hands on Session Microsoft Power BI Tool Dr.K.Abhirami , HOD/CSE (i/c) Ms.R.Sugantha Lakshmi , AP/CSE | Case Study & Valedictory Function Ms.S.Puvaneswari , AP/CSE Ms.R.Sugantha Lakshmi , AP/CSE |




CHIEF PATRON
Dr.R. Rajendran
Secretary

PATRON
Dr. J.Arputha Vijaya Selvi
Principal

CONVENER
Dr.K.Abhirami , HOD/CSE (i/c)

CO-ORDINATORS
Ms.S.Puvaneswari , AP/CSE
Ms.R.Sugantha Lakshmi , AP/CSE

IBM Cognos Analytics

"Empowering Educators: Harnessing the Power of Power BI , Anaconda Tools and IBM Congos Analytics for Effective Business Analytics Instruction."

ANNEXURE – IV
PARTICIPANTS LIST

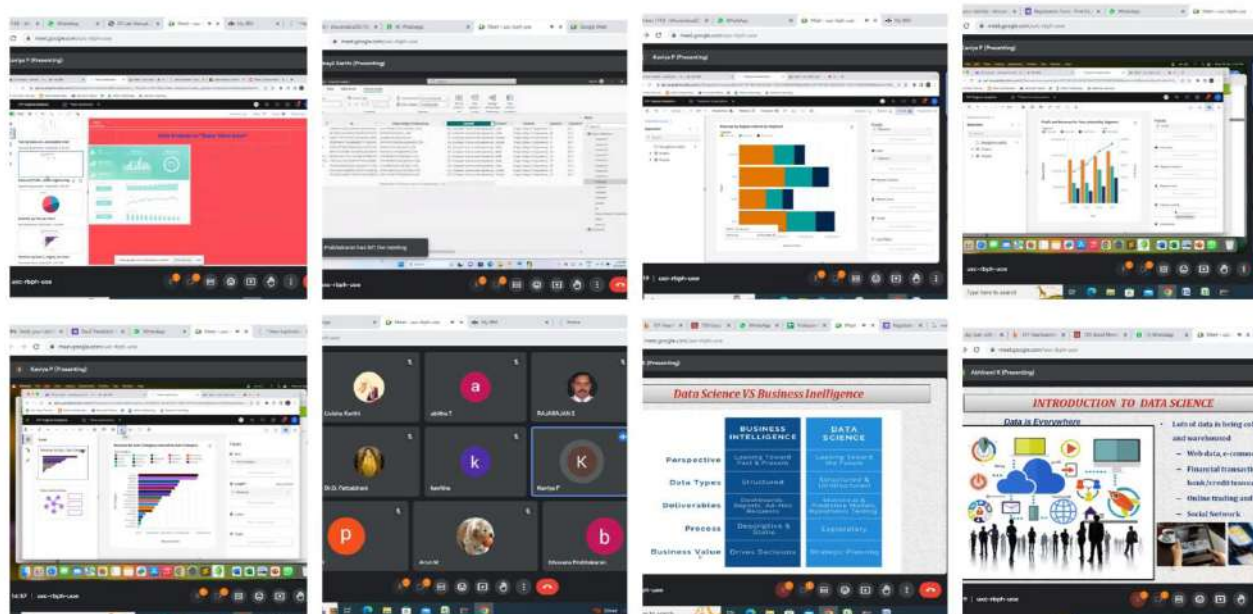
| S.No | Participant Name | Designation | Institution Name |
|-------------|-------------------------------|--|---|
| 1. | Ms. R.Muthu Pandeewari | Assistant Professor / CSE | Mohamed Sathak AJ College of Engineering, Chennai |
| 2. | Ms.J.Sri Latha | Assistant Professor / CSE | G. Narayanamma Institution of Technology & Science , Hyderabad |
| 3. | Ms.V.Sunitha | Assistant Professor / ECE | Sriindu College of Engineering and Technology, Sheriguda,,Hyderabad |
| 4. | Mr. Killi Chandra Bhusana Rao | Assistant Professor/ CSE | Vikas Engineering College, Vijayawada |
| 5. | Mr.Srinivasa Rao Nalabolu | Assistant Professor / EEE | Malla Reddy Institute of Technology and Science, Hyderabad |
| 6. | M.Snehapriya | Assistant Professor / CSE | SRM Institute of Science and Technology, Chennai |
| 7. | P.Devaghi | Research scholar / Computer Applications | Hindustan Institute of Technology and science, Chennai |
| 8. | Dr.N.Suguna | Associate professor / CSE | Government College of Engineering Thanjavur |
| 9. | Dr.G.Pattabirani | Assistant Professor / CSE | Government College of Engineering Thanjavur |
| 10. | Dr.K.Preethi | Assistant Professor / CSE | University College of Engineering Pattukkottai. |
| 11. | Ms.S.Gayathri | Assistant Professor / CSE | PRIST Deemed to be University |
| 12. | Ms.M .Akshara | Assistant Professor / CSE | St.Joseph's College of Engineering and Technology, Thanjavur |
| 13. | Mr.P. Parthiban | Assistant Professor / CSE | K.S.K College of Engineering and Technology, Kumbakonam |
| 14. | Ms.K.Livisha | HOD / CSE | Vandayar Polytechnic College |
| 15. | Mr.J.Subramanian | Lecturer / Mechanical | Periyar Centenary Polytechnic College Vallam, Tanjore |
| 16. | Ms.M.Vanaja | Lecturer / Electrical | Periyar Centenary Polytechnic College Vallam, Tanjore |

5 Day FDP ON Microsoft Power BI , Anaconda Tools and IBM Congos Analytics for Business Analytics and Data Science


| S.No | Participant Name | Designation | Institution Name |
|-------------|-------------------------|---------------------------|--|
| 17. | Mr. R.Anantha Krishnan | Assistant Professor / EC | JP College of Arts and Science, Tenkasi |
| 18. | K.Jayanthi | Assistant Professor / CSE | PREC Engineering College, Vallam |
| 19. | R.Bhuvaneswari | Assistant Professor / IT | Mookambigai College of Engineering, Pudukottai |
| 20. | A.Priya | Assistant Professor / IT | Mookambigai College of Engineering, Pudukottai |
| 21. | P.Menaka | Assistant Professor / CSE | PREC Engineering College, Vallam |
| 22. | Ms.D.Mangaiyarkkarasi | Assistant Professor / ECE | Kings College of Engineering |
| 23. | Dr.T.Shanthi | Assistant Professor / ECE | Kings College of Engineering |
| 24. | Mr.M.Arun | Assistant Professor / CSE | Kings College of Engineering |
| 25. | Ms.N.Dhamayandhi | Assistant Professor / CSE | Kings College of Engineering |
| 26. | Ms.B.Bavithra | Assistant Professor / CSE | Kings College of Engineering |
| 27. | Dr.S.Kannan | Assistant Professor / CSE | Kings College of Engineering |
| 28. | Ms.B.Sangeetha | Assistant Professor / CSE | Kings College of Engineering |
| 29. | Ms.M.Kavitha | Assistant Professor / CSE | Kings College of Engineering |
| 30. | Ms.D.Mangalambigai | Assistant Professor / CSE | Kings College of Engineering |
| 31. | Ms.K.Abinaya | Assistant Professor / CSE | Kings College of Engineering |
| 32. | Ms.M.Vidhya | Assistant Professor / CSE | Kings College of Engineering |
| 33. | Ms.T.Sindhu | Assistant Professor / CSE | Kings College of Engineering |

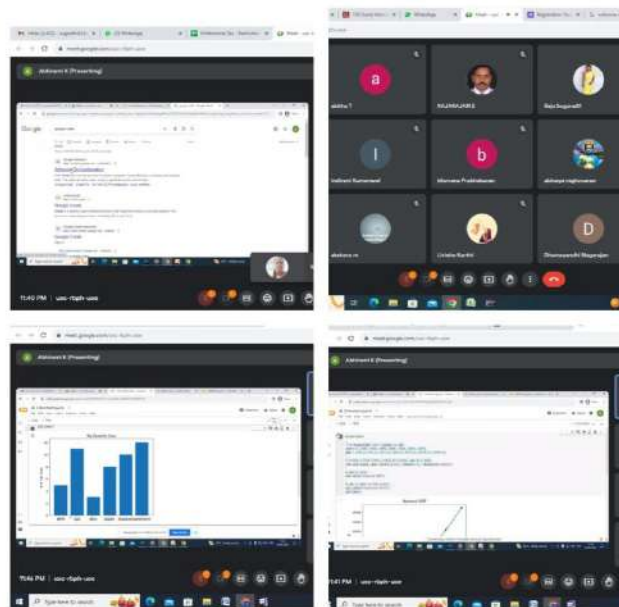
ANNEXURE - V

GLIMPSES OF THE EVENT



Messages can be seen only during the call by people on the call

- A** Abhirami K Now
Thank you all
- b** bhuvana Prabhakaran Now
thank you mam
-  Mangai Nallathambi Now
Thank you mam... Very nice and informative presentation.....
- I** Indirani Kumaravel Now
Very nice session for the new comers in data visualization Madam
Thank you very much Mam



ANNEXURE - VI

SAMPLE CERTIFICATES



ANNEXURE – VII FEEDBACK ANALYSIS



Department of Computer Science & Engineering

Academic Year 2023-2024 / Odd Semester

5 DAY FDP ON MICROSOFT POWER BI , ANACONDA TOOLS AND IBM CONGOS ANALYTICS FOR BUSINESS ANALYTICS AND DATA SCIENCE REPORT

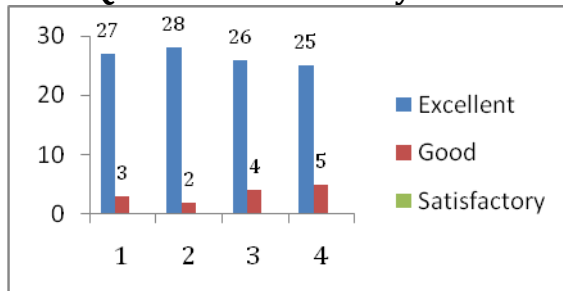
Feedback Form

| | Excellent | Good | Satisfactory |
|--|----------------------|----------------------|----------------------|
| Organization of the programme | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Registration process and communication | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Hospitality/Facilities | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Overall Feedback | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Other Comments: | <input type="text"/> | | |

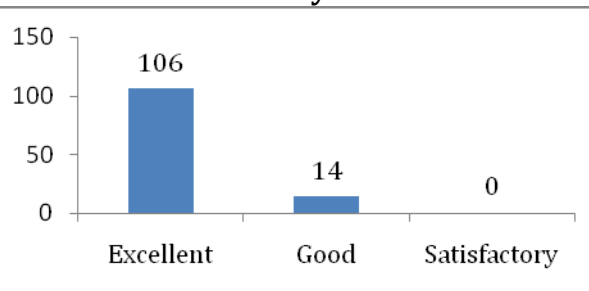
Total Samples : 30

| Q.NO | Excellent | Good | Satisfactory |
|-----------------|--|------------|--------------|
| 1 | 27 | 03 | 00 |
| 2 | 28 | 02 | 00 |
| 3 | 26 | 04 | 00 |
| 4 | 25 | 05 | 00 |
| Total | 106 | 14 | 00 |
| In % | 88% | 12% | - |
| Comments | <ul style="list-style-type: none"> • Very good FDP • It was a good learning experience. • This FDP was excellent and got awareness on lot of new concepts | | |

Question Based Analysis



Overall Analysis





DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR

2023 - 2024/ ODD SEMESTER

5 DAY FDP REPORT

19.09.2023 - 23.09.2023

On

**MICROSOFT POWER BI, ANACONDA TOOLS AND
IBM CONGOS ANALYTICS FOR BUSINESS
ANALYTICS AND DATA SCIENCE**



ACADEMIC YEAR 2023-2024 (ODD SEMESTER)

IEEE MADRAS SECTION SPONSORED

THREE DAY WORKSHOP

On

“Data Science and Machine Learning”

18.10.2023 - 20.10.2023

REPORT

Department of Computer Science Engineering of Kings College of Engineering in association with IEEE MADRAS SECTION organized Three day - Workshop on “Data Science and Machine Learning” during 18.10.2023 - 20.10.2023

Objective:

This workshop aims to equip participants with in-depth knowledge and hands-on expertise in Data Science and Machine Learning. By fostering understanding, enhancing practical skills, and encouraging collaboration, we prepare attendees to tackle real-world challenges in diverse industries. Our goal is to empower participants with the versatility and innovation required to excel in the dynamic fields of Data Science and Machine Learning.

Resource Persons:

Dr.K.Lakshmi, Professor, Sri Manakula Vinayagar Engineering College, Puducherry

Mr.K.M.Arivu Chelvan, S/w Architect, E.K software solutions, Thanjavur.

Dr.M.Brindha, Asst Professor, NIT, Trichy.

Dr.S.Kanimozhi, Asst Professor, VIT, Chennai.

Mr.S.Ramprakash, Teaching Fellow, UCE, Thirukkuvalai.

Mr.S.Dinesh Dhanabalan, Asst Professor, Arifa Institute of Technology, Esanoor.

Convener

Dr.K.Abhirami, HOD(i/c)/CSE, Kings College of Engineering.

Ms.S.Abikayil Aarthi, AP/CSE, Kings College of Engineering.

Coordinators

Mrs.B.Bavithira, AP / CSE, Kings College of Engineering.

Ms.K.Abinaya, AP / CSE, Kings College of Engineering.

Programme Type: Workshop

Inaugural Session:

Welcome address by Dr.K.Abhirami, HOD(i/c)/CSE

Presidential address by Dr.J.Arputha Vijaya Selvi, Principal & SBC, IEEE - STB

Overview:

Day 1 commenced with Dr. K. Lakshmi's insightful session on Python programming and foundational statistics, followed by Mr. K.M. Arivu Chelvan's expertise in NumPy and Pandas. Day 2 brought a deep dive into data visualization by Dr. M. Brindha and statistical analysis tailored for data by Dr. S. Kanimozhi. The workshop culminated on Day 3 with Mr. S. Ramprakash showcasing real-world data science applications, followed by Mr. S. Dinesh Dhanabalan's interactive hands-on workshop. Participants not only gained theoretical knowledge but also honed their practical skills, empowering them to tackle real-world challenges in the ever-evolving fields of data science and machine learning. We extend our heartfelt gratitude to our esteemed speakers and enthusiastic participants for making this workshop a resounding success.

Benefits in terms of Learning / Skills / Knowledge obtained:

- Enhanced Skills in Data Science and Machine Learning.
- Hands-on Practice with Real-world Data Projects.
- Expert Guidance from Industry-leading Professionals.
- Valuable Networking Opportunities with Peers and Experts.
- Career-Ready Skills for Competitive Job Market.

Workshop Summary

The Overall Summary was dictated by Ms.S.Abikayil Aarthi, IEEE SB Secretary, Convenor

Valedictory Function:

The feedback Analysis from the participants were collected.

Vote of Thanks was given by Ms.B.Bavithra AP/CSE, Kings College of Engineering.

Agenda:



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

IEEE Madras Section sponsored

Three Days National Level Workshop on

"Data Science & Machine Learning "

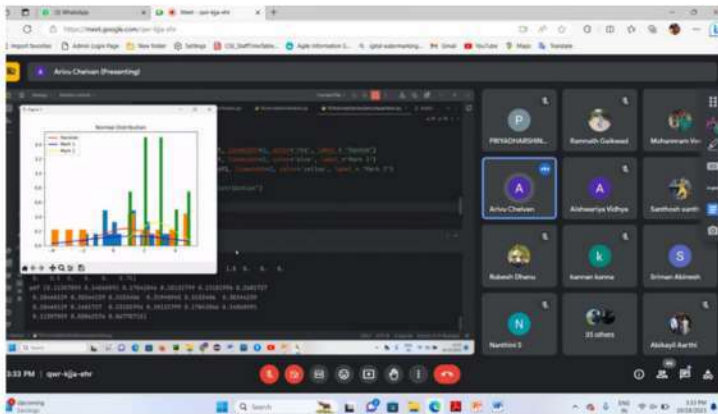
AGENDA

| DAY - 1 (18.10.2023) | |
|-------------------------|--|
| Timing | Programme Details |
| 10.15 a.m. - 10.20 a.m. | Welcome Address by Dr. K. Abhirami, HoD(i/c)/CSE |
| 10.20 a.m. - 10.25 a.m. | Presidential Address by Dr. J. Arputha Vijaya Selvi, Principal & SBC, IEEE STB , KCE |
| 10.25 a.m. - 10.30 a.m. | Introduction to Resource Person by Ms. S. Abikayil Aarthi, AP/ CSE & Secretary IEEE- STB |
| 10.30 a.m. - 12.00 p.m. | Session 1 - Dr. K. Lakshmi, Professor, SMVEC, Pondicherry |
| 12.00 p.m. - 12.05 p.m. | Vote of Thanks by Mr. Nithesh, IV / CSE |
| 2.00 p.m. - 2.05 p.m. | Introduction to Resource Person by Ms. B. Bavithra, AP/ CSE |
| 2.05 p.m. - 3.30 p.m. | Session 2 - Mr. K. Arivu Chelvan, Software Analyst E K Software solutions, Thanjavur |
| 3.30 p.m. - 3.35 p.m. | Vote of Thanks by Ms. K. Abinaya, AP/CSE |

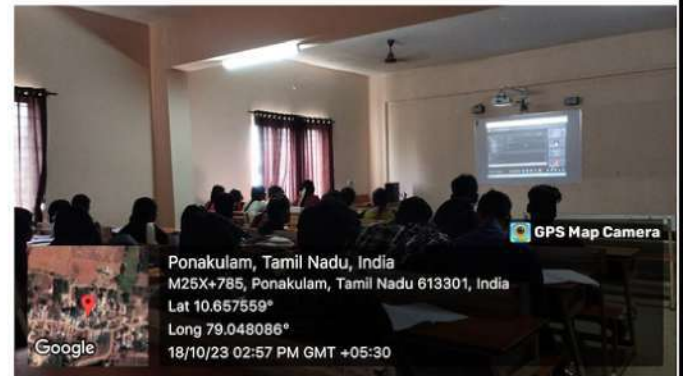
| DAY - 2 (19.10.2023) | |
|-------------------------|--|
| Timing | Programme Details |
| 10.25 a.m. - 10.30 a.m. | Introduction to Resource Person by Ms. B. Bavithra, AP/ CSE |
| 10.30 a.m. - 12.00 p.m. | Session 1 - Dr. M. Brindha, Asst. Professor/CSE, NIT, Trichy |
| 12.00 p.m. - 12.05 p.m. | Vote of Thanks by Mr. Nithesh, IV / CSE |
| 2.00 p.m. - 2.05 p.m. | Introduction to Resource Person by Ms. K. Abinaya , AP/ CSE |
| 2.05 p.m. - 3.30 p.m. | Session 2 - Dr. S. Kanimozhi, Asst. Professor, VIT, Chennai |
| 3.30 p.m. - 3.35 p.m. | Vote of Thanks by Mr. Rahul, III / CSE |

| DAY - 3 (20.10.2023) | |
|-------------------------|---|
| Timing | Programme Details |
| 10.25 a.m. - 10.30 a.m. | Introduction to Resource Person by Mr. Rahul, III/ CSE |
| 10.30 a.m. - 12.00 p.m. | Session 1 - Mr. S. Ramprakash, Teaching Fellow, Thirukkuvalai |
| 12.00 p.m. - 12.05 p.m. | Vote of Thanks by Mr. Nithesh, IV / CSE |
| 2.00 p.m. - 2.05 p.m. | Introduction to Resource Person by Ms. K. Abinaya , AP/ CSE |
| 2.05 p.m. - 3.30 p.m. | Session 2 - Mr. S. Dinesh Dhanabalan, Asst. Professor, Arifa Institute of Technology, Easanoor. |
| 3.30 p.m. - 3.40 p.m. | Feedback Session |
| 3.40 p.m. - 3.45 p.m. | Workshop Summary - Ms. S. Abikayil Aarthi, AP/ CSE & Secretary IEEE- STB |
| 3.45 p.m. - 3.50 p.m. | Vote of Thanks by Ms. B. Bavithra, III / CSE |

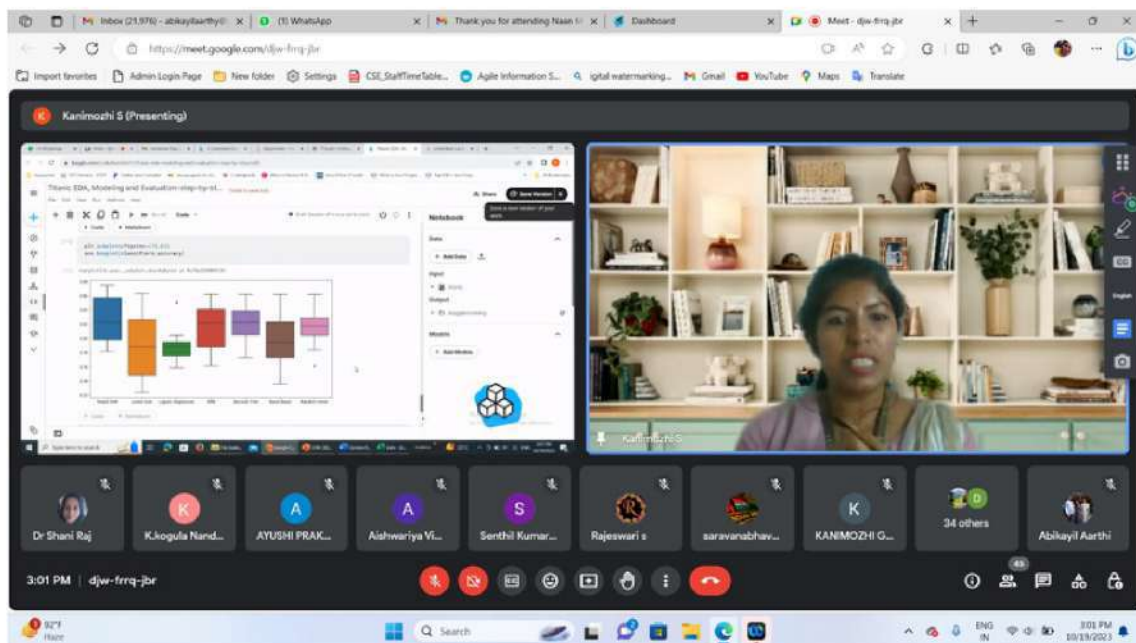
Event Photographs:



Hands-on Session



Explanation part in session



Discussion of Resource Person with participants



Certificate Distribution

Innagural photos:



Vote of Thanks:



Feedback session:



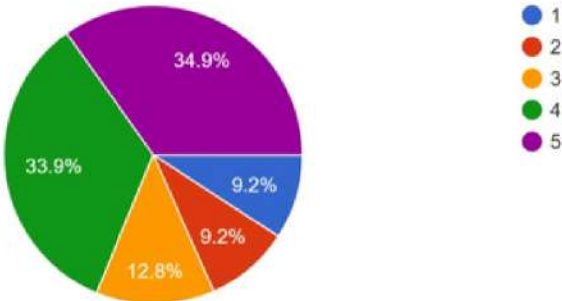
Feedback given by R. SrimanAbinesh , (AI & ML) student Paavai Engineering college , Pollachi



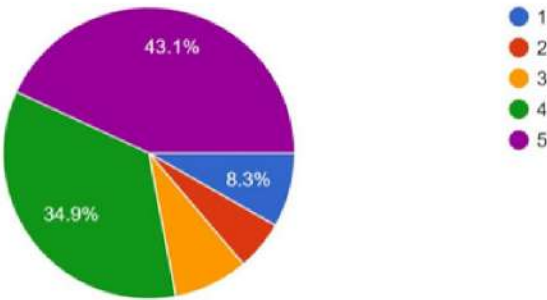
Certificate Distribution for External Participants

Feedback:

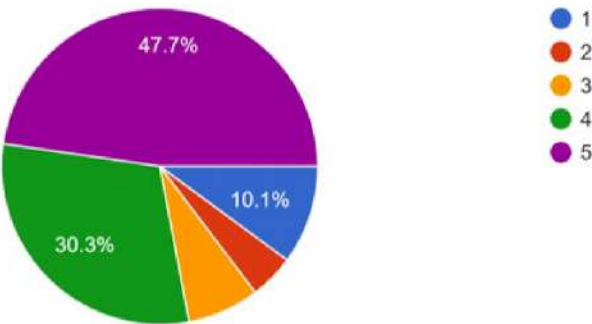
Video quality
109 responses



Is the session useful? Rate the session
109 responses



Content in the session useful? Rate the session
109 responses



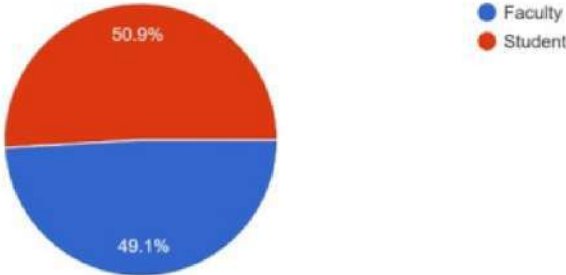
Participation details:

For our workshop Participants from various States had Participated

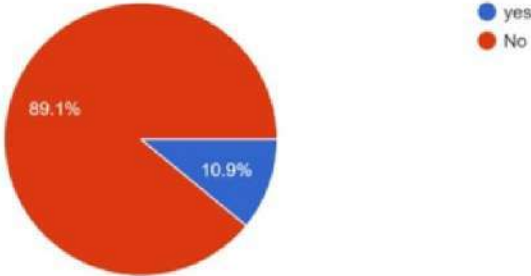
1. GNA University, Punjab
2. Sri Venkateshwara College of Engineering, Andrapradesh
3. College of Engineering Karunagappalli, Kollam
4. College of Engineering Chengannur, Alappuzha
5. Saveetha College of Engineering, Chennai
6. Center for differently abled persons - Bharathidasan University
7. Paavai College of Engineering, Naamakkal
8. Sri Manakula Vinayagar Engineering College, Puducheerry
9. Sengunthar Engineering College, Erode
10. P.R Engineering College, Vallam
11. K.S.R Institute of Technology, Thiruchengodu
12. Sethu Institute of Technology, New Delhi
13. Dr. Baba Sahib Ambedhkar Marathwada University, Maharastra
14. Amirtha college of Engineering, Chennai
15. Hindustan College of Engineering, Coimbatore
16. Adhitya Institue of Technology, Coimbatore
17. Government College of Engineering, Sengipatti
18. P.A College of Engineering and Technology, Pollachi
19. Vinayaga Mission Kirupananda Variyar Engineering College, Salem
20. M.G.M University, Maharastra
21. SRM-TRP Engineering College, Chennai
22. Periyar Maniyammai Institute of Science and Technology, Vallam

Response Details:

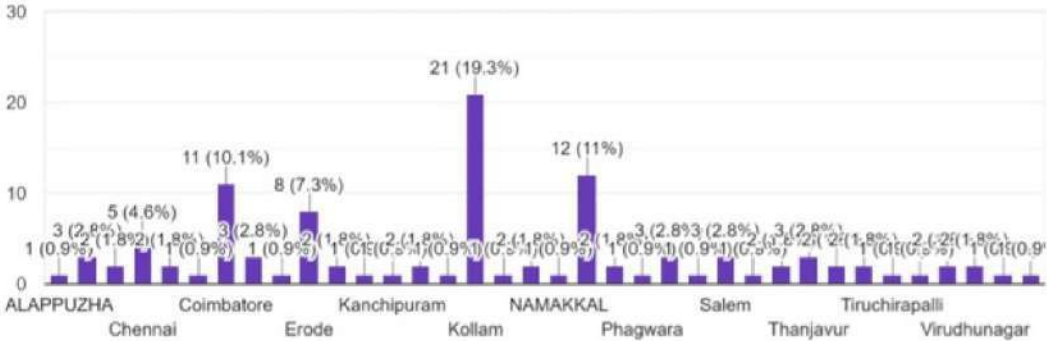
Participant
110 responses



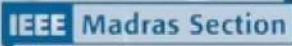


IEEE member
110 responses



District
109 responses





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Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.







3 day Workshop on DATA SCIENCE & MACHINE LEARNING

SPONSORED BY IEEE MADRAS SECTION
HELD IN HYBRID MODE

OFFLINE
VENUE: SMART CLASS ROOM
IT BLOCK, KINGS COLLEGE OF ENGG

ONLINE
TO JOIN THE MEETING CLICK THIS VIDEO LINK
[HTTPS://L1NQ.COM/T5QTD](https://l1nq.com/t5qtd)

18.10.2023 INAUGURAL FUNCTION ON 10.15 AM.

| | 10:30-12:00 | 14:00-15:30 |
|---------------------|--|---|
| 18th OCT | <p>INTRODUCTION TO PYTHON & STATISTICS</p>  <p>DR. K. LAKSHMI PROFESSOR, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, PUDUCHERRY</p> | <p>WORKING WITH NUMPY, PANDAS</p>  <p>MR. K. M. ARIVU CHELVAN S/W ARCHITECT EK SOFTWARE SOLUTIONS, THANJAVUR</p> |
| 19th OCT | <p>DATA VISUALIZATION</p>  <p>DR. M. BRINDHA ASST. PROFESSOR, NIT, TRICHY</p> | <p>STATISTICS FOR DATA SCIENCE</p>  <p>DR. S. KANIMOZHI ASST. PROFESSOR, VIT, CHENNAI</p> |
| 20th OCT | <p>HANDS - ON SESSION</p>  <p>MR. S. RAMPRAKASH TEACHING FELLOW, UCE, THIRUKKUALAI</p> | <p>HANDS - ON SESSION</p>  <p>MR. S. DINESH DHABALAN ASST. PROFESSOR, ARIFA INSTITUTE OF TECHNOLOGY, EASANOOR</p> |

ORGANIZED BY
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
DR. K. ABHIRAMI, AP/ CSE MS. S. ABIKAYIL AARTHI, AP/ CSE

Sample Certificate:




Workshop Team:



***** THANK YOU *****


4/11/23
Convenor


4/11/23
HOD(i/c) / CSE


Vice Principal


04/11/2023
Principal



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 – 2024 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 4.11.23 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about load balancing algorithm in cloud computing at the database level.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 4.11.23 from 10.30 A.M to 11.15 A.M in Smart Class room. Ms.B.Sangeetha explained the concepts of load balancing which helps to distribute all loads (traffic) that come from the client-side. It also ensures that each computing resource is distributed efficiently and fairly for users. She described the four types of load balancer in AWS and its benefits. The proposed load balancing model consists of an automatic scaling listener, application module, migration module monitoring and CPU performance module. The automatic scaling listener is divided into three sub-modules monitor, analyzer, and planner under the knowledge base. The automatic scaling listener module is connected with the Application module and monitoring module. She concluded that automatic scaling listener monitored the network traffic and spread the dynamic load equally across multiple cross-region for better computing load.

OUTCOME OF THE EVENT

- Got an idea about load balancing in cloud computing
- Motivate the students to do project in this domain
- Faculty members may have a research idea in this domain

Journal Details:

Jaleel Nazir, et.al, "Load Balancing framework for cross region tasks in cloud computing", *Computers, Materials & Continua* DOI:10.32604/cmc.2022.019344



Ms.B.Sangeetha discussed about load balancing algorithm in Cloud Computing



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 – 2024 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 7.11.23 at smart classroom.

OBJECTIVE

The objective of this seminar is to facilitate the upgradation of knowledge, skills and create awareness about the recent trends in CSE.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 7.11.23 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.S.Abikayil Aarthi AP/CSE list down the recent trends of emerging technologies in Computer Science and Engineering domain. She explained the various approaches of Artificial Intelligence, its application in real time scenario. She also described about the difference between machine learning and deep learning. She explained the concepts of Augmented Reality with real time application like snapchat. She mentioned the influence of Computer Science & Engineering domain in Robotics field. She concluded that how the modern desktop / mobile applications were enhanced using these technologies.

OUTCOME OF THE EVENT

- Got an idea about Augmented and Virtual Reality
- Motivate the students to do mini project / project in these areas.
- Faculty members may use these technologies for their teaching learning process.
- Faculty members may select research topics in these domains.



Ms.S.Abikayil Aarthi AP/CSE discussed about various emerging trends in CSE Domain



Department of computer Science & Engineering
Academic Year (2023 – 2024) ODD
Workshop on " Cloud Computing AWS"

Date: 15.11.2023

Abstract

The workshop on "Cloud Computing with Amazon Web Services (AWS)" provided a comprehensive overview of cloud concepts, AWS services, and certification courses on cloud. Beneficiaries of this program in count 70 This report encapsulates the key learning's and highlights from the workshop sessions held on 14.11.2023.

Workshop Objectives

- Introduce participants to the fundamental concepts of cloud computing.
- Familiarize attendees with AWS services and their applications.
- Provide hands-on experience through guided exercises on the AWS platform.
- Certification courses on Cloud Computing AWS.

Workshop Agenda

- Introduction to Cloud Computing
- Definition, benefits, and deployment models of cloud computing.
- AWS Overview

Overview of AWS services:

- EC2
- S3
- RDS
- Lambda, etc.

Hands-on Sessions

- Creating and configuring EC2 instances.
- Uploading and managing data in S3 buckets.
- Setting up a relational database using RDS.
- Implementing server less functions with Lambda.
- Best Practices and Use Cases
- Security best practices.
- Real-world applications and case studies.
- Q&A and Conclusion

Workshop Highlights

Cloud Computing Fundamentals

Scalability and Flexibility: Explained how cloud resources can scale on-demand, accommodating varying workloads.

Cost-Efficiency: Discussed cost advantages by paying for what is used rather than maintaining physical infrastructure.

AWS Services Exploration

EC2 Instances: Participants launched instances with different configurations and understood various instance types.

S3: Demonstrated how to upload, manage, and secure objects within S3 buckets.

RDS: Created a relational database, configured security settings, and connected applications to the database.

Lambda Functions: Deployed serverless functions and triggered them using various AWS services.

Practical Hands-on Experience

- **Step-by-step Guidance:** Participants followed detailed instructions to perform tasks on the AWS console, gaining practical experience.
- **Troubleshooting:** Addressed common issues encountered during exercises, enhancing troubleshooting skills.

Best Practices and Real-World Scenarios

Security Measures: Emphasized best practices for securing AWS resources, including IAM roles, encryption, and access controls.

Use Cases: Explored case studies where AWS services were leveraged for diverse applications like web hosting, analytics, and IoT.

Participant Feedback

Positive Aspects:

- Hands-on exercises were highly beneficial.
- Clear explanations helped in understanding complex concepts.
- Practical use cases made the content relatable.
- Areas for Improvement:
- Some participants requested more advanced-level exercises.
- A longer workshop duration to delve deeper into certain services.

Conclusion

The workshop served as a foundational guide for individuals new to cloud computing and AWS services. Participants gained practical experience and insights into cloud deployment models, AWS offerings, and best practices. The interactive sessions and hands-on exercises contributed to a comprehensive learning experience. Each student assure to register in the AWS cloud certification course.

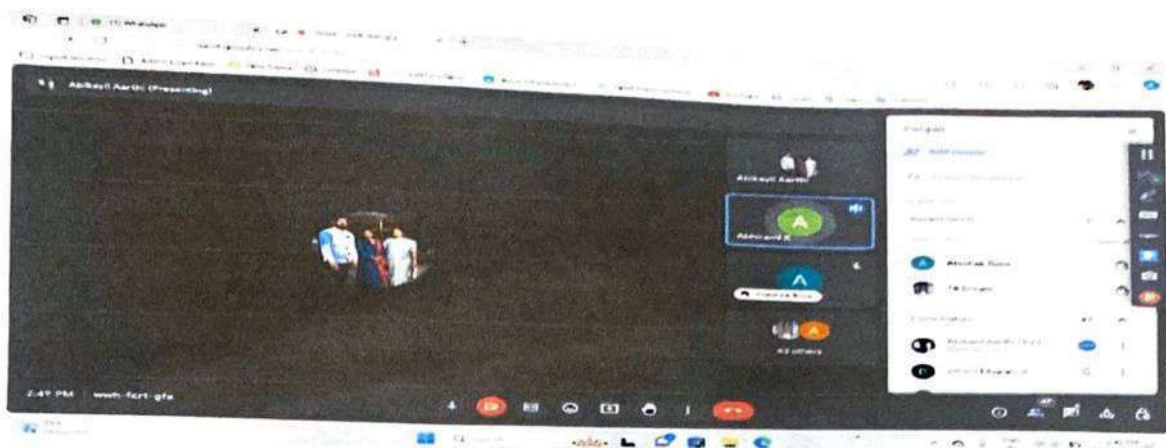
Recommendations

Consider offering an advanced-level workshop for individuals with prior AWS experience. Extend the workshop duration to cover additional advanced topics or allow more time for in-depth exploration of services.

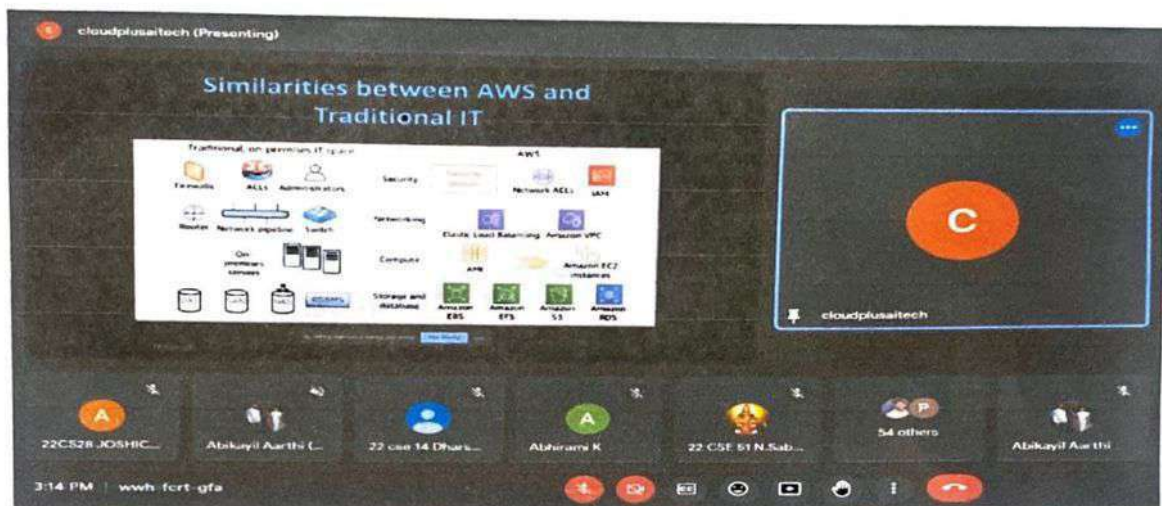
Acknowledgments

We extend our gratitude to the workshop facilitators, AWS trainers, and all participants whose active engagement made this learning experience enriching and insightful.

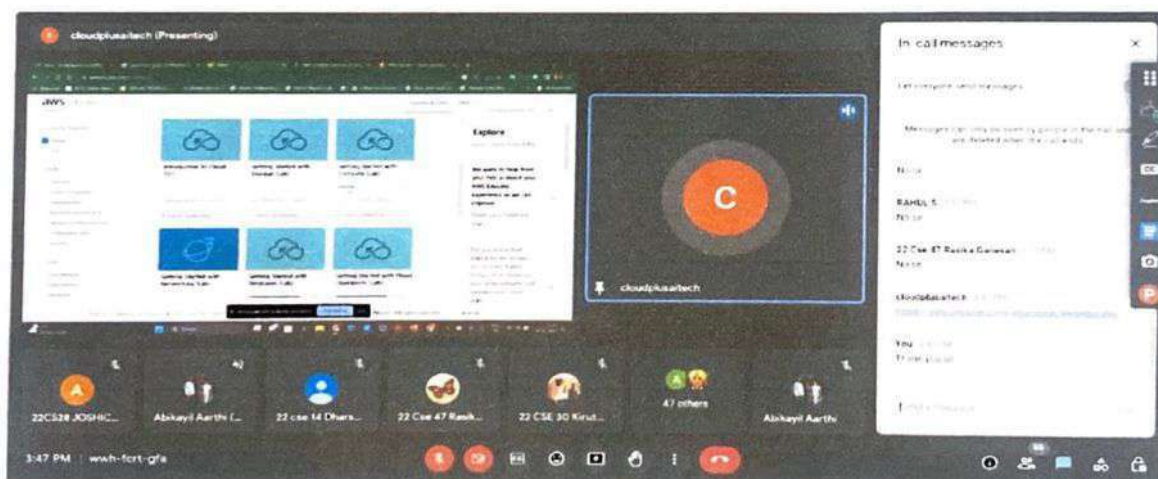
Session Clips



Welcome Address by Dr. K. Abhirami



Explanation about cloud clip



Explanation clip about Certification course on cloud

Broucher

KINGS COLLEGE OF ENGINEERING
IEEE

**DEPARTMENT OF
COMPUTER SCIENCE & ENGINEERING**

**WORKSHOP
ON
CLOUD COMPUTING (AWS)**

FOCUS TOPIC
DISCUSSION
OUTCOME

RESOURCE PERSON
 Dr. T. Arundhappan, Ph.D.,
 AWS Certified Solution Architect
 Associate Professor
 K. Ramakrishnan College of Technology,
 Tiruchirappalli,
 arundhappan.tce@kce.ac.in

14-11-2023 **Venue**
 Smart Class Room / CSE Smart
 Kings college of Engineering

Make use of it....

Co-ordinator
 Ms. S. Abhaya Aarthi, AP/ CSE

Organised By,
 Department of Computer Science & Engineering

Sample Certificate

KINGS COLLEGE OF ENGINEERING
IEEE

**CERTIFICATE
OF PARTICIPATION**

DHARANI. R, 3-CSE, KCE

For successfully participated in the workshop "Cloud Computing (AWS)" organized by Department of
 Computer Science & Engineering at Kings College of Engineering, held on November 14, 2023

Issue Date: [14.11.2023] KCEPAXRRL/CWL-YoQOs
 Certificate ID

Ms. S. Abhaya Aarthi, AP/CSE Dr. K. Abhirami Dr. J. Arputha Vignya Selvi

Event Coordinator HoD(i/c)/ CSE Principal

WWW.KINGS-CEE-INDIA

[Signature]
 20/11/23
 Event Coordinator

[Signature] 20/11/23
 HoD(i/c)/ CSE

[Signature]
 20/11/2023
 Principal

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023 - 2024

Report on the Inaugural Program of the IPR Awareness Initiative

Date: 15.02.2024

Venue: Pallava Hall, Kings College of Engineering

Organized by: IPR Cell, KCE

Sponsored by: TamilNadu State Council for Science and Technology

Introduction

The inaugural program of the on Intellectual Property Rights (IPR) was held on 15.02.2024 at Pallava Hall, Kings College of Engineering. The event aimed to spread awareness about the importance of IPR among students, faculty and External Participants.

Inauguration Ceremony

The program began at 10.00 A.M. with the welcoming of dignitaries and participants. Dr. S. Kannan, Co-ordinator of IPR Cell welcomed the gathering and set the tone for the event.

Dignitaries Present:

- **Chief Guest:** Dr. V. Thiruvalluvan, Vice Chancellor of Tamil University, Thanjavur
- **Guest of Honor:** Dr. R. Rajendran, Secretray, KCE
- **Other Notable Guests:** Dr. J. Arputha Vijaya Selvi, Principal, KCE

The ceremonial lighting of the lamp was conducted, symbolizing knowledge and enlightenment.

Keynote Address

The Chief Guest **Dr. V. Thiruvalluvan, Vice Chancellor of Tamil University**, delivered an insightful keynote address highlighting the significance of intellectual property in today's globalized world. The speech emphasized the importance of protecting innovations, trademarks, copyrights, and patents to foster creativity and economic growth.

Special Sessions

Following the inauguration, several sessions were conducted:

1. **Overview of IPR** by Dr. J. Arputha Vijaya Selvi, Principal, KCE
2. **Patent Filing Procedures** by S. Kannan, Associate Professor/ CSE.

3. Role of Copyright in Creative Industries by Ms. S. Abikayil Aarthi, KCE.

Interactive Segment

An interactive Q&A session allowed participants to clarify their doubts about IPR. The session was lively, with active participation from the audience.

Vote of Thanks

The event concluded with a vote of thanks by Ms. S. Abikayil Aarthi, AP/ CSE, KCE, expressing gratitude to the dignitaries, participants, and organizing team for making the event a success.

Outcome

The program was attended by approximately 34 participants. Feedback from attendees indicated a high level of satisfaction, and many expressed interest in attending future events on IPR.

Conclusion

The inaugural program successfully achieved its objective of spreading awareness about IPR. The event served as a platform for knowledge-sharing and encouraged participants to consider protecting their intellectual property as a vital step in their professional and academic endeavors.

Utilization of Fund

| S. No | Head of Expenditure | Amount in Rs |
|----------------|------------------------------|--------------|
| 1 | Workshop Expense, Madurai | 750.00 |
| 2 | Visit to TNSCST, Chennai | 1880.00 |
| 3 | Honorarium – Resource Person | 10,000.00 |
| 4 | TA | 5,000.00 |
| 5 | Hospitality | 2,980.00 |
| 6 | Stationaries & Printing | 2,320.00 |
| 7 | Food & refreshment | 2,720.00 |
| Total Expenses | | 25,650.00 |

Report Prepared by,

S. Abikayil Aarthi, AP/ CSE
Kings College of Engineering
Thanjavur.



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 27.02.2024 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain the insight knowledge about Android basis with compose.

SESSION DETAILS

The seminar for the faculties of Computer Science & Engineering department was conducted on 27.02.2024 from 12.30 P.M. to 01.15 P.M.in Smart Classroom. Ms. T. Abithakujalambal explained about "Android Basics with Jetpack Compose" the main aim to introduce internal staff to modern Android development practices using Jetpack Compose. Jetpack Compose is Google's latest toolkit for building native UI for Android applications. This session focused on its key features, benefits, and practical implementation techniques to improve development efficiency.

Key Takeaways

- Jetpack Compose simplifies UI development by using a declarative approach.
- The modularity and reusability of Compose components help improve productivity.
- Compose is compatible with existing View-based UIs, enabling gradual migration.
- Android Studio provides robust support for Compose, including previews and code hints.

The seminar successfully introduced the internal staff to Android development fundamentals and Jetpack Compose. By adopting Compose, the team can leverage its modern features to build efficient and user-friendly applications.



Ms. T. Abithakujalambal shared their concepts clips

S. Puv 7/5/24
Coordinator
(S. Puvaneshwari AP/ CSE)

J. S 7/5/24
HoD/ CSE



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023- 2024 / EVEN SEMESTER

WEBINAR REPORT

Organizers: Dept of CSE in association with R&D Section

The Department of Computer Science and Engineering in association with R&D section along with support of IEEE STB16621 , organised a Webinar on “**AI Tools for Academic Research Writing and Publishing**” in 07.03.2024 at 11.00 am to 12.30 pm. Welcome address was given by Ms. B. Bavithra, Assistant Professor / CSE, Kings College of Engineering. Resource Person **Dr. K.S. Sowmiya Rani, Cactus Communication, Andheri East, Mumbai**, was introduced by Ms. N. Dhamayandhi, Assistant Professor / CSE, Kings College of Engineering.

Objective:

The webinar aimed to introduce researchers to various AI tools that can enhance their academic research writing and publishing process. It focused on demonstrating how these tools can streamline tasks such as literature review, data analysis, writing assistance, and manuscript submission.

Agenda:

1. Introduction to AI tools for academic research
2. Literature review with AI assistance
3. Data analysis and visualization tools
4. Writing assistance with AI
5. AI-powered manuscript submission platforms
6. Q&A session

Key Takeaways:

1. Streamlined Literature Review: Participants learned about AI tools that can efficiently sift through vast amounts of academic literature, extract relevant information, and summarize key findings, thus expediting the literature review process.
2. Enhanced Data Analysis: Various AI-driven tools were showcased for data analysis and visualization, enabling researchers to derive meaningful insights from their data more quickly and accurately.

3. Writing Assistance: AI-powered writing tools were introduced, which offer grammar and style suggestions, as well as assistance in structuring and organizing research papers effectively.

4. Manuscript Submission: The webinar highlighted AI platforms that streamline the manuscript submission process, helping researchers choose suitable journals, format their manuscripts according to journal guidelines, and even predict the chances of acceptance.

5. Interactive Q&A: Participants had the opportunity to engage with the speakers during the Q&A session, where they could seek clarification on specific tools, share experiences, and explore further insights into AI applications in academic research.

Future Directions:

1. Continued Exploration: Encourage participants to explore and experiment with the showcased AI tools in their research workflows.

2. Skill Development: Offer workshops or follow-up sessions to provide hands-on training on using AI tools effectively.

3. Community Building: Establish a community platform where researchers can share their experiences, best practices, and new discoveries regarding AI tools for academic research.

Webinar Boucher

The image is a colorful flyer for a webinar. At the top left, it features the 'KINGS' logo and the text 'DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING' and 'R&D SECTION'. To the right is a large graphic of a laptop displaying 'AI' icons. Below the department name, it says 'Proudly Presents Webinar on "AI TOOLS FOR ACADEMIC RESEARCH WRITING & PUBLISHING"'. The speaker is listed as 'Dr. K.S. Sowmiya Rani, Ph.D.' with a small photo. The date '07.03.2024' is shown. Student volunteers 'Ms. B. Priyaranil & Ms. N.N. Varsha' are listed. A QR code is present with the text 'scan me to register'. The coordinator is 'Ms.S. Abikayil Aarthi, AP/ CSE'. The convener is 'Dr. K. Abhirami, Assoc. Prof/ CSE' and 'Dr. P. Shantharaman, Prof./ MECH'. The principal is 'Dr. J. Arputha Vijaya Selvi' with 'IEEE SBC - 16521' below.

KINGS
DEPARTMENT OF
COMPUTER SCIENCE
& ENGINEERING
In association with
R&D SECTION
Proudly Presents
Webinar on
**"AI TOOLS FOR ACADEMIC
RESEARCH WRITING &
PUBLISHING"**

Speaker
Dr. K.S. Sowmiya Rani, Ph.D.
Cactus Communications,
Andheri East, Mumbai

Student Volunteers
Ms. B. Priyaranil & Ms. N.N. Varsha
IV Year CSE

Co-ordinator
Ms.S. Abikayil Aarthi, AP/ CSE

Convener
Dr. K. Abhirami, Assoc. Prof/ CSE
Dr. P. Shantharaman, Prof./ MECH

Principal
Dr. J. Arputha Vijaya Selvi
IEEE SBC - 16521

07.03.2024

scan me to register

Session Snaps



Offline Participation Snap


List of Participants:


| <i>S.No</i> | <i>Participant Details</i> | <i>In Count</i> |
|---------------------|-----------------------------------|------------------------|
| 1 | UG Participants | 60 |
| 2 | Faculty | 11 |
| Total Beneficiaries | | 77 |

Conclusion:

The webinar provided valuable insights into the applications of AI tools in academic research writing and publishing. By leveraging these tools, researchers can enhance their productivity, improve the quality of their work, and navigate the complexities of the publishing process more efficiently. Moving forward continued exploration, skill development, and community engagement will be crucial in maximizing the benefits of AI in academic research.


Co-ordinator
(Ms. S. Abikayil Aarthi AP/ CSE)


HoD/ CSE
(Dr. S. M. Uma)


Principal
(Dr. J. Arputha Vijaya Selvi)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 - 2024 EVEN SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 14.03.24 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about detection of anomalies and threats, improvement in threat intelligence in cloud environment.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 14.03.24 from 01.15 P.M to 01.45 P.M in Smart Class room. Ms.M.Vidhya explained about various deep learning architecture such that Convolutional Neural Network (CNN), Artificial Neural Network (ANN). Deep learning models can identify unusual patterns and behaviors in network traffic and user activities that may indicate potential security threats. Deep learning models can be integrated into security orchestration, automation, and response (SOAR) platforms to automate the response to detected threats. This can include isolating affected systems, blocking malicious IP addresses, and initiating forensic investigations. By understanding user behavior, deep learning models can enhance access control mechanisms, ensuring that only legitimate users gain access to sensitive resources. Deep learning models can be used to create intuitive visualization tools that help security analysts understand complex threat landscapes and make informed decisions.

OUTCOME OF THE EVENT

- Got an idea about deep learning in cloud security
- Motivate the students to do project in this domain
- Faculty members may have a research idea in this domain

Journal Details:

Lumbardha Hasimi, et.al, "Cloud Computing Security and Deep Learning: An ANN approach", *The 14th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN 2023) November 7-9, 2023, Almaty, Kazakhstan*



Ms.M.Vidhya discussed about various architecture of deep learning models.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24 / EVEN SEMESTER
REPORT -INTER-COLLEGE MINI PROJECT EXPO

Batch: 2021-2025 Year/Sem: III/VI

Introduction

The Inter College Mini Project Expo was conducted in “ONE DAY TECHIE FEST” Workshop held on 14.03.2024, organized by Department of Computer Science and Engineering, Kings college Of Engineering, Pudukkottai, showcased an array of innovative projects from students across various colleges. The event aimed to foster creativity, collaboration, and practical application of theoretical knowledge. It provided a platform for students to present their projects, gain feedback from peers and experts, and network with like-minded individuals.

Event Overview

The expo featured over 20 projects across diverse fields including computer science and engineering. Each project was evaluated based on originality, technical complexity, practical application, and presentation skills.

Project Highlights

Several standout projects captured the attention of judges and attendees alike. One notable project was the "Finding Food Recipes by available ingredients" developed by a team from K.S.K College of Engineering and Technology, Kumbakonam.

Conclusion

The Inter College Mini Project Expo was a resounding success, highlighting the ingenuity and dedication of students. It provided valuable exposure and learning opportunities, encouraging participants to pursue their innovative ideas further. The event not only celebrated student achievements but also underscored the importance of practical application of knowledge in solving real-world problems. The organizers expressed their gratitude to all participants, judges and looked forward to even greater participation and groundbreaking projects in future expos.


HOD/CSE 14/8/24

H.O.D of Computer Science & Engineering
KINGS COLLEGE OF ENGINEERING
Punalkulam, Gandarvakottai (Tk).
Pudukkottai (Dt) - 613 303.


PRINCIPAL

Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 – 2024 EVEN SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 2.4.24 at smart classroom.

OBJECTIVE

The objective of this seminar is to educate and empower faculties with knowledge and strategies to effectively address obesity through health promotion efforts.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 2.4.2024 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.D.Mangalambigai explained the definition of obesity and its classification. She also discussed about the causes and risk factors such that behavioral factors, genetic factors and socio-economic factors. She described various case studies highlighting effective strategies and outcomes about obesity prevention programs. She also explained about various health promotion and prevention strategies such as,

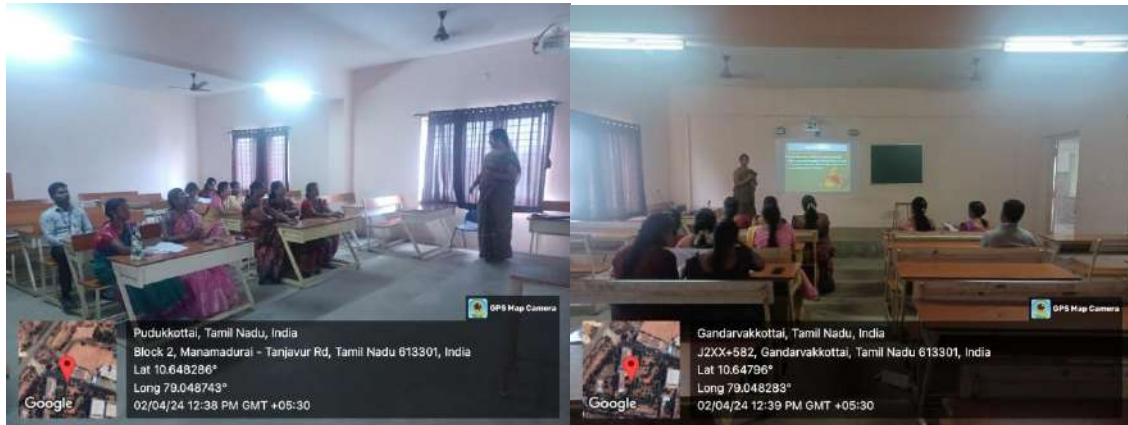
- Physical activity promotion
- Nutrition Education
- Behavioral Change Approaches
- Policy and Environmental Changes

OUTCOME OF THE EVENT

- Got an awareness about the complexities of obesity
- acquire new knowledge about effective strategies for health promotion and obesity prevention
- Faculty members may have a research idea to predict obesity in prior.

Journal Details:

Leire Bastida, "Promoting Obesity Prevention and Healthy Habits in Childhood: The OCARIoT Experience", IEEE Journal of Translational Engineering in Health and Medicine PP(99):1-1, March 2023.



Ms.D.Mangalambigai discussed about modern health issues and its causes



ACADEMIC YEAR 2023-24 (EVEN SEMESTER)
Internal Workshop
On
"Building and Training AI Model using Tableau"
10.04.24

REPORT

Department of Computer Science & Engineering in Kings College of Engineering organized an internal workshop on "Building and Training AI Model using Tableau" on **10.04.24**.

Objective:

The main aim of the workshop is to understand the advent of AI has revolutionized various industries, and Tableau, a powerful data visualization tool, has embraced this technological advancement. By integrating AI capabilities, Tableau empowers users to delve deeper into data, automate complex analysis, and generate insightful visualizations. This democratization of AI enables a broader audience to leverage its potential, driving data-driven decision-making and accelerating time to insight. With AI-powered features like natural language processing and automated insights, Tableau enhances user experience and fosters a more intuitive exploration of data.

Resource person:

Mr.S.Ramprakash, Teaching Faculty, University College of Engineering, Thirukkuvilai, handled the session. He interacted with students and make students to delve on the concept of AI. In afternoon session students are trained for AI Model using Tableau

Participants:

IIIrd Year students of CSE totally of 60 participants.

Inaugural Session:

Inaugural session was started with Welcome address and Introduction about the Resource Persons delivered by Ms. S. Abikayil Aarthi, AP/ CSE.

Session highlights: (Implement in the Real time Problems)

In this session, resource person explained about the how Tableau simplifies complex AI concepts, making them accessible to a wider audience. He elaborated on how Tableau empowers analysts to leverage AI without extensive coding or machine learning expertise. He also explains techniques to uncover complex patterns and trends within data using AI-powered

algorithms. He listed the career opportunities and scope for engineers in field of AI using the tool tableau.

In the afternoon session, participants gathered at CSE LAB1 for the hands-on session. He listed the availability of components and features in that tool. He demonstrates the AI model using tableau. All the participants eagerly learned the tool. The program was eagerly attended by all participants, who gained knowledge on AI and the tool.

Benefits in terms of Learning/Skills/Knowledge obtained:

- Learn to automate data preparation, modeling, and visualization processes, reducing time to insight.
- Learn how to use AI to personalize customer experiences and predict customer behavior, leading to increased customer satisfaction and loyalty.
- Gain the skills to extract actionable insights from data and use them to drive business growth and innovation.
- Gain practical skills to apply AI techniques to real-world business problems, enhancing your data analysis capabilities.

Valedictory Function:

Finally, vote of thanks was delivered by MS.S.Suganthalakshmi, AP/CSE. She thanked the resource person and all the participants for the success conduct of the workshop.

Brochure:

KINGS
COLLEGE OF ENGINEERING
(An Autonomous Institution)
[Affiliated to Anna University, Chennai] [Approved by AICTE, New Delhi]

ACCREDITED WITH GRANT
B++
NAAC

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
ORGANIZES
ONE DAY WORKSHOP ON
BUILDING AND
TRAINING AI MODEL
USING TABLEAU

Mr.S.Ramprakash
Teaching Faculty,
University College of Engineering,
Thirukkuvilai.

Resource Person

Date : 10.04.2024
Time : 10.00 am
Venue : CSE LAB 1

Ms.N.Dhamayandhi
AP/CSE
COORDINATOR

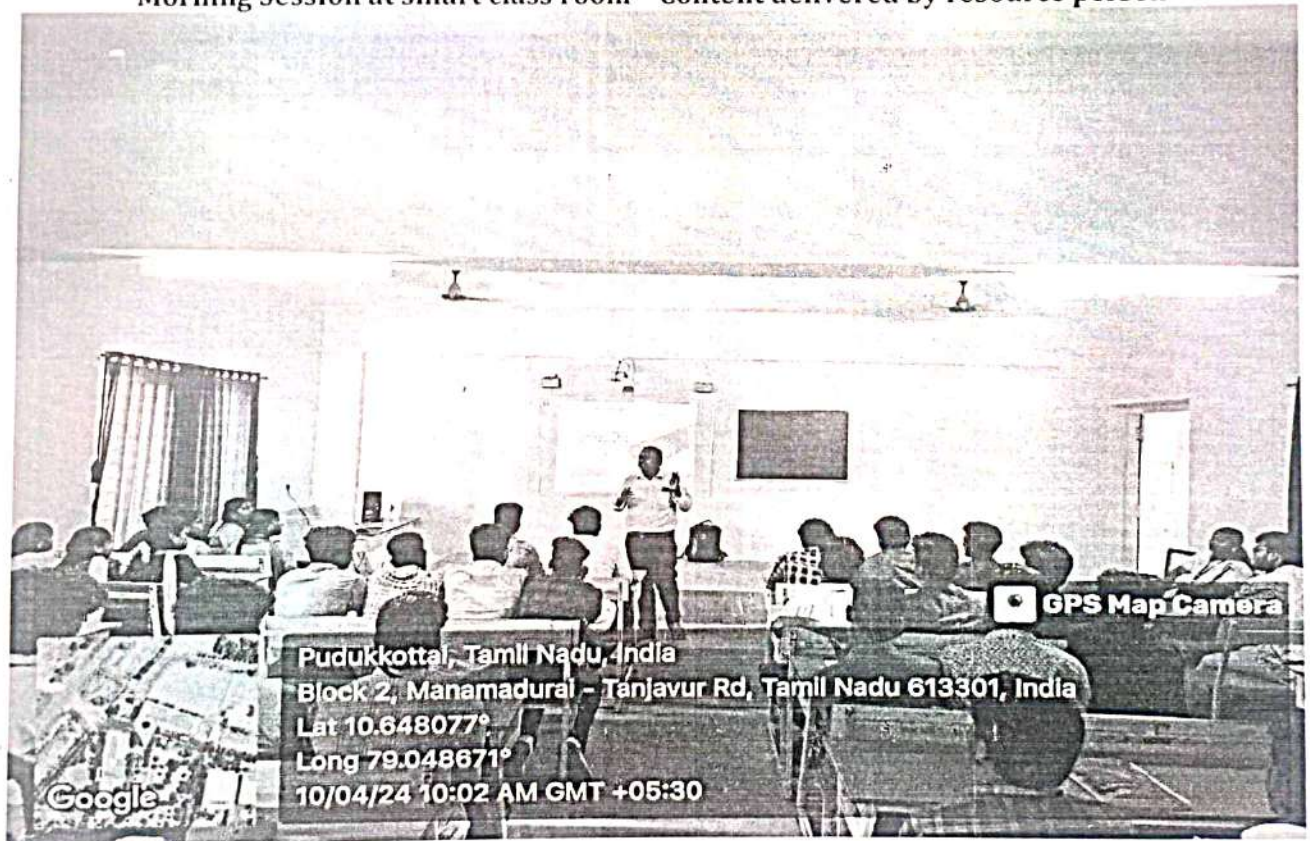
Dr.K.Abhirami
HOD/CSE
CONVENER

Dr.J.Arputha Vijaya Selvi
PRINCIPAL

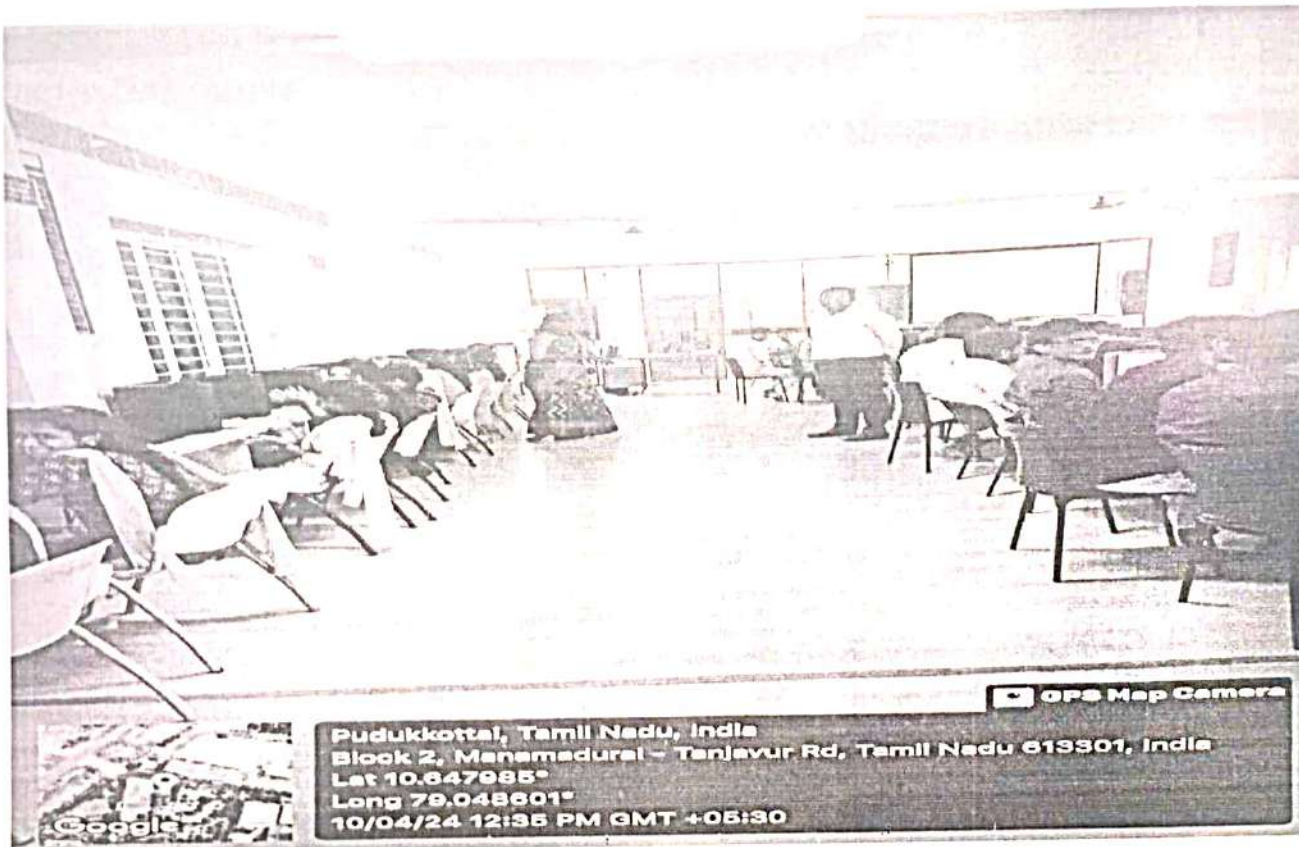
Glimpse of Event



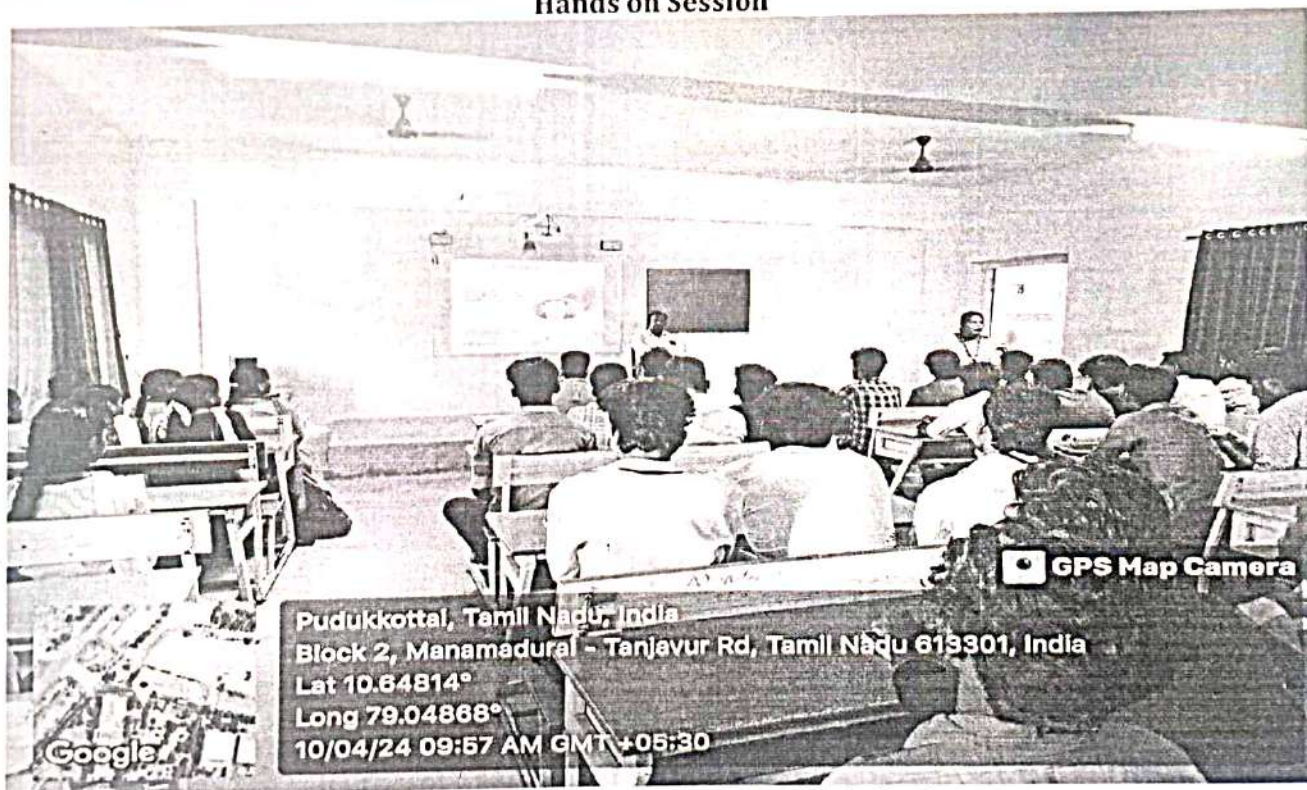
Morning Session at smart class room – Content delivered by resource person



Explanation on tools by resource person



Hands on Session



Vote of thanks by Ms.S.Suganthalakshmi

CERTIFICATE SAMPLE:

CERTIFICATE OF PARTICIPATION



This certificate is proudly awarded to

K. Hariharan

*has actively participated in One day workshop on BUILDING AND TRAINING AI MODEL
USING TABLEAU organized by Kings College of Engineering on 10.04.24.*

N.Dhamayandhi
AP/CSE
Coordinator

Dr.K.Abhirami
HOD/CSE
Convener

Dr.J.Arputha vijaya selvi
Principal

N.Dhamayandhi
16/4/24
Workshop Coordinator

Dr.K.Abhirami
16/4/24
HOD/CSE

J.Arputha vijaya selvi
16/4/2024
Principal

Principal

**Kings College of Engineering
(Autonomous)
Punalkulam - 613 303**



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Report on
International Conference on Recent Trends in Engineering and Science
(ICRTES 2024) - 02nd & 03rd May, 2024

Organized by
Center for Promotion of Research

Inauguration

ICRTES 2024 commenced with formal registration. Inaugural ceremony was initiated with prayer song. **Dr J. Arputha Vijaya Selvi, Principal and Conference Chair**, welcomed the gathering with the words also she emphasized that, this kind of conference will provide the opportunity for the students community as well as the participants to listen to the talk from eminent speakers followed by lighting of ceremonial lamp by the dignitaries. **Dr. R. Rajendran**, Secretary of the college honored the guests.



Dr. J. Arputha Vijaya Selvi, Principal delivering welcome address



Dignitaries on the Dias



Dignitaries lighting the Lamp



Dr. R. Rajendran, honoring Dr. B. Subramanian

Dr. R. Rajendran, Secretary presided over the function and delivered the Presidential Address. In his presidential he described the establishment of department of science and technology to promote innovation in science and engineering.



Dr. R. Rajendran delivering Presidential Address



A View of the participants

Dr. S. Sabanayagam, Prof. / Dept. of Mechanical Engineering introduced **Dr. B. Subramanian**. The Inaugural Address was delivered by **Dr. B. Subramanian**, in his address, he detailed about the Electroplating Technology and its material characterization.



Dr. S. Sabanayagam, Prof. / Dept. of Mechanical Engineering introducing the Chief Guest



Dr. B. Subramanian delivering Inaugural Address

Dr. S. Udayakumar, Associate Professor / Dept. of Science and Humanities introduced **Dr. M. Revanasiddappa**, Professor, PES University, Bangaluru. The Special Address was delivered by **Dr. M. Revanasiddappa**, in his address, he detailed about the importance of Science in Engineering.



Dr. S. Udayakumar, Assoc. Prof. / Dept. of S & H introducing the Chief Guest



Dr. M. Revanasiddappa delivering Special Address

Hard copy of the Conference Proceedings was released by **Dr. B. Subramanian** and received by **Dr. J. Arputha Vijaya Selvi Principal, Kings College of Engineering**.



Release of Conference Proceedings



The Conference also featured an invited talk by **Dr. M. Revanasiddappa** on the title, “**Recent Innovations in Science and Technology**” and an invited talk by **Dr. Sivakumar Subramanian**, Associate Professor, Electronics Engineering, Universiti Teknikal Malaysia, Melaka on the title, “**IoT Technology for Disaster Mitigation**”.



Invited Talk by Dr. M. Revanasiddappa



Invited Talk by Dr. Sivakumar Subramanian

On the day, papers were presented in 6 tracks; Track-1– Civil Engineering was chaired by **Dr. R. Saravanan & Mr.K.Arun**, Track-2 – Computer Science & Engineering was chaired by **Dr. S.M. Uma & Ms.M.Abinaya**, Track-3 – Electronics & Communication Engineering was chaired by **Dr. T. Shanthi & Mr.R.Balakrishnan**, Track-4 – Electrical & Electronics Engineering was chaired by **Mr.R.Sundaramoorthi & Dr.G.Suganya**. Track-5 – Mechanical Engineering was chaired by **Dr. T. Pushparaj & Mr.H.Agilan** and Track-6 – **Science & Humanities** was chaired by **Dr. V. Sureshkumar & Ms.T.Gananajeya**.



Participant presentation their papers



HoD's distributing certificates to the participants



HoD's distributing certificates to the participants

| S. No. | Details | | Department | | | | | | |
|--------------|-----------------------|-------------------|------------|-----|-----|-----|------|-----|-------|
| | | | CIVIL | CSE | ECE | EEE | MECH | S&H | Total |
| 1 | External participants | Research Scholars | 01 | | | | 02 | | 03 |
| 2 | | Offline mode | 20 | | 08 | 03 | 09 | 1 | 41 |
| 3 | | Online mode | | 38 | 07 | 25 | 06 | 12 | 88 |
| 4 | Internal participants | Students | 04 | 27 | 20 | 13 | 19 | | 83 |
| 5 | | Staffs | | 11 | 02 | | | | 13 |
| Total Papers | | | 25 | 76 | 37 | 41 | 36 | 13 | 228 |

Out of 283 papers received, 228 papers research articles were presented by the students, research scholars and faculty members from various reputed Institutions across India. In the valedictory function, **Dr. P.P. Shantharaman**, Convenor, presented the Conference Summary to the audience and distributed the Conference Certificates to the delegates. **Ms. S. Abikayil Aarthi**, Asst. Prof. / Department of Computer Science and Engineering, proposed the vote of thanks to all the participants.


Convenor 26/7/24


Publication Chair


Conference Chair



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Near Thanjavur, Punalkulam, Gandarvakottai Taluk, Pudukkottai Dist. - 613 303.

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Academic Excellence
SEEK • STRIVE • SUCCEED

INTERNATIONAL CONFERENCE ON RECENT TRENDS IN ENGINEERING & SCIENCE (ICRTES-2024) (Hybrid Mode)

02nd & 03rd May, 2024

Organized by

Centre for Promotion of Research (CPR)

ORGANIZING COMMITTEE

PATRON

Dr. R. Rajendran,
Secretary.

CONFERENCE CHAIR

Dr. J. Arputha Vijaya Selvi,
Principal.

PUBLICATION CHAIR

Dr. S. Sivakumar,
Vice Principal.

CONVENER

Dr. P.P. Shantharaman,
Head /CPR

STEERING COMMITTEE

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Head, Dept. of Civil.

Dr. K. Abhirami,
Head (i/c), Dept. of CSE

Dr. T. Shanthy,
Head, Dept. of ECE

Mr. R. Sundaramoorthi,
Head, Dept. of EEE

Dr. T. Pushparaj,
Head, Dept. of MECH

Dr. V. Suresh Kumar,
Head, Dept. of S&H

COORDINATORS

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Dept. of Civil

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Dept. of CSE

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Dept. of ECE

Dr. P. Narasimman,
Dept. of EEE

Dr. S. Sabanayagam,
Dept. of MECH

Dr. S. Udhayakumar,
Dept. of Science & Humanities

About the Conference:

The International Conference on Recent Trends in Engineering and Science (ICRTES-2024), from 02nd May to 03rd May 2024 in KCE, aims to bring together academic communities, researchers and scientists to exchange information, experiences and research results on all aspects of specialized and interdisciplinary areas. The conference provides an opportunity for everyone to network, exchange ideas and present their research to the international community.

Topics (but not limited to)

- Information & Communication Technologies
- Artificial Intelligence and Machine Learning
- Cyber Security
- Data Science & Cloud Computing
- Electronics & IoT
- Power Systems & Power Electronics
- Materials & Manufacturing Processes
- Energy Sources
- Robotics & Mechatronics
- Developments in Civil Engineering
- Sustainable Development in Construction
- Science & Mathematics
- Environmental Sustainability
- Education, Online education – eLearning



Important Dates:

Registration Opens : 04.03.2024
Last Date for Submission : 19.04.2024
Last Date of Registration : 26.04.2024

Registration Fee:

UG/PG Students Rs. 750/-
Research Scholar &
Faculty / Industrialist Rs. 1000/-

Publication

All accepted papers registered for presentation will be published in the conference proceedings with ISBN. Selected Papers will be recommended for publication in Scopus / WoS / UGC journals*

In Association with



Address for Communication

Dr. PP. Shantharaman
Professor / Mechanical
ICRTES-2024
Kings College of Engineering
Punalkulam, Near Thanjavur
Pudukkottai Dt - 613 303, India
iconkce2023@gmail.com
www.kingsengg.edu.in
+91 99448 76644

For Registration & Submission



Event Flyer



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Centre for Promotion of Research (CPR)
Cordially invites you to the

International Conference on Recent Trends in Engineering & Science (ICRTES-2024)

 02.05.2024 & 03.05.2024
  Chera Hall

Chief Guest



Dr. B. Subramanian,
Senior Principal Scientist,
Central Electrochemical Research Institute,
Karaikudi.

Keynote Speakers



Sivakumar Subramanian,
Associate Professor,
Electronics Engineering,
Universiti Teknikal Malaysia Melaka.



Dr. M. Revanasiddappa
Professor
P E S University
Bengaluru

In Association with








Dr.P.P.Shantharaman,
Convener

Dr.S.Sivakumar,
Publication Chair

Dr.J.Arputha Vijaya Selvi,
Conference Chair

Event Invitation



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NAAC Accredited Institution

Certificate of Participation

This Certificate is awarded to **Dr. A. SASI KUMAR, Dept of Production Engg.,**
of Government College of Technology, Coimbatore for
presenting a paper titled Experimental analysis of friction stir processed
aluminium alloy 6082 surface composites
in the **International Conference on Recent Trends in Engineering & Science**
(ICRTES-2024) on 2nd & 3rd May 2024, organized by the Centre for Promotion of
Research (CPR), Kings College of Engineering, Pudukkottai.



Convener
Dr.P.P.Shantharaman



Publication Chair
Dr.S.Sivakumar



Conference Chair
Dr.J.Arputha Vijaya Selvi

Sample Certificate



KINGS PROJECT EXPO'2024

Organized by

Center for Promotion of Research

Center for Promotion of Research in association with IEEE STB 16621 organized KINGS PROJECT EXPO' 2024 on 03.05.2024. This project expo aims to encourage the students' creativity and innovations on Engineering & Technology. Dr.S.Sabanayagam, CPR Member & Associate Professor / Mechanical Engineering, welcomed the gathering. Dr.J.Arputha Vijaya Selvi, Principal, inaugurated the expo and delivered the inaugural address. In her speech, she emphasized the significance of innovations in projects. Mr.J.Niranjan Samuel, JRF/R&D, introduced the chief guest Mr. M. I. Abdul Halik, Secretary of IEEE Madras Young Professionals, Chennai. Mr. M. I. Abdul Halik delivered special address on importance of IEEE membership and his IEEE membership journey. Also he shared his memories as Passion to Progress: My IEEE Member Experience. Dr. S. Sivakumar, Vice Principal, delivered the felicitation address. He insisted the students to enhance their technical knowledge both in software and hardware. The projects of internal and external students were evaluated by senior faculty members of every department nominated as jury's. Totally 70 batches participated in the project expo. Jury's evaluated the projects and gave feedback & valuable comments to the students. Based on the innovation, presentation, implementation and demonstration marks were awarded by the jury's. Two projects were selected for rewards from each department. The valedictory ceremony of the project expo started by 01:30 p.m. at Pallava Hall. Dr.R.Rajendran, Secretary of the college distributed the prizes and certificates to the participants. Project Expo came to an end with vote of thanks by Ms. S. Abikayil Aarthi, AP/CSE cum Event Coordinator – IEEE MAS YP and Secretary – IEEE STB 16621.



Invitation

Photo Gallery



Reception Snap



Welcoming Speech by Dr.S.Sabanayagam



Participants snap



Honouring Chief Guest by Principal



**Inagural Addressing by Dr.J.Arputha Vijaya Selvi,
Principal**



**Introduction Speech by Mr.J.Niranjan Samuel,
JRF/R&D**



Chief Guest Speech



Group Snap- 1



Group Snap-2



Project Evaluation Snap



Suggestion delivering by Chief Guest



Dignitaries on stage



Prize Distribution- 1



Prize Distribution - 2



Vote of Thanks by

Ms. S. Abikayil Aarthi, AP/ CSE

CPR COORDINATOR

PRINCIPAL



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 07.05.2024 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain the insight knowledge about Android basis with compose.

SESSION DETAILS

The seminar for the faculties of Computer Science & Engineering department was conducted on 07.05.2024 from 12.30 P.M. to 01.15 P.M.in Smart Classroom. Ms. T. Sindhu explained about basics of "Cloud Computing".The seminar on "Cloud Computing" was organized to educate internal staff about the fundamentals of cloud computing, its various models, and practical applications in the organization. With the growing reliance on cloud-based solutions, this seminar aimed to enhance understanding and promote effective adoption of cloud technologies.

Key Takeaways

- Cloud computing provides scalable and cost-effective solutions for data storage, computation, and collaboration.
- Different service models (IaaS, PaaS, SaaS) cater to varying business needs.
- Security and compliance are critical considerations for successful cloud adoption.
- Real-time collaboration tools and data analytics are key drivers of cloud adoption within organizations.

The seminar provided valuable insights into the fundamentals and applications of cloud computing. It empowered staff with the knowledge needed to leverage cloud technologies effectively, enhancing organizational efficiency and innovation.


Coordinator
(S. Puvaneswari AP/ CSE)


HOD/ CSE



ACADEMIC YEAR 2023- 2024

IEEE MADRAS SECTION YOUNG PROFESSIONAL

ORGANISED

2-DAY WORKSHOP ON

"CYBER SECURITY: SAFEGUARD YOUR DIGITAL WORLD"

REPORT

Dates : May 11th & 12th, 2024
Venue : Online via Zoom

Executive Summary

The 2-day workshop titled "Cyber Security: Safeguard Your Digital World" was held on May 11th & 12th, 2024, aimed to celebrate National Science day at educating participants about the fundamentals and advanced aspects of cyber security. The workshop was attended by 65 participants from various sectors including corporate, education, and government. The sessions were led by cyber security experts, providing comprehensive insights into protecting digital assets and enhancing overall cyber security posture.

Workshop Objectives

The primary objectives of the workshop were to:

1. Educate participants on the fundamentals of cyber security.
2. Provide advanced techniques and best practices for safeguarding digital information.
3. Demonstrate how to identify and mitigate cyber threats.
4. Enhance skills in creating a secure digital environment.
5. Facilitate practical, hands-on learning experiences.

Agenda and Content

Day 1: Fundamentals of Cyber security

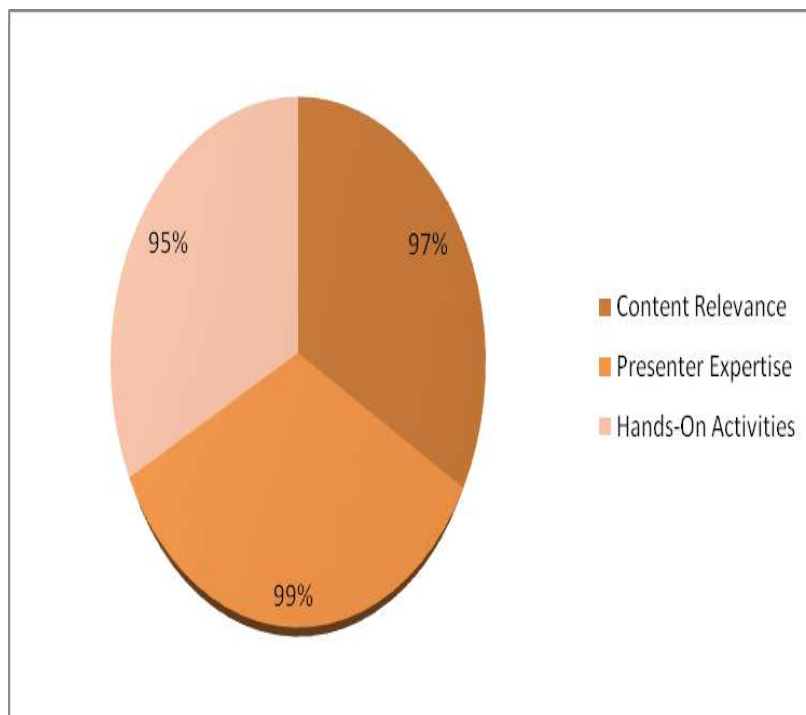
- Introduction to Cyber security
- Cyber Threats and Vulnerabilities
- Securing Your Digital Environment
- Safe Internet Practice
- Interactive Session: Case Studies

Day 2: Advanced Cyber security Practices

- Advanced Threat Detection and Response.
- Cyber security for Organizations
- Data Protection and Privacy
- Cyber security Tools and Technologies
- Hands-On Workshop: Simulated Cyber Attack
- Q&A and Expert Panel Discussion

Participant Feedback

Feedback was gathered through a post-workshop survey. Key points from the feedback include:



Recommendations

Based on participant feedback and observations:

- Follow-Up Workshops:
 - Plan additional workshops focusing on specific areas such as cloud security, ethical hacking, and cyber security certifications.
- Interactive Sessions:
 - Increase the number of interactive sessions and hands-on activities to enhance practical learning.
- Resource Distribution:
 - Provide participants with additional resources, such as toolkits, templates, and guides for ongoing learning.

Brochure

IEEE young professionals MADRAS SECTION

National Technology Day

IEEE MADRAS SECTION YOUNG PROFESSIONALS ORGANIZES WORKSHOP ON CYBER SECURITY : SAFEGUARD YOUR DIGITAL WORLD

GUEST SPEAKER

Mr. K. Akash
Cyber Security Expert

11, 12 May 2024

For Non IEEE Members
Rs. 50 /-
For IEEE Members
Free

Target Participants
UG scholars, PG Scholar, Faculty

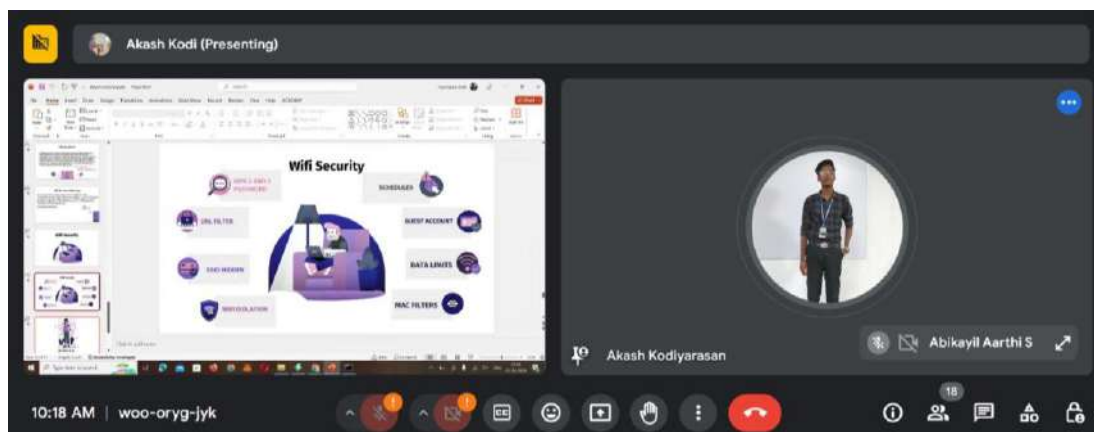
Hosted By
Kings College of Engineering (Autonomous)
Punakulam

Student Volunteers
Mr. S. Nesika
Mr. P. Jaya Prasad
Mr. S. Mehvin

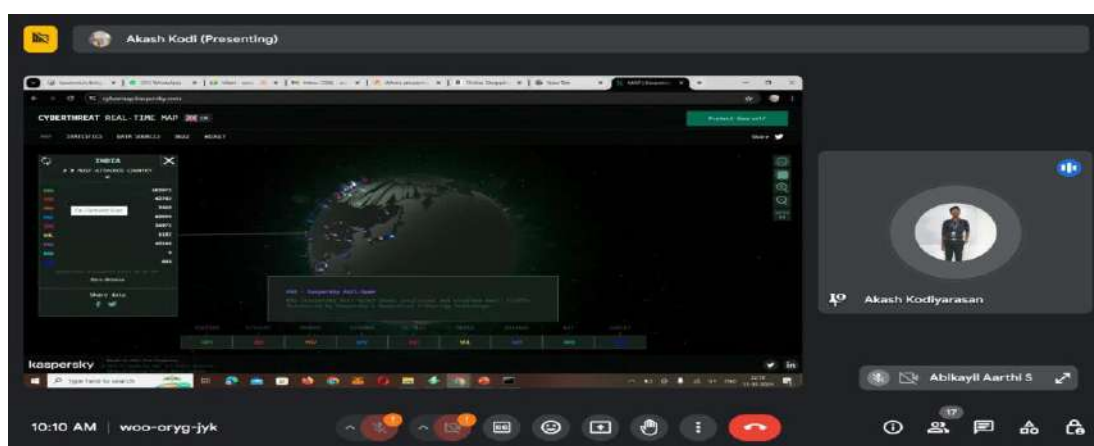
Faculty Coordinator
Mr. S. Abikayil Aarthi
Event Coordinator - IEEE MAS - YP
APIOSE, KCE

Kings College of Engineering **IEEE MAS YP**

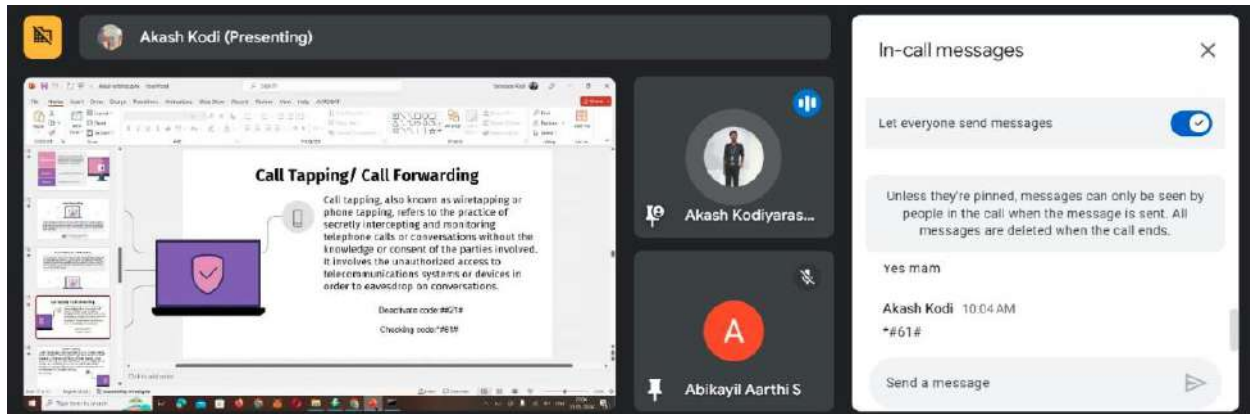
Session Snap



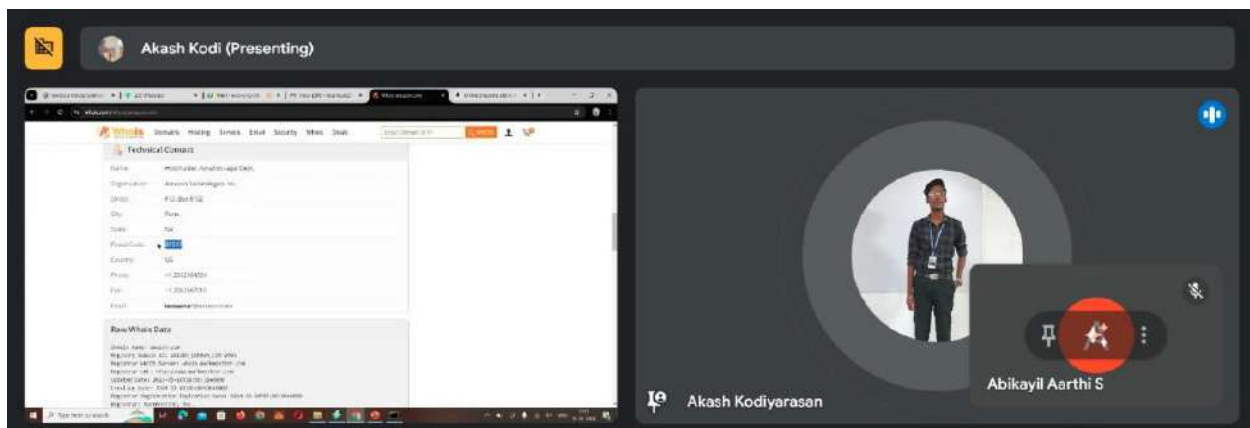
Session Snap - 1



Session Snap - 2



Session Snap – 3



Session Snap - 4

Conclusion

The "Cyber Security: Safeguard Your Digital World" workshop successfully equipped participants with essential and advanced cyber security knowledge and skills. The high level of engagement and positive feedback indicate a strong need for continued education in cyber security. Future workshops will build on this success, offering deeper dives into specialized topics and more interactive learning opportunities.


Co-ordinator
(Ms. S. Abikayil Aarthi AP/ CSE)


Principal/ IEEE SBT Counsellor
(Dr. J. Arputha Vijaya Selvi)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2023 - 2024/ EVEN SEMESTER

3 DAY WORKSHOP ON FROM DESIGN TO PATENT

The Department of Computer Science & Engineering organized a 3 Day Workshop on “**FROM DESIGN TO PATENT**” from **25.05.2024 - 27.05.2024** in Hybrid mode to guide the students through the essential stages of transforming a design concept into a patentable invention. Totally 166 participants from CSE department actively participated in this event.

The workshop provided a comprehensive understanding of the design process, patent requirements, and the necessary steps to protect intellectual property. Participants engaged in hands-on activities and gain practical knowledge from industry experts.

Day 1: 25.05.2024

Topic : Version control using GIT in Software Engineering

Mr.E.Hariharan, Member Technical Staff, Zoho Corporation, Chennai

The day 1 of the workshop equipped the participants with the fundamental knowledge and skills to effectively manage code changes and collaborate on software projects. Participants learnt the fundamental concepts, practical applications, and best practices of using GIT for version control in software development projects.

The day 1 of the workshop covered the following key topics:

- **Introduction to Version Control:** Explained the concept of version control and its importance in software development.
- **GIT Basics:** Introduced core GIT concepts like repositories, working directories, staging area, commits, and branches.

- **Benefits of GIT:** Highlighted the advantages of GIT, including tracking changes, enabling collaboration, reverting to previous versions, and managing branching strategies.

Hands-on Practice:

Participants engaged in practical exercises using a GIT client (e.g., GIT Bash, GitHub Desktop) to:

- Initialize a GIT repository
- Stage and commit changes
- View commit history
- Inspect code changes with diff
- Create and manage branches
- Resolve merge conflicts (optional)

Day 2: 26.05.2024

Data and Content Governance

Mr.Sasi Pradeep Raja ,Content Strategist at Novo Nordisk London, UK

In-depth information on establishing and upholding efficient governance procedures for data and information assets inside a company was covered for the students on day two.

The workshop covered the following key topics:

- **Data Governance Fundamentals:**
 - Introduction to data governance concepts and benefits.
 - Importance of data quality, security, and accessibility.
 - Roles and responsibilities for data governance.
- **Content Governance Fundamentals:**
 - Definition of content governance and its goals.
 - Content lifecycle management (creation, review, approval, publication).
 - Maintaining brand consistency and messaging.
- **Building a Governance Framework:**
 - Key components: data policies, data standards, content strategy, style guide, workflows, and access controls.
 - Tools and technologies for data and content governance.

- **Implementation Strategies:**

- Developing a data governance plan.
- Creating a content governance policy.
- Establishing clear roles and responsibilities.
- Communication and change management strategies.

Day 3: 27.05.24

IPR, Design, Patent Filing

Mr. Sasikumar Chandran, CEO , HUMCEN GLOBAL Pvt Ltd , India

On the third day of the program, the students were given a thorough rundown of design principles, the IPR landscape, and the process of filing patents. The session gave the attendees the know-how and abilities needed to safeguard their inventions using successful design and patent tactics. Also offered practical guidance on drafting , preparing and filing patent applications.

The workshop covered the following key topics:

- **Introduction to IPR:**

- Definition and types of intellectual property (patents, copyrights, trademarks, designs)
- Importance of IPR protection in a competitive market

- **Design Protection:**

- What constitutes a protectable design (visual features, functionality)
- Benefits of design registration (exclusivity, brand protection)
- Process for design registration in the relevant jurisdiction

- **Patent Filing:**

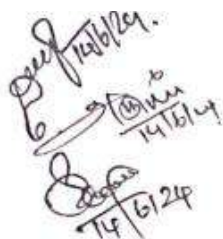
- Types of patents (utility, design, plant)
- Patentability criteria (novelty, non-obviousness, industrial applicability)
- Steps involved in the patent filing process (invention disclosure, patent search, application drafting)
- Importance of working with patent professionals

In summary, the workshop emphasized the journey of going from design to patent.

Workshop Outcomes

- Increased the awareness of the connection between design and patentability
- Gained valuable insights on how to strategically integrate patentability considerations into the design process from the very beginning
- Provided the participants with the information and procedures needed to turn their original concepts into patentable creations.
- Bridged the gap between design and intellectual property protection.

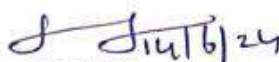
Overall, the Design to Patent workshop served as a springboard for participants to leverage design not just for aesthetics, but also as a strategic tool for securing patent protection and achieving greater success in the marketplace.



14/6/24

COORDINATOR(s)

Ms.R.Sugantha Lakshmi
Ms.D.Mangalambigai
Mr.M.Arun



14/6/24

HOD/CSE
Dr.S.M.Uma



14/6/2024

PRINCIPAL

Dr.J.Arputha Vijaya Selvi

Principal

Kings College of Engineering
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Punalkulam - 613 303

ANNEXURE - I

WORKSHOP POSTER



Department of Computer Science and Engineering
Organizes
3 DAY WORKSHOP
on
FROM DESIGN TO PATENT
25-27 May, 2024



| DAY 1 25.05.2024 | Speakers DAY 2 26.05.2024 | DAY 3 27.05.2024 |
|--|---|---|
|  |  |  |
| Mr. E.Harihran Member Technical Staff Zoho Corporation ,Chennai | Mr. Sasi Pradeep Raja Content Strategist Novo Nordisk , London,UK | Mr. Sasikumar CEO HUMCEN GLOBAL Pvt Ltd ,Chennai |
| Topic Version control using GIT in Software Engineering | Topic Data and Content Governance | Topic IPR,Design, Patent Filing |
| Ms.R.Sugantha Lakshmi AP/CSE Ms.D.Mangalambigai AP/CSE Mr.M.Arun AP/CSE | Dr.S.M.Uma Prof/CSE |  25-27 May, 2024 Dr.J.Arputha Vijaya Selvi |
| Co-ordinators | HOD/CSE | Principal |

ANNEXURE – II

SESSION DETAILS

| S.No | Date | ResourcePerson | Topic |
|------|----------|--|--|
| 1 | 25.05.24 | Mr.E.Hariharan Member Technical Staff Zoho Corportation, Chennai | Version control using GIT in Software Engineering |
| 2 | 26.05.24 | Mr.Sasi Pradeep Raja Content Strategist at Novo Nordisk London UK | Data and Content Governance |
| 3 | 27.05.24 | Mr. Sasikumar Chandran CEO , HUMCEN GLOBAL Pvt Ltd , India | IPR, Design, Patent Filing |

ANNEXURE – III

PARTICIPANTS LIST

| S. No. | Name of the Student | S. No. | Name of the Student | S.No | Name of the Student |
|--------|---------------------|--------|---------------------|------|---------------------|
| 1. | AARTHI S | 56. | AASHA J | 112. | KIRUTHIKA R |
| 2. | ABISHEK C | 57. | AJAY S | 113. | LEXMADURAI S |
| 3. | ADITYA RAAJAN M | 58. | ARUNOTHAYA A C | 114. | MADHAN M |
| 4. | AJAY KARTHICK A | 59. | ASHWIN V | 115. | MARIMUTHU P |
| 5. | ANBUCHZHIAN S | 60. | ATCHAYA R V | 116. | MOHANRAJ T S |
| 6. | ARAVAMUTHAN J C | 61. | BALAMURUGAN M | 117. | MOULI K |
| 7. | ARCHANA S | 62. | BARATHRAJ R | 118. | MUTHEESWARAN S |
| 8. | ASWINI S | 63. | BHAVATHARANI V | 119. | NAASIM M |
| 9. | BARGAVI M | 64. | BOOMIKA R | 120. | NARMATHA P |
| 10. | BHUVANESHWARI B | 65. | DEEPAN S | 121. | SNEGA S |
| 11. | DHANYALAKSHIMI R | 66. | DEEPIKA K | 122. | SURIYAPRAKASH M |
| 12. | DINESH S | 67. | DINESH S | 123. | SURUTHIGA C |
| 13. | GAYATHRI R | 68. | ELAMARAN S | 124. | THIRUMURUGAN K |
| 14. | GOPIKA R | 69. | ESWAR S | 125. | SHAMEER RAHMAN S |
| 15. | HARISH M | 70. | GAYATHRI M | 126. | SIVA PRAKASH P |
| 16. | HARISH SRIRAM B | 71. | GEETHA I | 127. | SRI GIRIDHARA S |
| 17. | HEMAVARTHINI S | 72. | GUHAN D | 128. | SRIHARINI R |

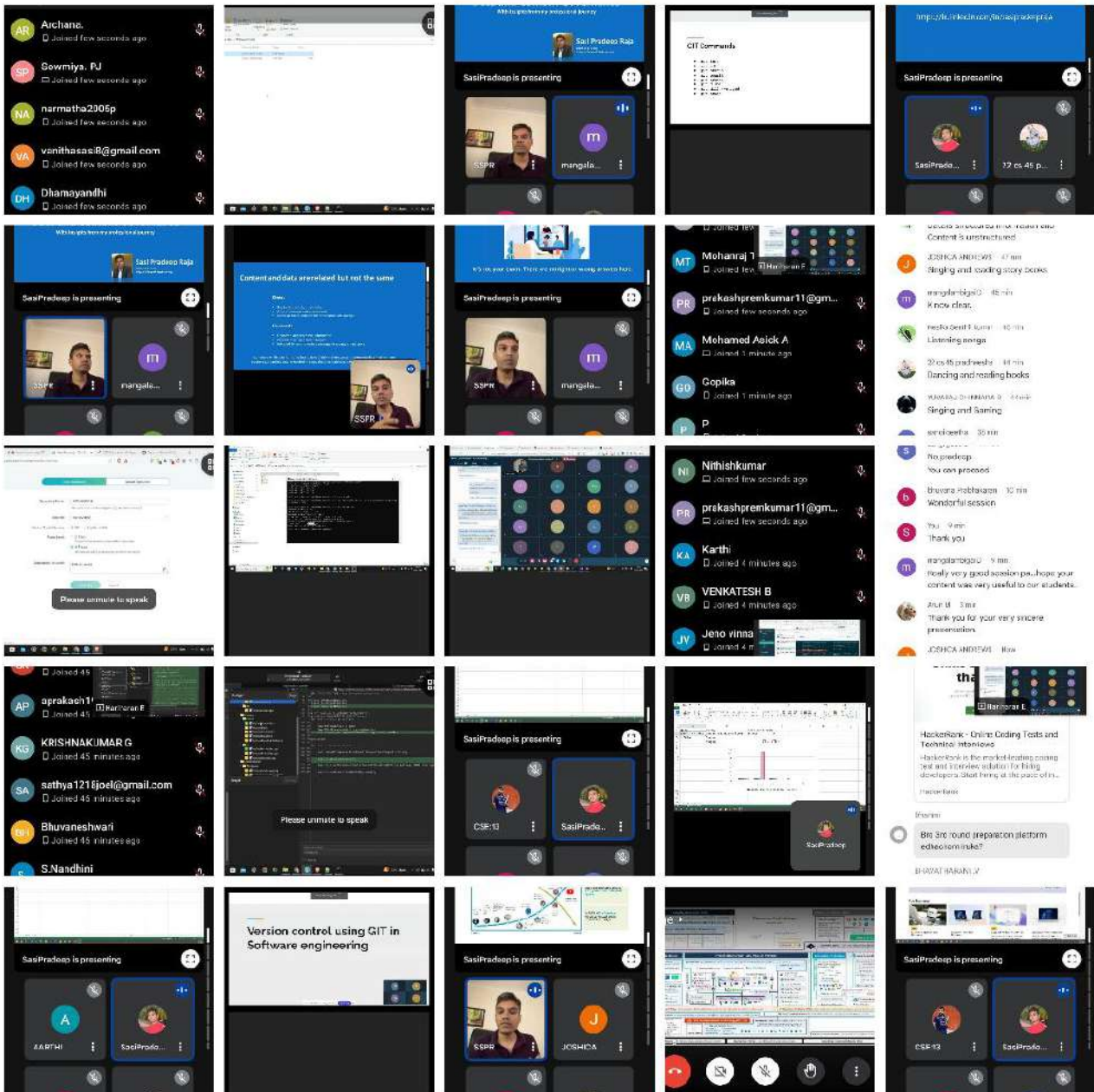
3 Day WORKSHOP ON FROM DESIGN TO PATENT

| | | | | | |
|-----|-----------------|------|------------------|------|---------------------|
| 18. | HRITHICK J | 73. | HARISH B | 129. | SUDHISHA S |
| 19. | JAYAPRIYA B | 74. | JAYAVANI K | 130. | SWATHI M |
| 20. | JEEVAROSHINI M | 75. | JENO VINNARASI A | 131. | VISHNU PRASADD M B |
| 21. | JEFRY ALLWIN J | 76. | KARTHIKA M | 132. | BHARANIDHARAN G |
| 22. | JOSEPHCLINTON S | 77. | KAYALVIZHI K | 133. | SIVANESAN K |
| 23. | JOSHICA A | 78. | KEERTHIGA S | 134. | VINTHIYA M |
| 24. | NESIKA S | 79. | LAVANYA J | 135. | SELVAPRIYA A |
| 25. | NIRANJAN R | 80. | MAHALAKSHMI V | 136. | RASIKA G |
| 26. | NITHISHKUMAR V | 82. | MOHAMED SAMEER S | 137. | SABARINATHAN N |
| 27. | PAVITHRA U | 83. | MUHILAN E | 138. | SANDHIYA R |
| 28. | POONGUZHALI J | 84. | MURUGARAJ M | 139. | SANJIVE BALAJI A |
| 29. | PRADHEESHA R | 85. | NANDHINI S | 140. | SATHISHKUMAR S |
| 30. | NIVETHA S | 86. | NARESH KUMAR N | 141. | MATHESH KRISHNAN M |
| 31. | PARKAVI D | 87. | NITHISH S | 142. | MOHAMED ASICK A |
| 32. | PRAKASH A | 88. | SANTHOSH KUMAR G | 143. | MOHAMED GANI M |
| 33. | PRIYARANI.B | 89. | SARVESH S | 144. | MOHAMMED ALI K |
| 34. | RAGUL SANKAR J | 90. | SATHYA A | 145. | MONESHWARAN S |
| 35. | RAJKUMAR K | 91. | SATHYA R | 146. | MURUGANANTHAM P |
| 36. | REENA S | 92. | SIVA M | 147. | MURUGESHWARI A |
| 37. | SAFREENBANU S | 93. | AAKASH S | 148. | NANDHAKUMAR P |
| 38. | RAGAVI R | 94. | AANDAL S A | 149. | ASHOK KUMAR K |
| 39. | RAJASHREE E | 95. | ANEES PRIYANKA V | 150. | BHARATHI P A |
| 40. | THIRUMURUGAN S | 96. | ARAVIND S | 151. | DEEPA K |
| 41. | VANATHI G | 97. | ARUL B | 152. | DHARANI R |
| 42. | VARSHA N N | 98. | NAVEEN G | 153. | DHEVADHARSHINI M |
| 43. | VASANTH M | 99. | NITHYASHRI B M | 154. | GAYATHIRI S |
| 44. | VASINYA M | 100. | NOORA K M | 155. | GOWRISHANGARI R |
| 45. | VICHITHRA V | 101. | PRAGATHI V | 156. | SARAVANAN K |
| 46. | YOKESHWARI P | 102. | PRAKASH M | 157. | SATHYA A |
| 47. | RISHI KUMAR R | 103. | PRASANNA R | 158. | SHALINI K |
| 48. | THASEEN AKBAR | 104. | RAHUL S | 159. | SHARMIKA R |
| 49. | HARIHARAN K | 105. | ROOBIGA R | 160. | SHASHANK S |
| 50. | HARI PRASATH S | 106. | HARINI V | 161. | SOWMIYA P J |
| 51. | INDRANI M | 107. | MAHESHWARI D | 162. | SRIRAM R |
| 52. | JANARTHANAN P | 108. | MANIBHARATHI V S | 163. | YUVARAJ CHINNAIYA R |
| 53. | JEEVA R | 109. | MANOJ M | 164. | YOKESHWARAN M |
| 54. | KARTHIK V | 110. | KISHORE B | 165. | KUMARESAN K P |

3 Day WORKSHOP ON FROM DESIGN TO PATENT

| | | | | | |
|-----|-------------|------|-------------|------|----------|
| 55. | KEERTHANA J | 111. | SURENDRAN V | 166. | VISHAL K |
|-----|-------------|------|-------------|------|----------|

ANNEXURE – IV GLIMPSES OF THE EVENT



ANNEXURE - V
SAMPLE CERTIFICATES



Department of Computer Science and Engineering

CERTIFICATE OF APPRECIATION

This is to certify that

Ajay S
of

Kings College of Engineering

Has attended 3 Day Workshop on **From Design to Patent**
conducted by Department of Computer Science & Engineering
from **25-27 May,2024**

Ms.R.Sugantha Lakshmi
Ms.D.Mangalambigai
Mr.M.Arun
Co-ordinators

Dr.S.M.Uma Prof/CSE
HOD/CSE

Dr.J.Arputha Vijaya Selvi
PRINCIPAL



Department of Computer Science and Engineering

CERTIFICATE OF APPRECIATION

This is to certify that

B.M.Nithyashri
of

Kings College of Engineering

Has attended 3 Day Workshop on **From Design to Patent**
conducted by Department of Computer Science & Engineering
from **25-27 May,2024**

Ms.R.Sugantha Lakshmi
Ms.D.Mangalambigai
Mr.M.Arun
Co-ordinators

Dr.S.M.Uma Prof/CSE
HOD/CSE

Dr.J.Arputha Vijaya Selvi
PRINCIPAL

ANNEXURE – VI
FEEDBACK ANALYSIS

Feedback Form

25-27 May 2024 , 3 Day Workshop on **From Design to Patent**

B *I* U  

Before sharing this Form, customize this description, the title above, and the questions below.

Email *

Valid email

This form is collecting emails. [Change settings](#)

Full Name *

Short answer text

Questions Responses **74** Settings

Year *

- ☐ II Yr
- ☐ III Yr
- ☐ IV Yr

Mr. E.Hariharan - Day 1 Session Feedback *

- ☐ Excellent
- ☐ Good
- ☐ Fair

Mr. Sasi Pradeep Raja - Day 2 Session Feedback *

- ☐ Excellent
- ☐ Good
- ☐ Fair

Questions Responses **74** Settings

Mr. Sasi Pradeep Raja - Day 2 Session Feedback *

- ☐ Excellent
- ☐ Good
- ☐ Fair

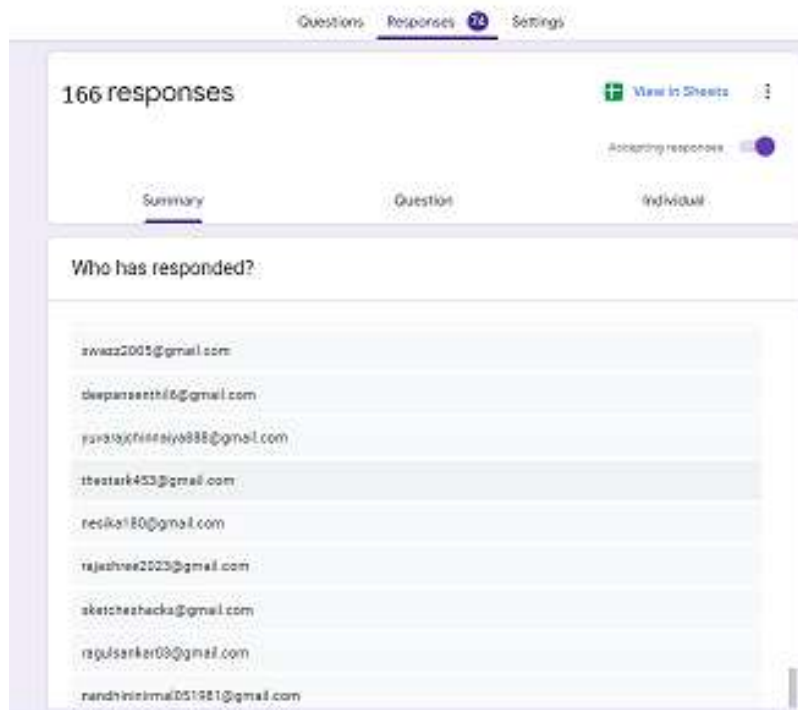
Mr. Sasikumar - Day 3 Session Feedback

- ☐ Excellent
- ☐ Good
- ☐ Fair

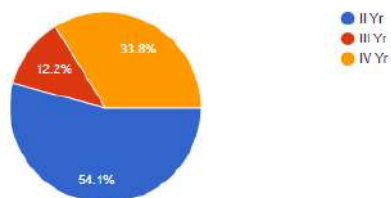
Comments *

Long answer text

3 Day WORKSHOP ON FROM DESIGN TO PATENT

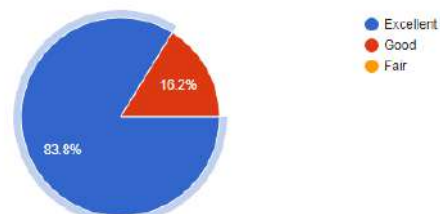


Year
166 responses



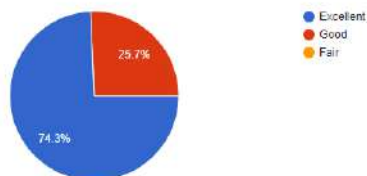
Mr. E.Hariharan - Day 1 Session Feedback

155 responses



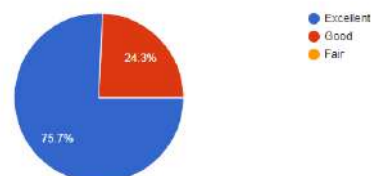
Mr. Sasi Pradeep Raja - Day 2 Session Feedback

165 responses



Mr. Sasikumar - Day 3 Session Feedback

156 responses



Sample Comments

Thank you so much for giving us a wonderful training. It's very useful to us
Very informative talk

Excellent Sessions and of course the flow of covering topics is great.

Thank you for ur wonderful sessions. Gained a lot of knowledge from your sessions .

Really very useful to learn more practically

Thank you for this wonderful session I had learn many things from this.



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR

2023 - 2024/ EVEN SEMESTER

3 DAY WORKSHOP REPORT

25.05.2024 - 27.05.2024

On

FROM DESIGN TO PATENT



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023- 2024 / EVEN SEMESTER

ONLINE WEBINAR ON

“HOW TO WRITE A GRANT PROPOSAL IN AN EFFECTIVE MANNER”

Date : *May 31, 2024*

Time : *2:00 PM - 4:00 PM (EST)*

Platform : *Zoom*

Executive Summary:

On May 31, 2024, a two-hour webinar titled "How to Write a Grant Proposal in an Effective Manner" was conducted via Zoom. The session was organised by Department of CSE in association with R&D, led by **Mr. M. Logeshwaran, Trainer, IGNZEE Software Solutions**. The webinar attracted 62 participants. The session aimed to equip attendees with the skills and knowledge required to craft compelling grant proposals.

Objectives:

The primary objectives of the webinar were to:

1. Provide an overview of the grant proposal writing process.
2. Break down the essential components of a successful grant proposal.
3. Offer practical writing tips and strategies.
4. Highlight common pitfalls and how to avoid them.
5. Engage participants in a Q&A session to address specific concerns.

Agenda and Content:

1. Introduction to Grant Proposals
2. Preparing to Write

3. Components of a Grant Proposal

4. Writing Tips and Strategies

5. Review and Submission

6. Q&A Session

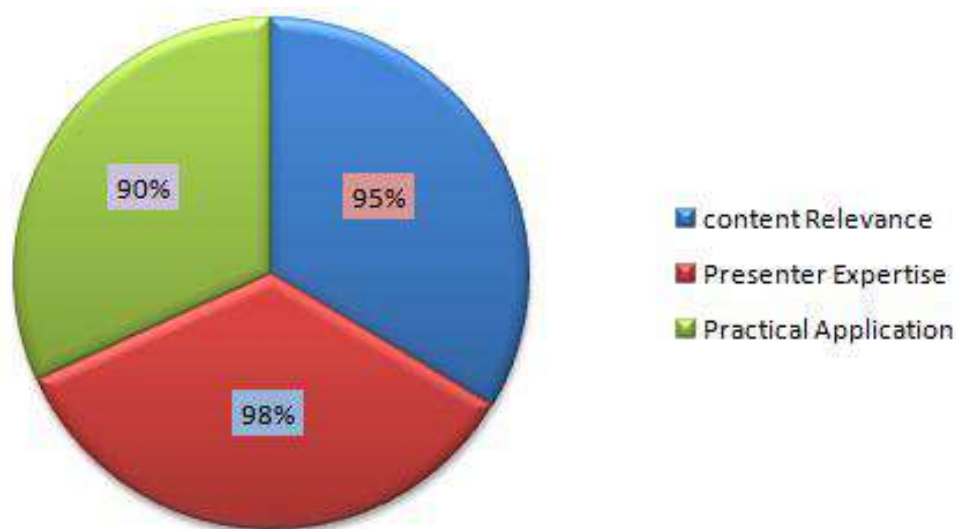
Participant Feedback

Feedback was collected through a post-webinar survey. Key takeaways from the feedback include:

Content Relevance: 95% of participants found the content highly relevant and applicable to their needs.

Presenter Expertise: 98% rated Dr. Johnson's expertise and delivery as excellent.

Practical Application: 90% felt confident they could apply what they learned to their grant writing efforts.



Recommendations:

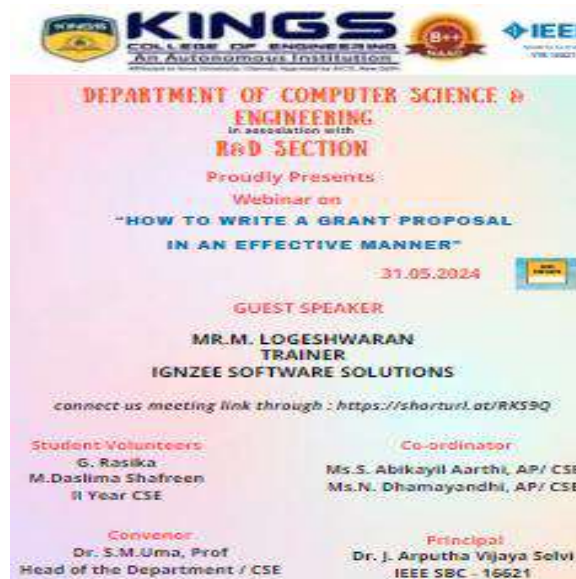
Based on participant feedback and observations:

1. **Follow-Up Webinars:** Consider offering advanced sessions focusing on specific types of grants or sectors.

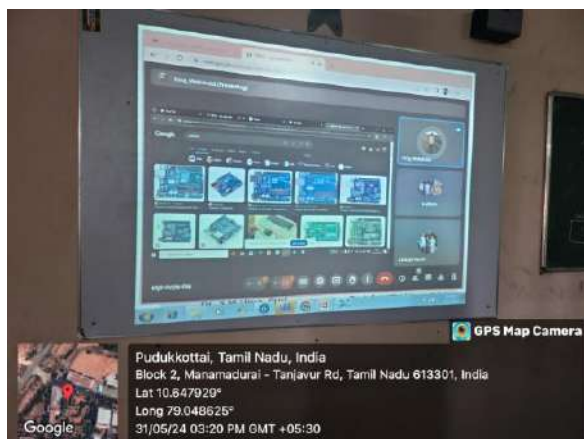
2. **Interactive Workshops:** Incorporate hands-on writing exercises in future sessions to enhance learning.

3. **Resource Materials:** Provide additional resources, such as templates and examples of successful proposals.

Boucher:

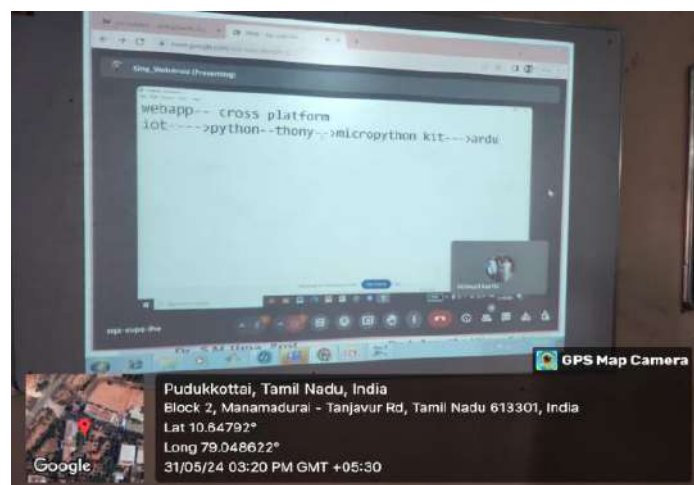


Snap of the session:



Online Presenting Screen

Offline Participants



Practical Session


Conclusion

The "How to Write a Grant Proposal in an Effective Manner" webinar was a resounding success, providing valuable insights and practical skills to a diverse audience. Participants left with a stronger understanding of grant writing and the confidence to seek funding for their projects. The high level of engagement and positive feedback underscore the need for ongoing training and support in this area. Vote of thanks for the session delivered by M.Manoj, III- CSE/ KCE.

Prepared by:

Ms. S. Abikayil Aarthi, AP/ CSE

Kings College of Engineering



Co-ordinator
(Ms. S. Abikayil Aarthi AP/ CSE)



HoD/ CSE
(Dr. S. M. Uma)

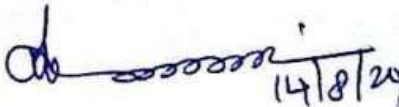


Principal
(Dr. J. Arputha Vijaya Selvi)

3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

| S.No | Date | Title of the Seminar | Beneficiaries | Page No |
|------------|--------------------------------|--|---------------|---------|
| ECE | | | | |
| 1. | 27.05.2024 to 28.05.2024 | Internet of Things with Artificial Intelligence | 83 | 1 |
| 2. | 08.05.2024 | Alumni Talk On Career Success Tips for Fresher's | 42 | 20 |
| 3. | 29.04.24 | Alumni Talk On Career Success Tips for Fresher's | 39 | 22 |
| 4. | 13.04.24 | Internal Seminar on Solutions of soil Moisture Sensing with RFID for Landslide Monitoring | 7 | 24 |
| 5. | 09.04.24 | Webinar on Communication technologies and Its Real Time Applications using Edge Computing Technologies | 91 | 26 |
| 6. | 03.04.2024 | Mini Project Expo | 30 | 38 |
| 7. | 10.11.2023 | Alumni Talk On Career Success Tips for Fresher's | 35 | 41 |
| 8. | 18.10.2023 | Internal seminar on Automatic Bottle Filling and Capping System Using PLC | 10 | 44 |
| 9. | 10.10.2023 | Mini Project Expo | 87 | 46 |
| 10. | 04.10.2023 | 5G Skilling | 87 | 51 |
| 11. | 13.09.2023 | Alumni Talk On Career Success Tips for Fresher's | 101 | 61 |
| 12. | 04.09.2023 | The Significance and Perks of Gate and Competitive Exam | 39 | 63 |

| | | | | |
|-----|--------------------------------|--|----|----|
| 13. | 01.09.2023 | Alumni Talk On Job Opportunities In Software Companies | 35 | 71 |
| 14. | 21.08.2023 to 22.08.2023 | Training Program on INNOVATIVE PROJECT DEVELOPMENT USING IOT | 30 | 73 |

 14/8/24

HOD/ECE

H.O.D.
ELECTRONICS AND COMMUNICATION ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNAKULAM - 613 303.
GANDHIVAKOTAI TALUK, PUDUCHOTAI DISTRICT



A REPORT

ON

TWO DAY WORKSHOP TITLED

“INTERNET OF THINGS WITH ARTIFICIAL INTELLIGENCE”

Held on

27th & 28th May 2024



Organized by

Department of Electronics and Communication Engineering

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

A NAAC Accredited Institution

Recognized under 2(f) & 12(B) of UGC

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

Phone : 04362-282474, 282395

Website : www.kingsindia.net

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| 1. | Detailed Report | 03 |
| 2. | Annexure: I (Brochure) | 06 |
| 3. | Annexure: II (Sample Certificate) | 10 |

A Glimpse on the Background of Workshop:

In KCE, Department of Electronics and Communication Engineering, has organized two day workshop exclusively for II year ECE students in the title of “**Internet of Things with Artificial Intelligence**” on 27th & 28th May 2024. Totally 83 students have enthusiastically participated in this workshop.

The main objective of this Workshop is to educate some knowledge about the Internet of things and Artificial intelligence to the students. To identify problems where artificial intelligence techniques are applicable. To apply selected basic AI techniques and to judge applicability of more advanced techniques. To obtain and analyze data from things (devices) that were previously disconnected from most data processing tools.

About the workshop:

The Workshop started with Tamizhthai Vazhththu. Ms. G.Harini, from second year ECE welcomes the gathering. Dr.T.Shanthi, HOD/ECE delivered the Inaugural address. Mrs.N.Mangaiyarkarasi, Head of Student Affairs & Dr.R.Ponni, Deputy of COE, delivered the special address.

Mr. R. Sathyaraj, Academic Coordinator of ECE, introduced the Resource persons.

Day-1 Resource Persons - Anitha P, Backia Regil P, Athithyan G, Kiruthika D – Students of II ECE-A

Day-2 Resource Persons – Suthersan A , Suriyanarayanan R, Naveen G, Mohamed Kasim J - Students of II ECE-B.

Mrs.U.Jeyamalar, AP/ECE & Mr.R.Balakrishnan, AP/ECE were the coordinators of this workshop.

Mr. B.Gunaseelan & Mr.M.Arunan from II ECE were the student coordinators of this workshop.



Dignitaries on the Dias



Inaugural address by Dr.T.Shanthi ,HOD/ECE



Special Address by Dr.R.Ponni, AP/ECE



Dignitaries were honored by the student coordinators



Dignitaries were honored with a shawl by the students



Resource persons were honored with a shawl



Resource person and student coordinators were honored

DAY-1 WORKSHOP:

SESSION:1

The first session was handled by **Ms.D.Kiruthika, from II ECE-A**. She gave an excellent lecture to the students and interacted with the students about the Internet of Things, Evolution of Internet of Things & Artificial intelligence. She also explained about the IoT with AI concepts with real time examples.



Resource Person Ms.D.Kiruthika, II ECE-A delivering the lecture to the Participants

She discussed in detail about the Home automation system using AI and also about the key applications of a smart home is to assist the elderly and disabled peoples.

- These home systems use assistive technology to accommodate an owner's specific disabilities.
- Voice control can assist users with sight and mobility limitations while alert systems can be connected directly to cochlear implants worn by hearing-impaired users.
- They can also be equipped with additional safety features, including sensors that monitor for medical emergencies such as falls or seizures.
- Smart home technology applied in this way can provide users with more freedom and a higher quality of life.

SESSION: 2

The second session was handled by **Ms.P.Anitha from II ECE-A**. She gave the lecture in the title of IoT with AI in agriculture. She explained about IoT with AI.

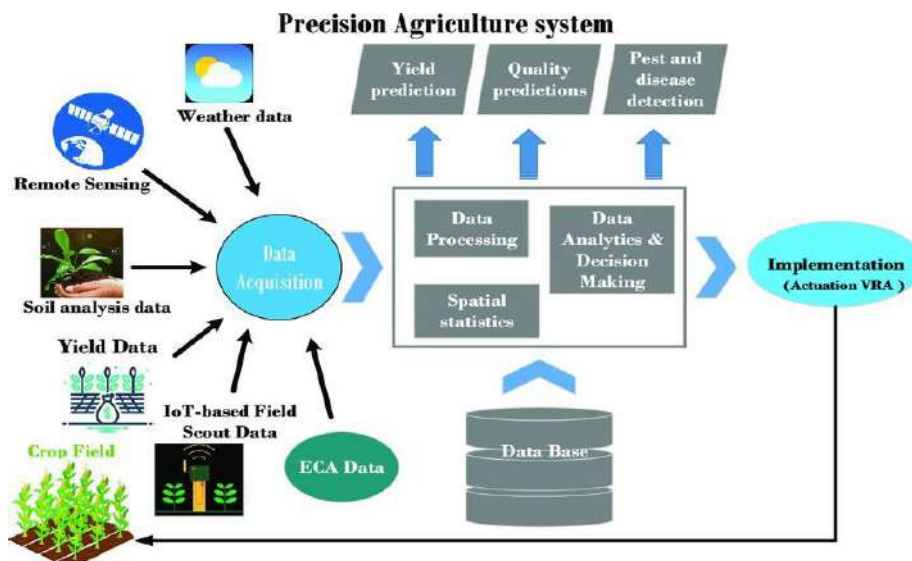


Resource Person Ms.P.Anitha, II ECE-A delivering the lecture to the Participants

AIOT in Agriculture:

- A smart agriculture system based on IoT is used to monitor a host of farming tasks.
 - For example, you can schedule the system to automatically irrigate land otherwise you can spray pesticides or fertilizers on the crops wirelessly through your smart phone.
 - This system is very useful in monitoring soil moisture with a moisture sensing system to notice dry soil.
 - This advanced system simply handles routine agricultural tasks by simply allowing cultivators & farmers to focus on agricultural tasks.

- She discussed about the Precision agriculture.



She explained about the weather report system based on Iot with AI, Environmental monitoring system, crop health monitoring and how AI models can forecast crop yields, predict weather patterns, and identify potential risks or opportunities based on historical and real-time IoT data. Also discussed about the fertilizers using drone, livestock management.

- How the AI-powered IoT systems can monitor livestock health, behaviour, and location in real-time, enabling farmers to optimizing animal welfare and productivity.
- For example, AI algorithms can analyze data on animal movement, body temperature, and feeding patterns to detect early signs of illness or stress, allowing for timely intervention.

Smart irrigation system:



She explained about how to sense the moisture and irrigates the plants

Harvesting robot:

- Harvesting robots are designed to harvest crops such as fruits and vegetables.
- They use sensors and cameras to detect when the crops are ready to be picked, then use robotic arms or other tools to carefully harvest them without damaging the produce.



Harvesting robot



Harvest using Image processing

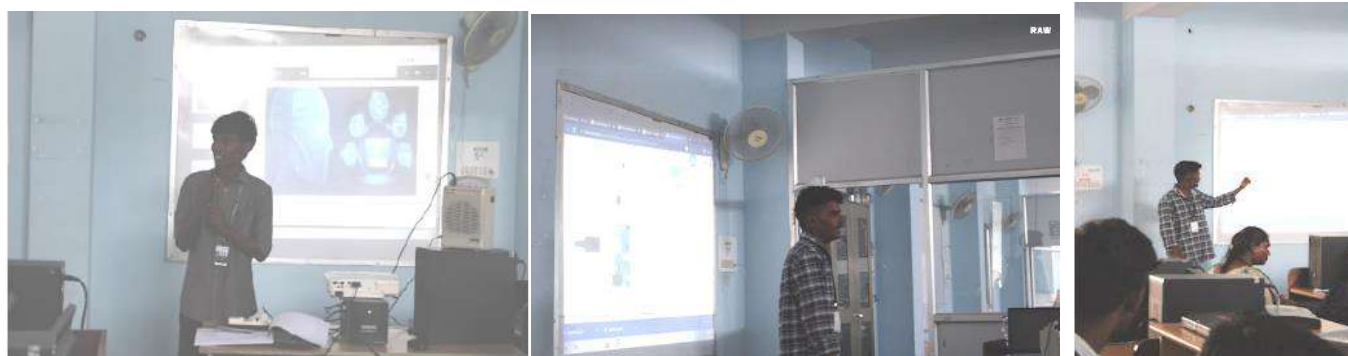
Smart garden using IoT:

The monitoring system for smart gardens using IOT is used to sense the soil moisture of plants & supply water to them. Moisture & fertility level of soil mainly changes based on the type of soil. So this system uses moisture and soil sensor to detect soil moisture.

She also discussed about the Benefits of IoT in agriculture and disease predictor etc.

SESSION:3

The afternoon session was completely Hands on session. This session was handled by **Mr.Backia Regil.P** and **Mr. Athithyan .G** from II ECE-A. They gave very good demonstration about the **Gas leakage detector using IoT**.

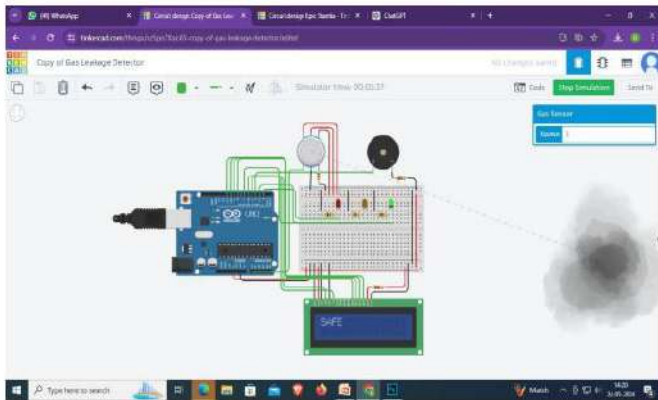


Resource persons Mr.Backia Regil .P and Mr.Athithyan .G from II ECE-A during the demonstration session.

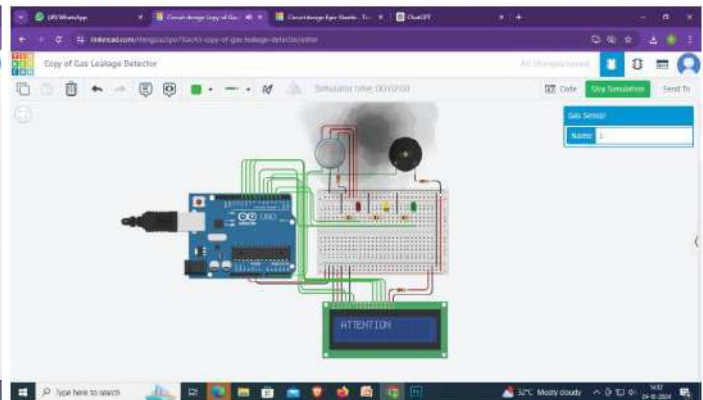
They have started with how to write the programs using tinkercad and they have explained the project step by step in a very clear manner.



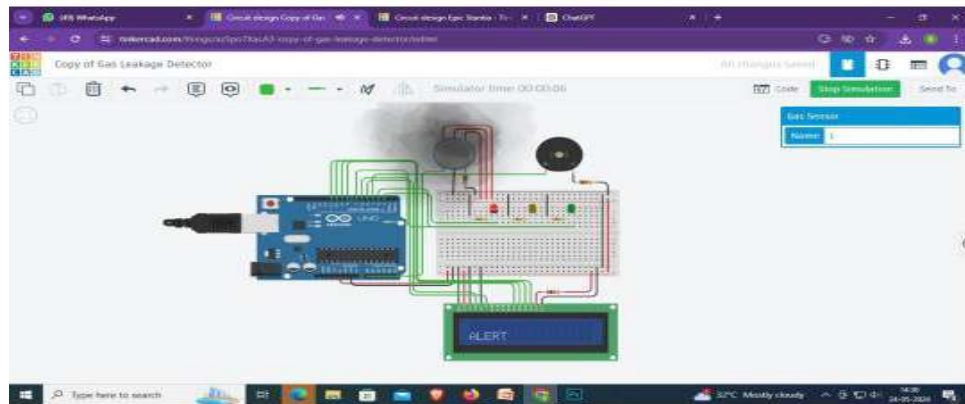
STEP 12 : SAFE(GREEN LED)



STEP 13 :(YELLOW LED-ATTENTION)



STEP 14 :(RED LED-ALERT)



As a conclusion they have stated that, A gas detector can sound an alarm to operators in the area where the leak is occurring, giving them the opportunity to leave. This type of device is important because there are many gases that can be harmful to organic life, such as humans or animals. Another benefit of Tinker cad is that it has now evolved to incorporate “circuits” functionality. This allows students to design circuits, program micro-controllers and incorporate the electronics directly into their 3D designs.

DAY-2 WORKSHOP:



Dignitaries on the Dias



Resource persons were honored with a shawl



Resource person and Staff coordinator were honored

SESSION:1

The second day, first session was handled by **Mr. Suthersan.A from II ECE- B**. He explained about the Internet of Things, Its features, the benefits of IoT for business, Artificial Intelligence, Role of AI in society 4.0 etc.

AI in diverse domains such as Life style, Healthcare & medicine, Food & Agriculture, Banking & Finance, Transportation and Automobiles, E-Commerce, Robotics, Education and Entertainment etc..

He explained about the machine learning and deep learning concepts.



Resource Person Mr.Suthersan.A, II ECE-B delivering the lecture to the Participants

He also explained about how the data will be stored in the cloud and discussed about the volume of data occupied every minute in various social media.

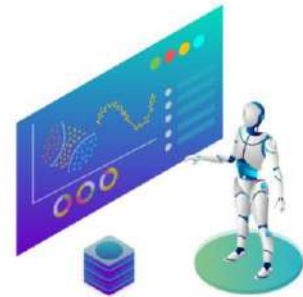
Data Storage

Historically, data was stored in:



Cloud Storage

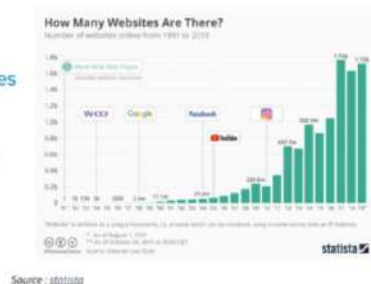
Storing large amounts of data digitally enabled computers to identify patterns in the data



Volume of Data

Total Number of Websites from 1991 to 2019

> 1.72 billion websites!



Source: Statista

Volume of Data

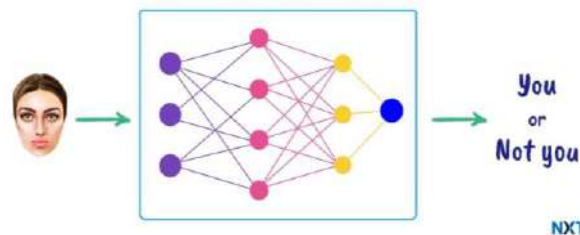
Over 2.5 Quintillion (10^{18}) Bytes of Data is Created Each Day!



Source: Data Never Sleeps 7.0 - Q4 2016

He also discussed about the artificial neural networks and the pattern recognition with real time examples.

Learning



He explained in detail about the data science and machine learning concepts.

Data Science



Data Science is the science of extracting knowledge and insights from data

Machine Learning



Machine Learning is a field of study that gives computers the ability to learn

SESSION:2

The second session was handled by **Mr. Suriyanarayanan.R from II ECE-B**. He explained about the Arduino, open source Hardware, various kinds of Arduino boards, various types of microcontrollers used and commonly used Arduino boards.



Resource Person Mr. Suriyanarayanan.R II ECE-B delivering the lecture to the Participants

The reason to use Arduino Uno:

- Most popular board in Arduino board family
- Best board to start with Electronics and coding

The main components in Arduino Uno are: USB Jack, Power Jack, Voltage regulator, Crystal Oscillator, Reset buttons, power pins, LEDs, Microcontroller etc. He explained in a detailed manner about the components and their working.



He explained about the Arduino's Microcontroller ATMEGA328P.

The three main segments in that are Flash memory- 32Kbytes, SRAM- 2K bytes, EEPROM – 1Kbytes. The peripheral features, and also about the communication protocol. He also explained about the purpose of the three memory segments.

- Flash memory (program space), is where the Arduino sketch is stored.
- SRAM (static random access memory) is where the sketch creates and manipulates variables when it runs.

➤ EEPROM is memory space that programmers can use to store long-term information. At last he concluded about, how we have to do the projects using this Arduino microcontroller.

SESSION:3

The afternoon session was handled by **Mr.Mohamed Kasim.J and Mr. Naveen.G from II ECE -B.**



Resource Persons Mr.Mohamed Kasim.J and Mr. Naveen.G from II ECE -B during the demonstration session

They explained about the project titled **Monitoring the Garden Using PIR Sensor.**



PIR SENSOR



PIN Details

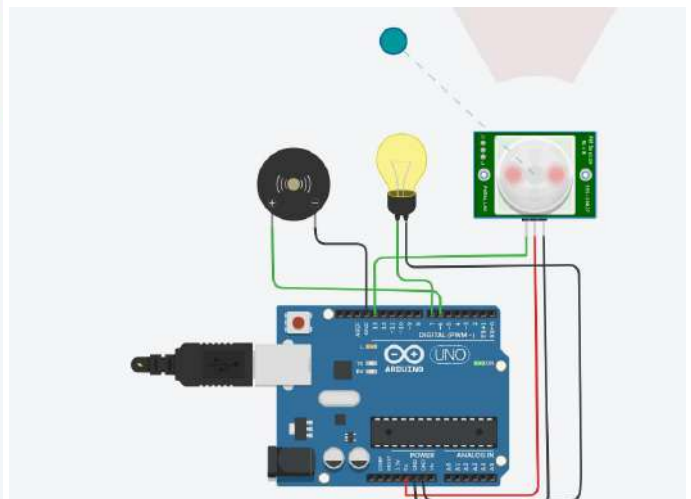
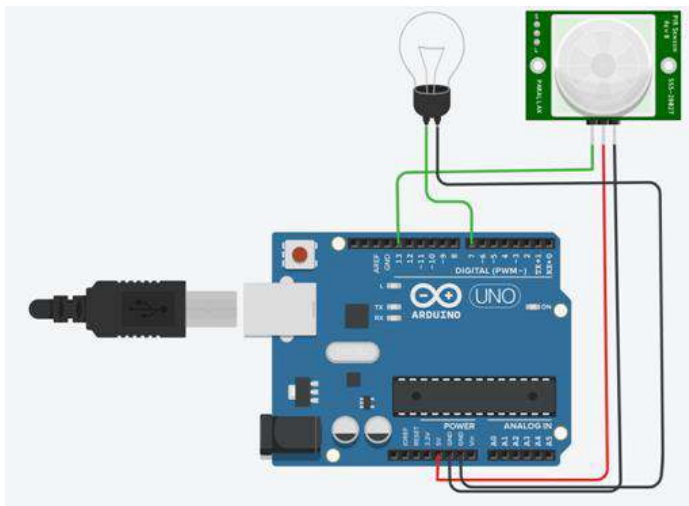
They gave very clear explanation about, what is a PIR sensor? How it works? What does a PIR Sensor detect? It's working principle, pin configurations and the range of PIR Sensor.

- **Passive infrared sensor** is an electronic sensor that measures infrared light radiating from objects.
- PIR sensors mostly used in PIR-based motion detectors.
- Also, it used in security alarms and automatic lighting applications.
- The below image shows a typical pin configuration of the PIR sensor, which is quite simple to understand the pin outs.

- The PIR sensor consist of 3 pins,
- Pin1 corresponds to the drain terminal of the device, which connected to the positive supply 5V DC.
- Pin2 corresponds to the source terminal of the device, which connects to the ground terminal via a 100K or 47K resistor. The Pin2 is the output pin of the sensor. The pin 2 of the sensor carries the detected IR signal to an amplifier.
- Pin3 of the sensor connected to the ground.

Range of PIR Sensor.

- Indoor passive infrared: Detection distances range from 25 cm to 20 m.
- Indoor curtain type: The detection distance ranges from 25 cm to 20 m.
- Outdoor passive infrared: The detection distance ranges from 10 meters to 150 meters.
- Outdoor passive infrared curtain detector: distance from 10 meters to 150 meters



At the last they have explained about the various sensor and its applications.



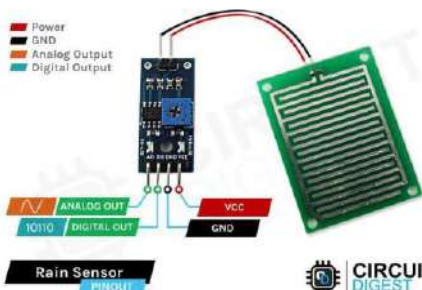
PIR Sensor



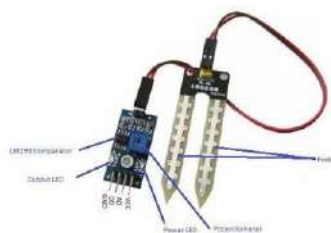
Ultrasonic Sensor



IR Sensor



Rain Drop Sensor



Soil Sensor



Gas/Smoke Sensor

Valedictory Session:



Dignitaries on the Dias



Principal was honored by Mrs.N.Mangaiyarkarasi



Vice principal was honored by Mr.R.Sathyaraj



Honoring Mr.R.Sathyaraj, Academic Coordinator/ECE



Dignitaries during their Valedictory Address

During the valedictory session, Dr.J.Arputha Vijaya Selvi, Principal/KCE and Dr.S.Sivakumar, Vice principal/ KCE appreciated all the students for their involvement and support.

They appreciated and motivated the students who acted as resource person for this two day workshop. They encouraged the students with words. They motivated that, this type of workshop should be conducted frequently and all the students should come forward.



The moment of Appreciation – Students received their Participation Certificate

Finally, Mrs.D.Vennila, AP/ECE gave the vote of thanks with words and she appreciated all the student participants and the resource persons for their endless effort. Thus the workshop ended successfully with National Anthem.

OUTCOME:

- At the end of the workshop the students gathered more knowledge on Internet of Things and Artificial Intelligence.
- Students can able to identify the various sensors, actuators and microcontrollers that form the backbone of IoT infrastructure
- Hands-on experience with popular IoT development platforms like Arduino and Raspberry Pi enables learners to build their own IoT prototypes.
- Additionally, understanding different IoT platforms allows individuals to leverage existing frameworks and tools in their projects.

1. 
 2. 
Co ordinators


HOD/ECE


Principal
PRINCIPAL
Kings College of Engineering
PUNALKULAM - 613 303

Annexure: I

BROCHURE

**KINGS**
COLLEGE OF ENGINEERING
(An Autonomous Institution)
Affiliated to Anna University, Chennai | Approved by AICTE, New Delhi

ACCREDITED WITH GRADE
B++
NAAC

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
PROUDLY PRESENTS

INTERNET OF THINGS WITH AI WORK SHOP

REGISTRATION FEE:
100/-




27,28 MAY, 2024
10:00AM

Pallava Hall

STAFF COORDINATORS

Mrs.U.JEYAMALAR,
AP/ECE,
Mr.BALAKRISHNAN,
AP/ECE.

STUDENT COORDINATORS

Mr.B.GUNASEELAN
Mr.A.SUTHERSAN
Mr.M.ARUNAN
Mr.R.SURYANARAYANAN

| | | |
|---|--|------------------------------------|
| Mrs. D.VENNILA AP/ECE IDAC MEMBER | Mr.R.SATHYARAJ AP/ECE ACADEMIC COORDINATOR | Dr.R.PONNI AP/ECE DEPUTY COE |
| Mrs.N.MANGAIYARKARASI AP/ECE SSS | Dr.T.SHANTHI HOD/ECE | Dr.S.SIVAKUMAR VICE PRINCIPAL |
| Dr.J.ARPUTHA VIJAYA SELVI PRINCIPAL | Dr.R.RAJENDRAN SECRETARY | |

FOR CONTACT
8940979746
95971 77957



28, MAY 2024



SUTHERSAN A

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TOPIC: IOT AND AI INTRODUCTION

TIME: 10:00AM-11:00AM

BREAK



SURIYA NARAYANAN R

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TOPIC: SENSOR AND PROCESS OF MICROCONTROLLER

TIME: 11:30AM-12:30PM

LUNCH



MOHAMMED KASIM J

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TOPIC: PRACTICAL DEMONSTRATION

TIME: 1:30PM-2:30PM

BREAK



NAVEEN G

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TOPIC: PRACTICAL DEMONSTRATION

TIME: 3:00PM-4:10PM

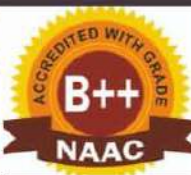


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27, MAY 2024



KIRUTHIKA D

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TOPIC: IOT IN SMART HOME

TIME: 10:00AM-11:00AM

BREAK



ANITHA P

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TOPIC: IOT IN AGRICULTURE

TIME: 11:30AM-12:30PM

LUNCH



BACKIA REJIL P

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TOPIC: PRACTICAL DEMONSTRATION

TIME: 1:30PM-2:30PM

BREAK



ATHITHYAN G

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TOPIC: PRACTICAL DEMONSTRATION

TIME: 3:00PM-4:10PM

Annexure: II
Sample Certificates





DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)

ALUMNI TALK ON CAREER SUCCESS TIPS FOR FRESHERS

Venue: Class Room

Date: 08.05.2024

Time: 01:30 – 02:00 PM

Background:

In KCE, Department of Electronics and Communication Engineering had organized an Alumni talk by **Ms.S.Maheshwari** (2019-2023) on 08-05-2024 for Second year ECE students in the respective classroom.

Totally 42 students have enthusiastically attended this talk.

Resource Person Details:

1. Ms.S.Maheshwari, Preparing for UPSC Exam, Shankar IAS Academy, Chennai.

Objective:

- The program's aim was to make students to understand how they can have a successful engineering career in future.
- To give awareness about the job opportunities in Government sectors and the preparation towards state and central government exams.

Alumni Session:

Ms.S.Maheshwari, preparing for UPSC Examination, in Shankar IAS Academy, Chennai. She gave many key points regarding the preparation towards the TNPSC and UPSC Examinations.

She discussed about the syllabus for various examinations and Fees structures. She insisted the importance of Naan mudhalvan course completion, because students can avail stipend / scholarship for every stage of examination preparations like prelims, mains, Interview etc. Many students were get impressed in her talk. She shared her experience and motivated the students towards their goal. She advised the students to make right decisions.

She also discussed about the job opportunities available in software companies. How to prepare for the interview? Importance of Aptitude knowledge and Group discussion. She insisted that, the communication plays a vital role. This is the right time to develop your communication skills.



Alumni talk by “Ms.S.Maheshwari towards the UPSC Exam preparation”

The session was very informative and interactive for the students and it was organized by Mrs. D.Vennila, IQAC member, Department of ECE. Towards the end, there was an interactive session, with the alumni answering various queries raised by the students.

Outcome

The Alumni talk is a platform for the renowned alumni to share their views and experiences with the junior students. It is the stage for relishing and encouraging the students and to guide them forward towards their goal. Around 42 students of second year ECE attended this Alumni talk.

D. Vennila
14/8/24

IQAC MEMBER

[Signature]
14/8/24

HOD/ECE

H.O.D.
ELECTRONICS AND COMMUNICATION ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNALKULAM - 613 303.
GANDYAKKOTTAI TALUK, PUDUKKOTTAI DISTRICT

J. Praveen
14/8/24

PRINCIPAL

Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023-2024 (EVEN SEMESTER)
ALUMNI TALK ON CAREER SUCCESS TIPS FOR FRESHERS

Venue: Class Room

Date: 29.04.2024

Time: 01:15 – 01:45 PM

In KCE, Department of Electronics and Communication Engineering had organized an Alumni talk by Mr. Pugalendhi.K (2016-2020) on 29-04-2023 for second year ECE students in Classroom. Totally 39 students have enthusiastically attended this talk.

Resource Person Details:

Mr. Pugalendhi.K, Assistant system Engineer, Foxconn Technology India Pvt Ltd, Chennai.

Objective:

The main objective of the program was to make students to know, how to face the Interview in software companies and also to give some awareness regarding the placement process in software companies.

Alumni Session:

Mr. Pugalendhi.K, working as an, Assistant system Engineer, Foxconn Technology India Pvt Ltd, Chennai. He gave some tips to the students through his past and present experiences as being an ex-student of the department as well as an employee of IT industry.

He gave important tips to face the interview in software companies. He insisted the students that they have to be very strong in communication. Their answers should be very clear and bold.

If it is a product based companies, they will conduct 2-5 technical rounds. The technical round can be conducted from on-site (team who are in other country) people. HR Interview - This round will evaluate your communication skills, learning capabilities, social skills, interpersonal skills etc...

If they are good in coding means they can express it. He insisted the students to utilize the training and placement hour properly. He asked the students to concentrate more in soft skill training and aptitude. From third year onwards start your preparation for aptitude. Before attending an interview, watch you tube videos related to group discussion. In all the companies, Group discussion plays the vital role because the work will be team oriented. Wherever you get placed, you have to survive in that company for a minimum of one year.

Students interacted with enthusiasm and they have asked so many queries during the session.



Alumni talk Alumni talk by “Mr.Pugazhendi on “Career Success Tips for Freshers”

Finally he have answered the queries raised by students and made the session as an interactive one.The session was very informative and interactive for the students and it was organized by Mrs. D.Vennila, IQAC member, Department of ECE.

Outcome

The Alumni Speech is a platform for the renowned alumni to share their views with the junior students. It is the stage for relishing and encouraging the students and to guide them forward with a sense of purpose and anticipation. Around 39 students of second year ECE were benefitted by the Alumni speech.

D. Vennila
14/8/24

IQAC MEMBER

[Signature]
14/8/24

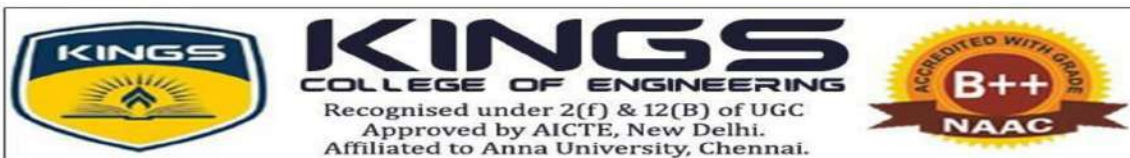
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GANDARVAKKOTTAI TALUK, PUDUKKOTTAI DISTRICT

J. Praveen
14/8/24

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-24(EVEN SEM)

IEEE STUDENT BRANCH STB 16621- JUNE, 2023

INTERNAL STAFF TECHNICAL SEMINAR

16.04.2024

Summary of the seminar:

Department of Electronics and Communication Engineering in association with IEEE student branch (16621) organized an Internal staff technical Seminar on **13.04.2024**.

The main objective of this internal staff technical seminar is to:

- Provide a platform and to get exposure in the recent trends of Electronics and Communication Engineering.
- Improve the performance of all the Staff members at all levels.
- Identify the persons in the department with the required potential and prepare them for higher positions in future.
- Prevent stagnation of faculty by exposing them to the latest concepts and techniques in their respective areas of specialization.

Mr.N.Mangaiyarkarasi, HOD/ECE welcomed the gatherings. **Mr.R.Thandayathapani**, Assistant Professor/ECE delivered a lecture in the topic of **“Solutions of Soil Moisture Sensing with RFID for Landslide Monitoring”**.

Online Journal Paper Referred:

Sérgio Francisco Pichorim , Nathan J. Gomes , John C. Batchelor, "Two Solutions of Soil Moisture Sensing with RFID for Landslide Monitoring," in sensors journal, vol. 18, 2018, doi:10.3390/s18020452

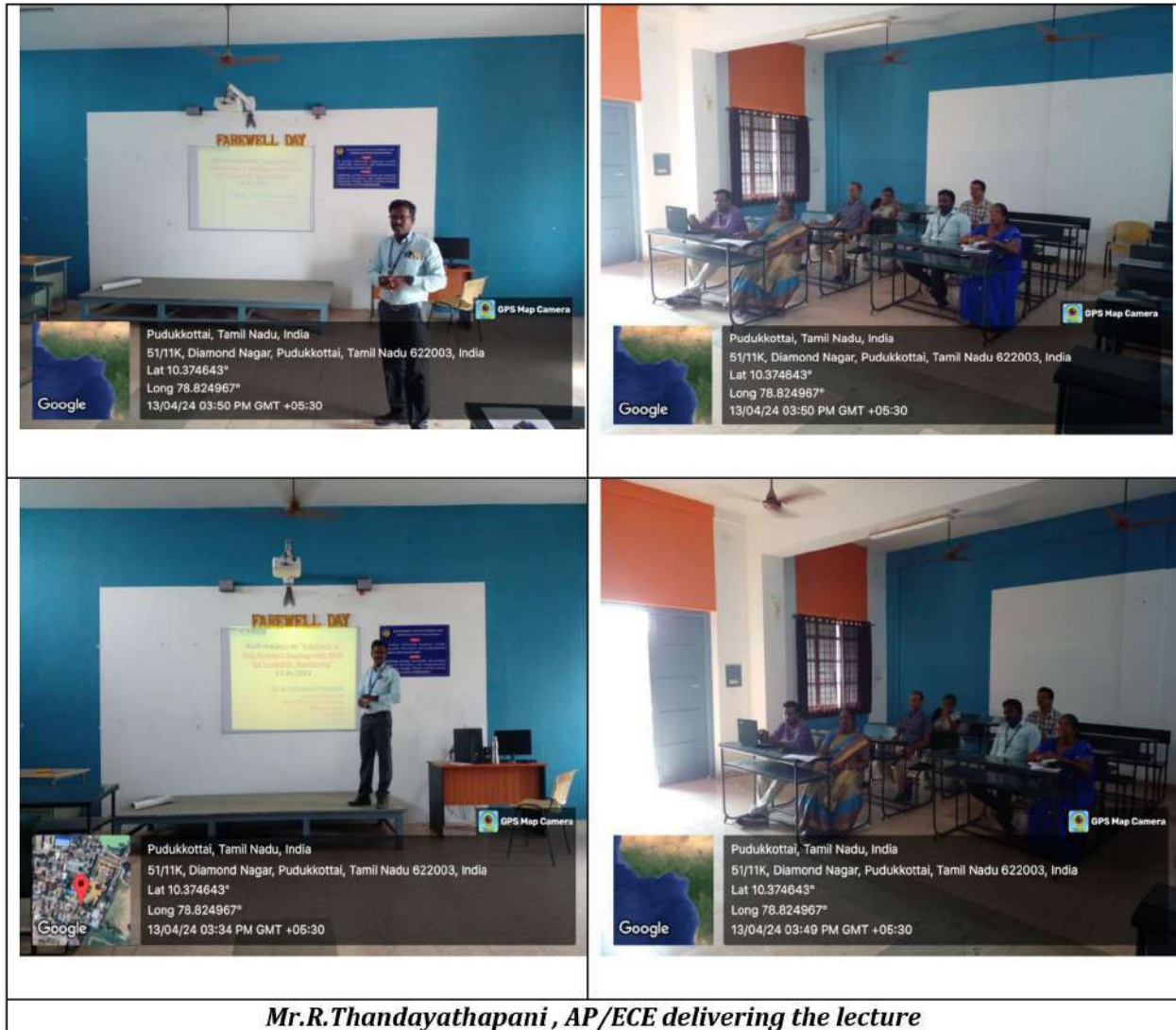
Aim and the themes discussed:

- This seminar revolves around leveraging **advanced sensing technologies (RFID)** to address **geological and environmental challenges** like landslides.
- This seminar Integrating **RFID-based sensors** with soil moisture monitoring for **proactive disaster management**.

Outcome:

- Attendees may gained knowledge how integrating RFID with IoT can provide real-time monitoring and alerts for early landslide prediction.

- The seminar will inspire researchers and engineers to explore innovative solutions combining RFID technology with other sensing systems for natural disaster mitigation.
- Overall the seminar was helpful for the future researchers, who have the interest to work and make advancements in the field to gain insight into the topic.



A.H. 14/8/24

Staff in charge

14/8/24

HOD

J. Prasad 14/8/24

Principal

H.O.D.
ELECTRONICS AND COMMUNICATION ENGINEERING
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PUNALKULAM - 613 303.
GANDAYAKOTTA TALUK, PUDUKKOTTA DISTRICT

Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303



A REPORT
ON
LIVE ONLINE WEBINAR TITLED
“COMMUNICATION TECHNOLOGIES AND ITS REAL TIME
APPLICATIONS USING EDGE COMPUTING TECHNOLOGIES”

ON
09th APRIL 2024



Organized by
Department of Electronics and Communication Engineering
KINGS COLLEGE OF ENGINEERING, PUNALKULAM
A NAAC Accredited Institution

Recognized under 2(f) & 12(B) of UGC
(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

Phone : 04362-282474, 282395
Website : www.kingsindia.net

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| 3. | Annexure: II (Registration Form) | 08 |
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| 5. | Annexure: IV (Feedback Response) | 10 |
| 6. | Annexure: V (Resource Person Profile) | 11 |
| 7. | Annexure: VI (Sample Certificate) | 12 |

A Glimpse on the Background of Webinar:

In KCE, Department of Electronics and Communication Engineering, has organized an online Webinar Titled “**Communication Technologies and its Real Time Applications Using Edge Computing Technologies**” on 09th April 2024 from 10.30 a.m to 12.00 p.m.

The main objective of this Webinar is to have some knowledge about the various communication technologies, major communication protocols and its real time applications etc .

Under the guidance of our Principal, Dr. J. Arputha Vijaya Selvi, we hosted this Webinar.

Dr.T.Shanthi, HOD/ECE was the convener of our webinar. Mrs.D.Vennila, AP/ECE was the program coordinator.

OVERVIEW OF THE WEBINAR:

ABOUT THE RESOURCE PERSON:

The resource person for the webinar was **Dr. Vaddi Naga Padma Prasuna**, Associate Professor, Atria Institute of Technology, Bangalore.

ABOUT THE REGISTRATION PROCESS:

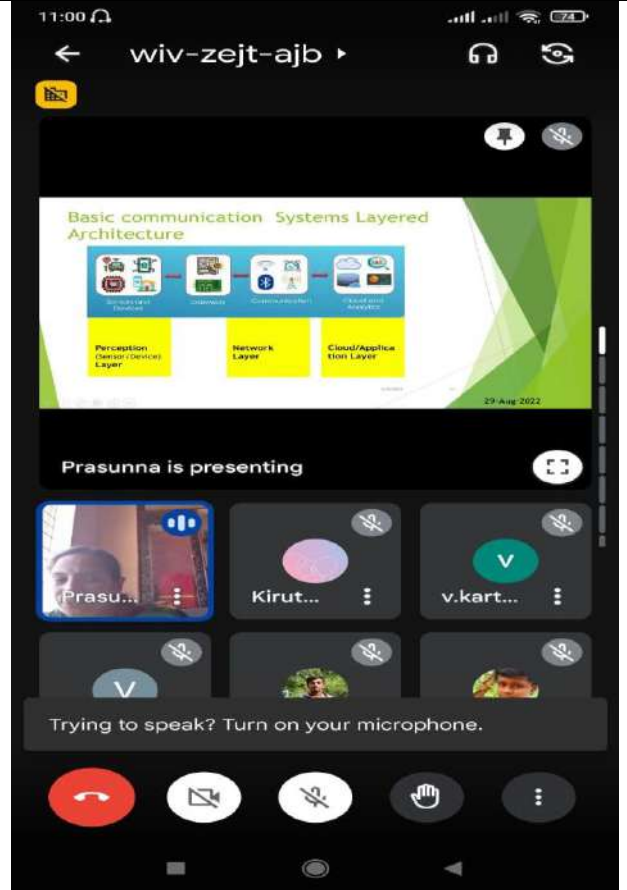
The webinar was planned to conduct via Google meet platform. The registration link was created through Google forms and the link was posted in Whats app group.

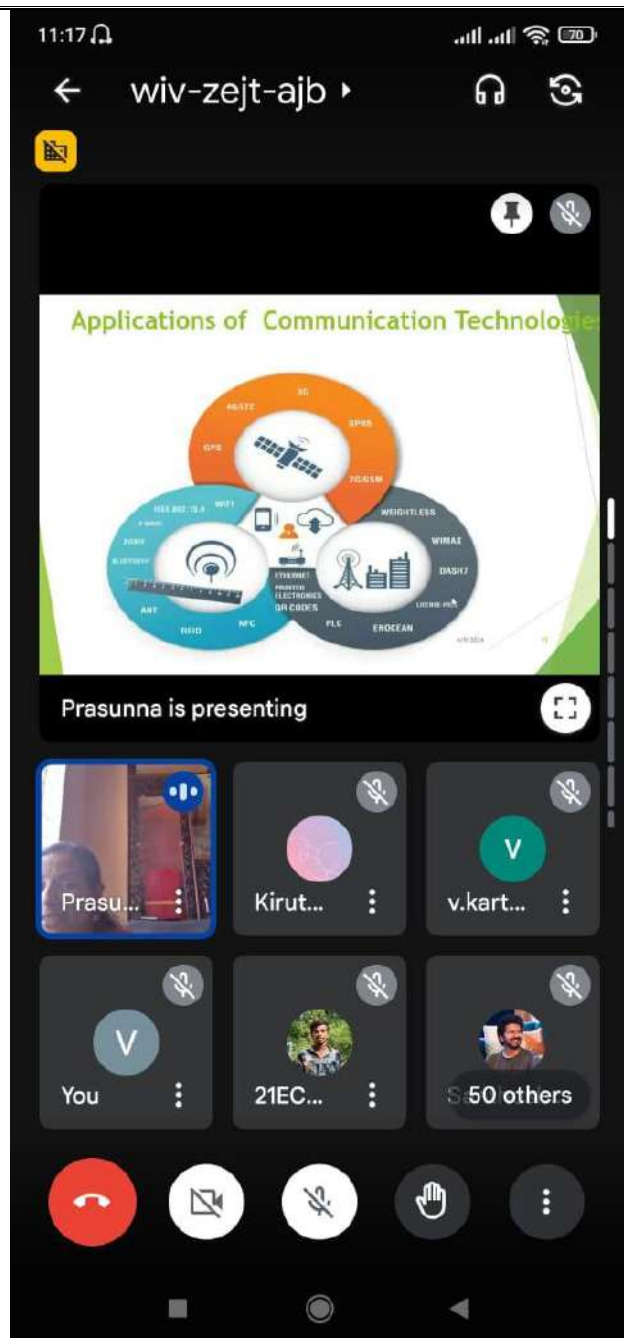
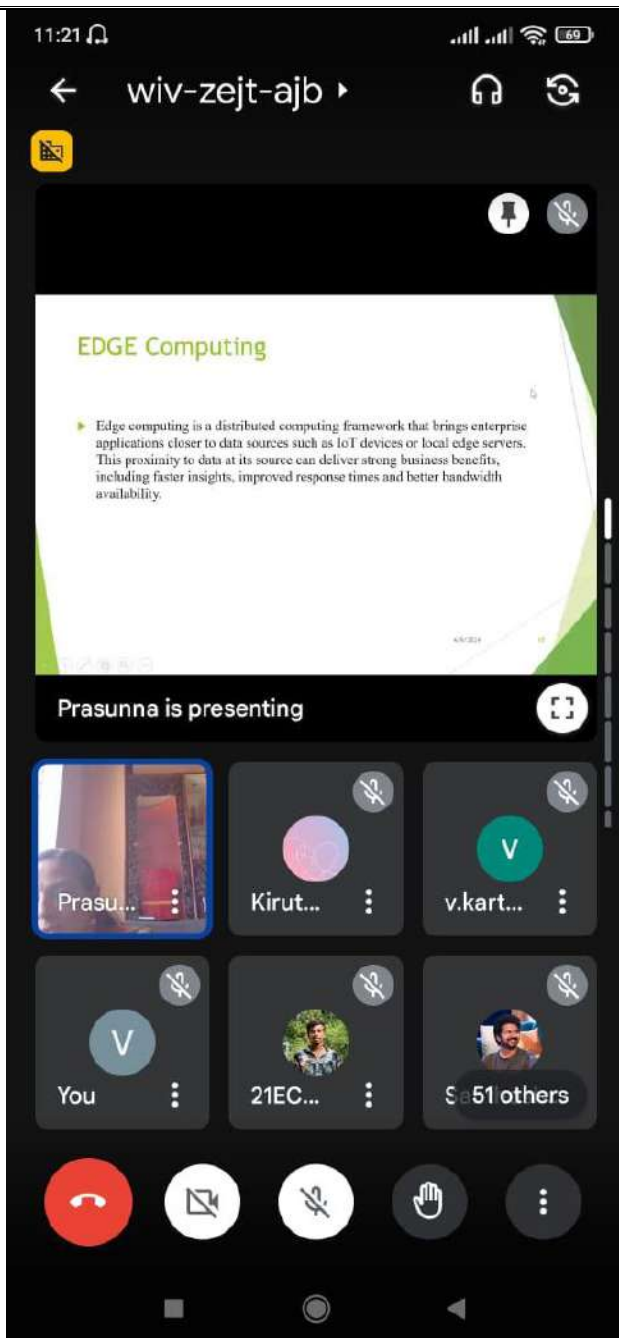
Registration Link: <https://tinyurl.com/commutech>

ABOUT THE WEBINAR:

The webinar was started at 10.30 a.m with 91 participants. Ms. D. Kiruthika, Student of II ECE, welcomed the resource person and the participants by the words. Mrs. D.Vennila, AP/ECE coordinator of this webinar gave the Introduction about the Resource person. Then the session was handed over to the Resource person. She gave very clear explanation about the Title of the Webinar “Communication Technologies and its real time applications”

In her lecture, she explained about the various communication Technologies, The layered architecture of communication, Major communication protocols available, Edge computing technologies, Edge computing in real time applications etc. She emphasized about the evolution of mobile networks and their characteristics.





Snapshots of the webinar during the lecture of Dr. V N P Prasuna

She also explained about the evolution of mobile networks and their technical characteristics.

1G – Developed in 1980, No data transmission, No impact on Industrial Applications

2G – Developed in 1991, Upto 40 Kbps, Text messages from and to remote machines.

3G - Developed in 2001, Upto 20 Mbps, Video monitoring, Remote conditioning monitoring.

4G - Developed in 2010, Upto 1 Gbps, Wireless Environment Network, Services via smart phones.

5G - Developed in 2020, Upto 20 Gbps, Autonomous Logistics, Real time Data Analytics.

The top 7 technical skills in 5G technologies are:

- Network design and architecture

- Wireless communication technologies
- Network security
- Project management
- System Integration
- Software development and programming languages
- Data analysis and management

The four common communication models used by IoT devices are:

1. Device to Device Communication
2. Device to Cloud Communication
3. Device to Gateway
4. Back End Data Sharing

The Advanced applications of Communication technologies are:

- The Rise of 5G technology, Edge Computing, Manufacturing and Health care, Connected Smart cars and Smart cities etc.

She gave the overview about the Basic communication systems: Layered architecture, Layered architecture protocols and the various protocols comparison.

Finally she discussed about the Edge computing technologies.

At 12.00 p.m she comes to the end of the session. The queries were asked by the participants for 10 minutes. She gave the answers for all the queries. At 12.15 p.m we have posted the Feedback link Via the chat box.

Feedback Link: <https://forms.gle/sM3MWGLXPZQ1oASa7>

Finally, Mrs. D.Vennila, AP/ECE coordinator of this webinar gave the vote of thanks with words.

Thus the program ended successfully.

OUTCOME:

- All the second and third year ECE students have attended the session.
- Students gained some knowledge about the communication technologies and its real time applications. Also they have understood about the communication protocols and the edge computing technologies.
- E-Certificate was provided to all the participants through their E-mail.

D. Vennila
12/4/24
Co coordinator

[Signature]
HOD/ECE
12/4/24
H.O.D.

[Signature]
12/4/2024
Principal

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GANDAPPAKOTTAI TALUK, PUDUKOTTAI DISTRICT

PRINCIPAL
Kings College of Engineering⁶
PUNALKULAM - 613 303

Annexure: I

BROCHURE

**KINGS**
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**B++**
NAAC

**IEEE**

Madras Section
STB 16621

Department of ECE
and
IEEE Student Branch
jointly organize

WEBINAR ON
Communication Technologies
and its real time Applications
using Edge Computing
Technologies

**Dr Prasuna V N P**
Associate Professor
Atria Institute of Technology,
Bangalore



**09 APRIL 2024**
TUESDAY

**TIME**
10:30 a.m.

Coordinator
Ms. D. Vennila,
AP/ECE

Convener
Dr. T. Shanthi,
HOD/ECE

Patron
Dr. J. Arputha Vijaya Selvi
Principal/IEEE SBC

Annexure: II
Registration Form

Registration Form - Webinar on "Communication Technologies"

Organized by Department of ECE, Kings College of Engineering, Punalkulam, Pudukkottai.

COMMUNICATION TECHNOLOGIES




Annexure: III
Feedback Form

Questions



Responses **83**

Settings

Total points: 0









COMMUNICATION TECHNOLOGIES AND ITS REAL TIME APPLICATIONS USING EDGE COMPUTING TECHNOLOGIES.

B **I** **U**  

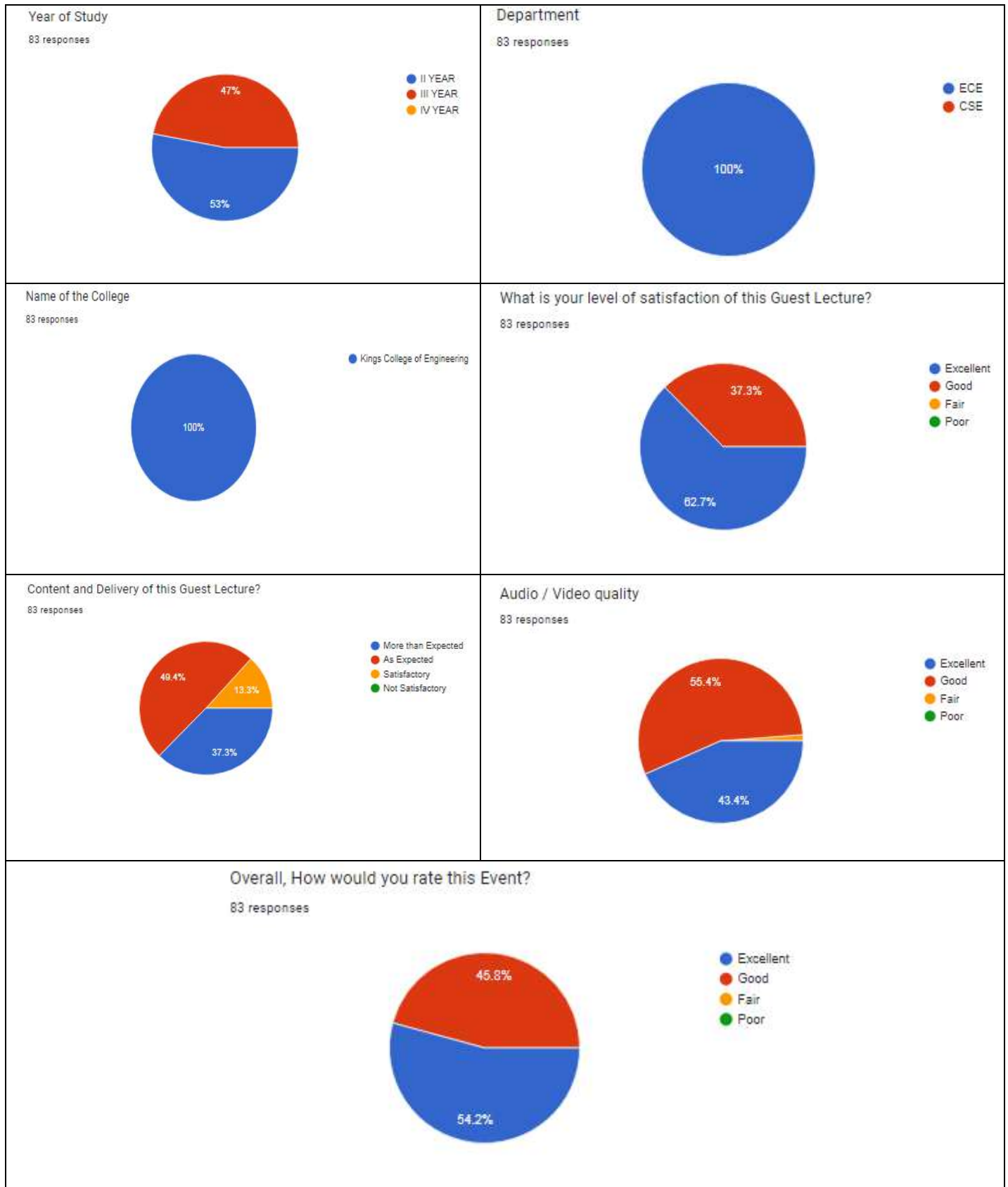
WEBINAR ON 09-04-2024 (TUESDAY) at 10.30 AM

This form is automatically collecting emails from all respondents. [Change settings](#)



Annexure: IV

Feedback Response



Annexure: V
Resource Person Profile



Dr. Vaddi Naga Padma Prasuna,
Associate Professor, Atria Institute of Technology, Bangalore.

She is having 16 years of teaching experience in the fields of wired and wireless Networks, IoT, ICT technologies. She acquired her M.Tech in VLSI & Embedded systems with distinction from V.T.U in 2008. She was awarded her PhD from Anna University in 2018.

Her areas of interest include WSN, Reconfigurable systems, Industrial IoT, 4G, and 5G networks. She conducted many Faculty Development programs and Student Development Programs in Atria Institute of Technology, and SDPs in other colleges. Delivered talks in different colleges.

Achievements:

Currently serving as Secretary 2024, WiE AG Bangalore Section, WiE Execom member Bangalore Section 2023, WiE Affinity group Advisor SB AIT since 2021, Recognized as VTU research supervisor from 2021.

Awards received:

Received Outstanding WIE Volunteer 2023 award from IEEE Bangalore section
Received Outstanding Branch WIE Student 2023 award from IEEE WIE Bangalore section
Received research incentives from Honorable Register of VTU June 2023

Research/Publications:

Recognized VTU supervisor, Guiding few scholars, 31 research Publications, Published One Book Chapter, 4 – Patents, Proposals submitted to VGST, AICTE, ISRO, 6G Bell labs, Received KCST Funded project 2022-23

Memberships, Outreach Activities:

IEEE Member – 97237912, IEEE Bengaluru Section WIE 2023 – serving as EXECOM member, IETE Fellow Member, IANG Member -281080, ISTE Life Member -13267, served as a resource person for prestigious colleges and IEEE events/ workshops/SDPs.

Annexure: VI
Sample Certificates



ISTE STUDENTS CHAPTER (TN 217)
ACADEMIC YEAR 2023-2024(EVEN SEMESTER)
MINIPROJECT EXPO REPORT

The ISTE Students Chapter (TN 217), Kings College of Engineering organized a **Mini Project Expo** on 03.04.2024 between 10.00 am - 1.30 pm through offline mode ISTE student members of ECE Department. Initially Dr. T. SHANTHI HOD/ECE has given some important tips to the students regarding the expo. Nearly 30 students have actively participated in this competition. There are two internal juries evaluated the projects.

Internal Juries:

Mrs. N. Mangaiyarkarasi AP/ECE

Mrs. R. Ponni AP/ECE

LIST OF PROJECTS: The following projects were presented in the project Expo

| S.No | Name of the students | Year | Project title |
|------|-----------------------------------|----------|--|
| 1 | Joanleo E Kavivarathan M | II ECE A | Mini Robot |
| 2 | Sneharaj Eniyarasi P | III ECE | Height Measurement Drive Using Arduino |
| 3 | Suthersan A Suriyanarayanan R | II ECE A | Arduino Radar Using Ultrasonic Sensor |
| 4 | Jaya Prasad P Arivazhagan G | II ECE | Face Reorganization |
| 5 | Backia Regil P Karthikeyan V S | II ECE A | Door Lock Password |
| 6 | Sajjeevan M Krishnamoorthy V | III ECE | Air Quality Monitoring System |
| 7 | Sudharsan P Mukilvannan M | III ECE | Arduino Radar Using Ultrasonic Sensor |
| 8 | Gunalan S Manikandan A | II ECE A | Distance Indicating |
| 9 | Subhadharshini A Swathi R | II ECE B | Plant Watering System |
| 10 | M.Vinotha P.Rajkarunya | II ECE B | Blind Stick Using Ultrasonic Sensor |

Prize winners

| S.No | Name of the students | Year | Position |
|------|----------------------------------|-----------|--------------|
| 1 | Pasupathi G Pasupathi K | II ECE B | First Prize |
| 2 | Suthersan A Suriyanarayanan R | II ECE B | Second Prize |
| 3 | Maheswaran D Mohamed Yazeen M | III ECE | Third Prize |
| 4 | Kiruthika D Kamali M | III ECE A | |

SNAPSHOTS



Students actively explain their projects to the juries



Dr.T.Shanthi HOD/ECE distributing the certificates at SCC

OUTCOMES:

- Understand, plan and execute a Mini Project with team.
- Engineering students have to get a good knowledge of electronic concepts by doing some electronic projects in the final year itself. So, it is very important to concentrate on some electronic mini project ideas to get succeed in engineering.
- Prepare a technical report based on the Mini project.
- Deliver technical seminar based on the Mini Project work carried out

M. H. S. 2
Dept. ISTE Co-ordinator

P. S. S.
ISTE Co-ordinator

J. M. S.
22/05/2024
Principal



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023-2024 (ODD SEMESTER)
ALUMNI TALK ON CAREER SUCCESS TIPS FOR FRESHERS

Venue: Class Room

Date: 10.11.2023

Time: 11:15 – 12:00 PM

Background:

In KCE, Department of Electronics and Communication Engineering had organized an Alumni talk by Ms.K.Gayathri (2019-2023) and Ms.S.Maheshwari (2019-2023) on 10-11-2023 for Third year ECE students in Digital Laboratory.

Totally 35 students have enthusiastically attended this talk.

Resource Person Details:

1. Ms.K.Gayathri, Junior programmer Trainee, Vcidex Solutions, Chennai.
2. Ms.S.Maheshwari, Preparing for UPSC Exam, Shankar IAS Academy, Chennai.

Objective:

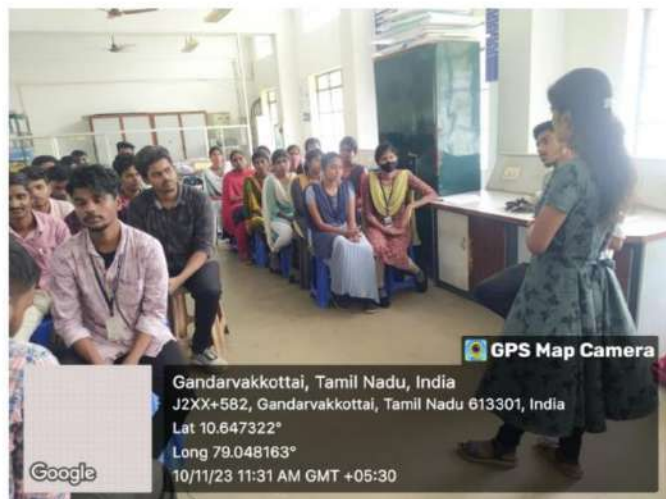
- The program's aim was to share the fast growing technologies, which will help students to develop their career.
- To make students to understand how they can have a successful engineering career in future.
- To give awareness about the job opportunities in Government sectors and the preparation towards state and central government exams.

Alumni Session:

Ms.K.Gayathri, working as a Junior programmer Trainee, Vcidex Solutions, Chennai. She motivated and guided the students through his past and present experiences as being an ex-student of the department as well as an employee of IT industry. She shared her experiences about the college days and importance of subjects in ECE. She also insisted the importance of Naan Mudhalvan course project, which paves the way to join in that concern. Many questions were asked in the interview from Naan mudhalvan project. She interacted with the students about the need and expectations of the software company. Also she advised students to get trained in professional courses for gaining more knowledge and to update the technical skills to get into the industry.

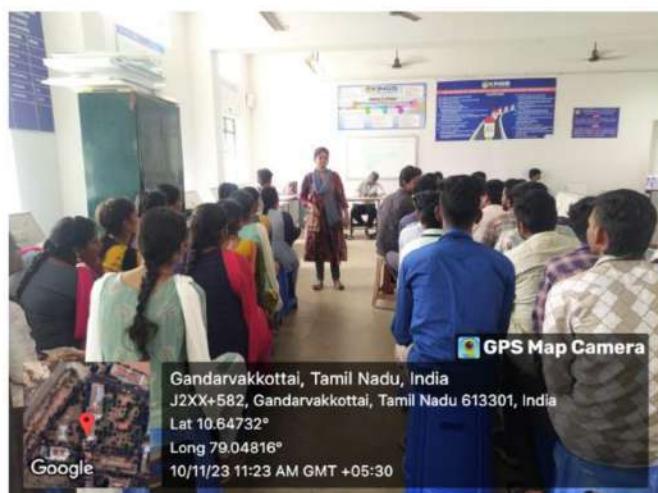
Ms.S.Maheshwari, preparing for UPSC Examination, in Shankar IAS Academy, Chennai. She gave many key points regarding the preparation towards the TNPSC and UPSC Examinations.

She discussed about the syllabus for various examinations and Fees structures. She insisted the importance of Naan mudhalvan course completion, because students can avail stipend / scholarship for every stage of examination preparations like prelims, mains, Interview etc. Many students were get impressed in her talk. She shared her experience and motivated the students towards their goal. She advised the students to make right decisions.



Alumni talk by “Ms.S.Maheshwari towards the UPSC Exam preparation”





Alumni talk by “Ms.K.Gayathri towards Career Success Tips”

The session was very informative and interactive for the students and it was organized by Mrs. D.Vennila, IQAC member, Department of ECE. Towards the end there was an interactive session, with the alumni answering various queries raised by the students.

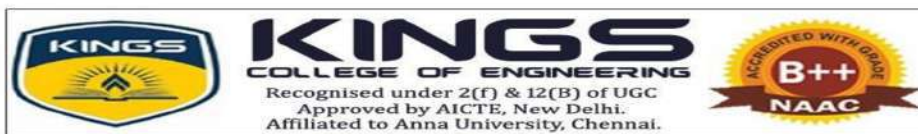
Outcome

The Alumni talk is a platform for the renowned alumni to share their views and experiences with the junior students. It is the stage for relishing and encouraging the students and to guide them forward towards their goal. Around 35 students of third year ECE attended this Alumni talk.

D. Vennila
5/12/23
IQAC MEMBER

[Signature]
5/12/23
HOD/ECE

[Signature]
05/12/2023
PRINCIPAL
PRINCIPAL
Kings College of Engineering
PUNALKULAM - 613 303.



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-24(ODD SEM)

IEEE STUDENT BRANCH STB 16621- JUNE, 2023

INTERNAL STAFF TECHNICAL SEMINAR

20.10.2023

Summary of the seminar:

Department of Electronics and Communication Engineering in association with IEEE student branch (16621) organized an Internal staff technical Seminar on **18.10.2023**.

The main objective of this internal staff technical seminar is to:

- Provide a platform and to get exposure in the recent trends of Electronics and Communication Engineering.
- Improve the performance of all the Staff members at all levels.
- Identify the persons in the department with the required potential and prepare them for higher positions in future.
- Prevent stagnation of faculty by exposing them to the latest concepts and techniques in their respective areas of specialization.

Mr.N.Mangaiyarkarasi, HOD/ECE welcomed the gatherings. **Mrs.U.Jeyamalar**, Assistant Professor/ECE delivered a lecture in the topic of “**Automatic Bottle filling and Capping System Using PLC**”.

Online Journal Paper Referred:

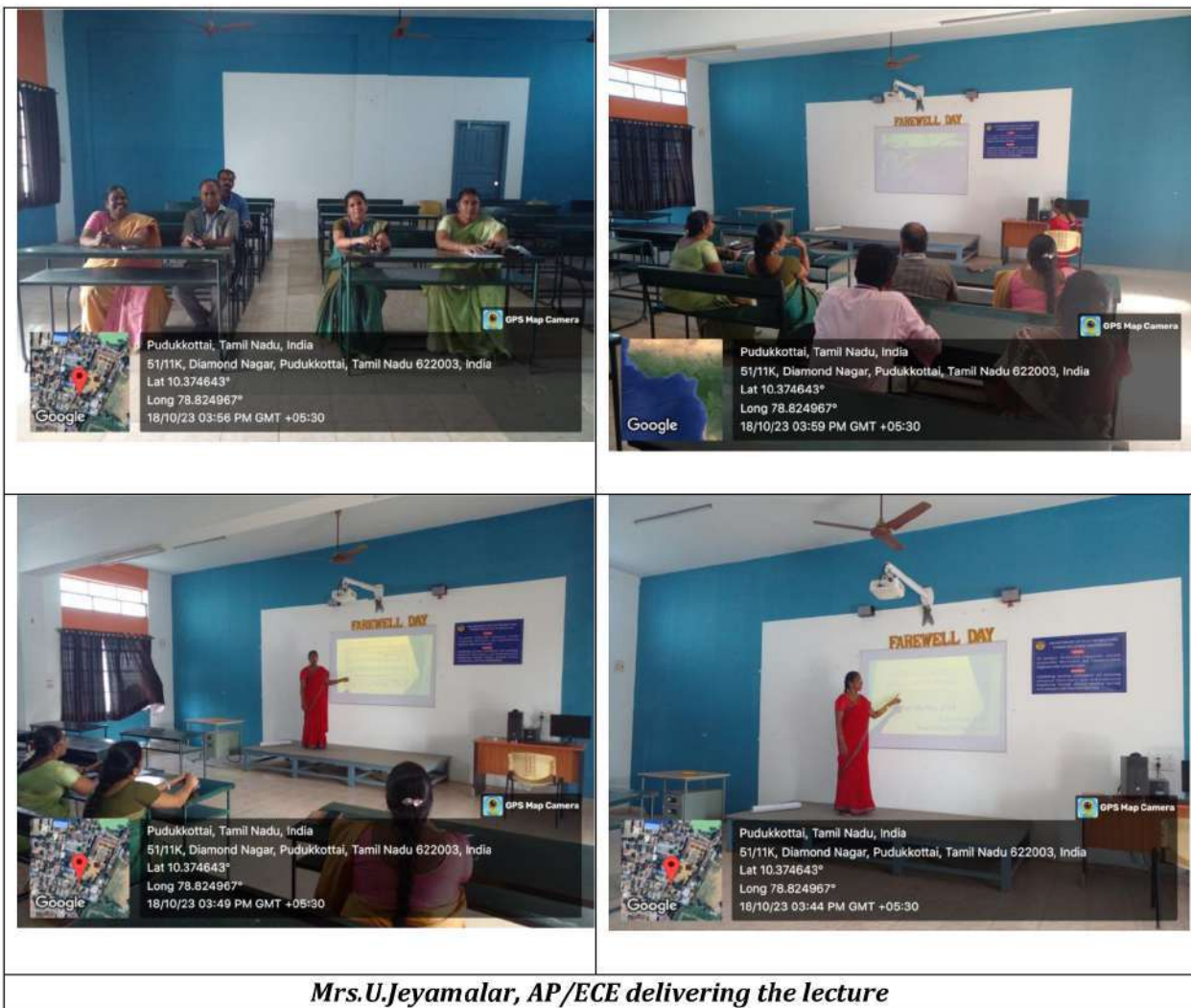
Dr. Pankaj Prajapati, Sachin Singh, Saurabh Gupta, Shivani Srivastava" Automatic Bottle Filling and Capping System Using PLC," in IRJET journal, vol. 06, 2019.

Aim and the themes discussed:

- This seminar to explore the design, implementation, and functionality of a Programmable Logic Controller (PLC)-based automation system used for the precise and efficient filling and capping of bottles in industrial production lines
- The seminar will focus on the technological advancements, operational principles, and practical applications of such systems, as well as their role in improving productivity, reducing human error, and ensuring quality control in the manufacturing process.

Outcome:

- Attendees will be equipped with the knowledge and skills to design, implement, or optimize automated bottle filling and capping systems in industrial settings.
- The seminar will have a well-rounded understanding of the technical and practical aspects of PLC-based automation, preparing them to contribute to or lead automation projects in industrial environments.
- Overall the seminar was helpful for the future researchers, who have the interest to work and make advancements in the field to gain insight into the topic.



Mrs.U.Jeyamalar, AP/ECE delivering the lecture

A.H. 5/12/23
Staff in charge

HOD
H.O.D.
ELECTRONICS AND COMMUNICATION ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNALKULAM - 613 303.
GANDAPPAKOTTAI TALUK, PUDUKKOTTAI DISTRICT

Principal
PRINCIPAL
Kings College of Engineering
PUNALKULAM - 613 303.



REPORT - MINI PROJECT EXPO – 2023

Organized by
Department of Electronics and Communication Engineering
KINGS COLLEGE OF ENGINEERING
A NAAC Accredited Institution
(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)
Phone : 04362-282474, 282395. Website : www.kingsengg.edu.in

In KCE, Department of Electronics and Communication Engineering had organized a **Mini Project Expo-2023** on 10-10-2023 at **Digital Electronics Lab**.

The chief guest for the expo was Mr. Swami Prabakaran K, Full Stack Developer from Ejyle Technologies Pvt Ltd., who is alumni of our college.

Our honorable principal, Dr. J. Arputha Vijaya Selvi, graced the occasion with her presence. Totally **87 students**, i.e **24 Teams** have enthusiastically participated in this event.

OBJECTIVE:

- ✓ The major objective of organizing this exhibition was to provide the platform and to bring out the potential of the students by showcasing their innovative projects developed.
- ✓ It provides an opportunity for the students to demonstrate their personal abilities and skills required to produce and to present an extended piece of work.
- ✓ Also to engage in personal inquiry, action and reflection on specific topics and issues and reflect on learning and share knowledge, views and opinions.

About the Expo:

Students exhibited the projects based on different technologies like

- ✓ Internet of Things
- ✓ Embedded System
- ✓ Machine Learning
- ✓ Artificial Intelligence
- ✓ Smart Agriculture

The students participated actively and exhibited their projects. The presentation was very interesting and the students sincerely contributed themselves in doing their mini projects. All the projects were useful for the Society.



Principal visited the Expo



Group photo with Jury



A live demo of project was presented by students

Each staff visited the students and looked over their projects and asked variety of questions. They also interacted with the students and responded to their inquiries about the various discipline and also gave career development guidance.

Points were awarded for the projects by considering varieties of factor like novelty of the project, technology used, way of presentation and capability of answering to queries.

Students from various disciplines have visited the expo and learned about the innovative ideas presented by the students of ECE. After reviewing each project, the three outstanding projects were selected and awarded with certificate.

PRIZE WINNERS:

| S.No | Project Title | Team Members | Prize |
|------|---|---|-----------------------|
| 1. | Wild Animal Monitoring | N.Shantosh | 1 st Prize |
| 2. | IOT based IVF Bag Monitoring | K.Pandimeena, T.Rajeshwari, V.Swathi, D.Yamuna | 1 st Prize |
| 3. | Smart Irrigation System using Arduino | D.Maheswaran,M.Mukilvanan, Mosikeeran, Pragadheswaran | 1 st Prize |
| 4. | Bi-Directional visitor counter with light control | Suriyanarayan , Suthersan, pasupathi.G, Pasupathi K | 2 nd Prize |
| 5. | Invisible switch using arduino and Laser | CM. Punniyamoorthy, Seran, S.Somasundaram, Sudharsan | 2 nd Prize |



Mrs.N.Mangaiyarkarasi, HOD/ECE distributed the prize for the winners and also issued the participation certificates to all the participants. Mr.R.Thandayuthapani, AP/ECE coordinated the entire EXPO.

The Mini Project Expo sparkled with success. The conceptions from the visitors regarding the Expo were outstanding. The students were very much thankful for the management for giving a chance to exhibit their talents which are useful for the upcoming students.

OUTCOME:


Department of ECE is conducting Mini Project Expo since 2013, keeping in mind the pursuance of student's natural curiosity and imagination to showcase their creativity.

This expo provides a unique platform to the participating students for their innovations and new experiences with the community.

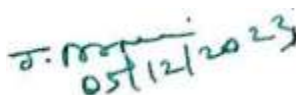
Finally, the **Mini Project Expo-2023** highly motivated the other students, apart from the participants to come up with their innovative ideas in the future.



Mini Project In-Charge



HoD/ECE



PRINCIPAL



A REPORT

ON

LIVE ONLINE WEBINAR TITLED

“5G SKILLING” ON

04th October 2023



Organized by

Department of Electronics and Communication Engineering

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

A NAAC Accredited Institution

Recognized under 2(f) & 12(B) of UGC

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

Phone : 04362-282474, 282395

Website : www.kingsindia.net

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A Glimpse on the Background of Webinar:

In KCE, Department of Electronics and Communication Engineering, has organized an online Webinar titled “5G Skilling” on 04th October 2023 from 11.30 a.m to 1.00 p.m.

The main objective of this Webinar is to have some knowledge about the communication and its evolution. To know the job roles in 5G technology sector in India. To understand the soft skills and technical skills in 5G. etc

Under the guidance of our Principal, Dr. J. Arputha Vijaya Selvi, we hosted this Webinar.

Mrs. N.Mangaiyarkarasi, HOD/ECE was the convener of our webinar. Mrs.D.Vennila, AP/ECE was the program coordinator.

OVERVIEW OF THE WEBINAR:

ABOUT THE RESOURCE PERSON:

The resource person for the webinar was **Mr. Shone Jose, Industry – Academic Collaboration Expert**, Indo-European Collaboration | SAC Chair - IEEE Kerala | Tech GTM Consultant | Building Freshers Ladder | 5G and IoT, Kochi, Kerala, India.

ABOUT THE REGISTRATION PROCESS:

The webinar was planned to conduct via Google meet platform. The registration link was created through Google forms and the link was posted in Whats app group.

Registration Link: <https://tinyurl.com/skilling5g>

ABOUT THE WEBINAR:

The webinar was started at 11.30 a.m with 101 participants. Mrs.R.Ponni, AP/ECE welcomed the resource person and the participants by the words. Mrs. D.Vennila, AP/ECE coordinator of this webinar gave the Introduction about the Resource person. Then the session was handed over to the Resource person. He gave very clear explanation about the Title of the Webinar “5G Skilling”

In his lecture, he explained about the evolution of 5G. He also explained about the job roles in the 5G technology sector in India, Such as

- 5G Network Engineer
- 5G System Integrator
- 5G Solutions Architect
- 5G Software Developer

- 5G Data Analyst
- 5G Network Security Specialist
- 5G Product Manager

1G to 5G Evolution

| 1G | 2G | 3G | 4G | 5G |
|--|---|---|---|--|
| Analog | Digital | Mobile Data | Mobile Broadband | eMBB, mMTC, URLLC |
| Voice only. Limited coverage and mobility. Example: AMPS | Improved voice, security, coverage. SMS, data. Example: GSM, CDMA | Higher data rates, smartphones, better voice. Example: HSPA / HSPA+ | High speed data, better smartphones. Example: LTE / LTE-A | Even higher speeds, ultra-reliable, low latency, high connection density |

Timeline: 2010 → 2020

PRAKASH ANTONY can now join this meeting

Someone wants to join this call

11:40 AM | Webinar

Use Cases

Enhanced Mobile Broadband (eMBB)

Ultra-reliable Low Latency Communications (URLLC)

Massive Machine-type Communications (mMTC)

11:56 AM | Webinar

Use Cases

Enhanced Mobile Broadband (eMBB)

Ultra-reliable Low Latency Communications (URLLC)

Massive Machine-type Communications (mMTC)

12:19 PM | Webinar

Someone wants to join this call

12:31 PM | Webinar

Participants: Shone Jose, Niranjan Samuel, 47 others, 85 others, and individual names like Maniyarasi R, IV ECE 31_Shafin, 21EC20-SUJITHRA.T, IM MOSIKKEERAN, L MANOJ, Mangai Nallathambi, Anjalinie sneha J, Priyanga .R, Mukil Vannan, 21EC60 Yamuna, Gunalan, Abinaya k, and Niranjan Samuel.

Snapshots of the webinar during the lecture of Mr.Shone Jose

He also explained about the technical skills and soft skills in 5G technology.

The top 7 technical skills in 5G technologies are:

- Network design and architecture
- Wireless communication technologies
- Network security
- Project management
- System Integration
- Software development and programming languages
- Data analysis and management

The top 5 soft skills in 5G technologies are:

- Communication skills
- Collaboration and teamwork
- Problem-solving and critical thinking
- Adaptability and flexibility
- Leadership and decision making

Finally he talk about the need of interdisciplinary skills.

At 1.00 p.m he comes to the end of the session. The queries were asked by the participants for 10 minutes. He gave the answers for all the queries. At 1.15 p.m we have posted the Feedback link Via the chat box.

Feedback Link: <https://forms.gle/s4YF8ZrQVzpsWcUTA>

Finally, Mrs. D.Vennila, AP/ECE coordinator of this webinar gave the vote of thanks with words. Thus the program ended successfully.

OUTCOME:

- All the third and final year ECE students have attended the session.
- Students gained some knowledge about the 5G communication evolution and its advantages. Also they have understood about the interdisciplinary skills, the job opportunities in 5G sector in India, the future trends in 5G.
- E-Certificate was provided to all the participants through their E-mail.


6/10/23
Co coordinator


6/10/23
HOD/ECE


06/10/23
Principal

Annexure: I
BROCHURE

KINGS
COLLEGE OF ENGINEERING
Recognized under 2BT & 2BT1 of UGC
Approved by AKTE, New Delhi
Affiliated to Anna University Chennai

IEEE Madras Section
STD 16621

Department of ECE
and
IEEE Student Branch
jointly organize

5G

WEBINAR ON
5G Skilling

IEEE DAY

Mr. Shone Jose
SAC Chair - IEEE Kerala Section
5G and IIoT Consultant
Building FreshersLadder

04 OCTOBER 2023
WEDNESDAY

TIME
11:30 a.m.

Coordinator:
Ms. D. Vennila,
AP/ECE

Convener:
Mrs. N. Mangaiyarkarasi,
HOD/ECE

Patron:
Dr. J. Arputha Vijaya Selvi
Principal/IEEE SBC

For Registration
<https://tinyurl.com/skilling5g>

Annexure: II
Registration Form

Registration Form - Webinar on "5G Skilling"

Organized by Department of ECE, Kings College of Engineering, Punalkulam, Pudukkottai.

Image title



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Annexure: III
Feedback Form

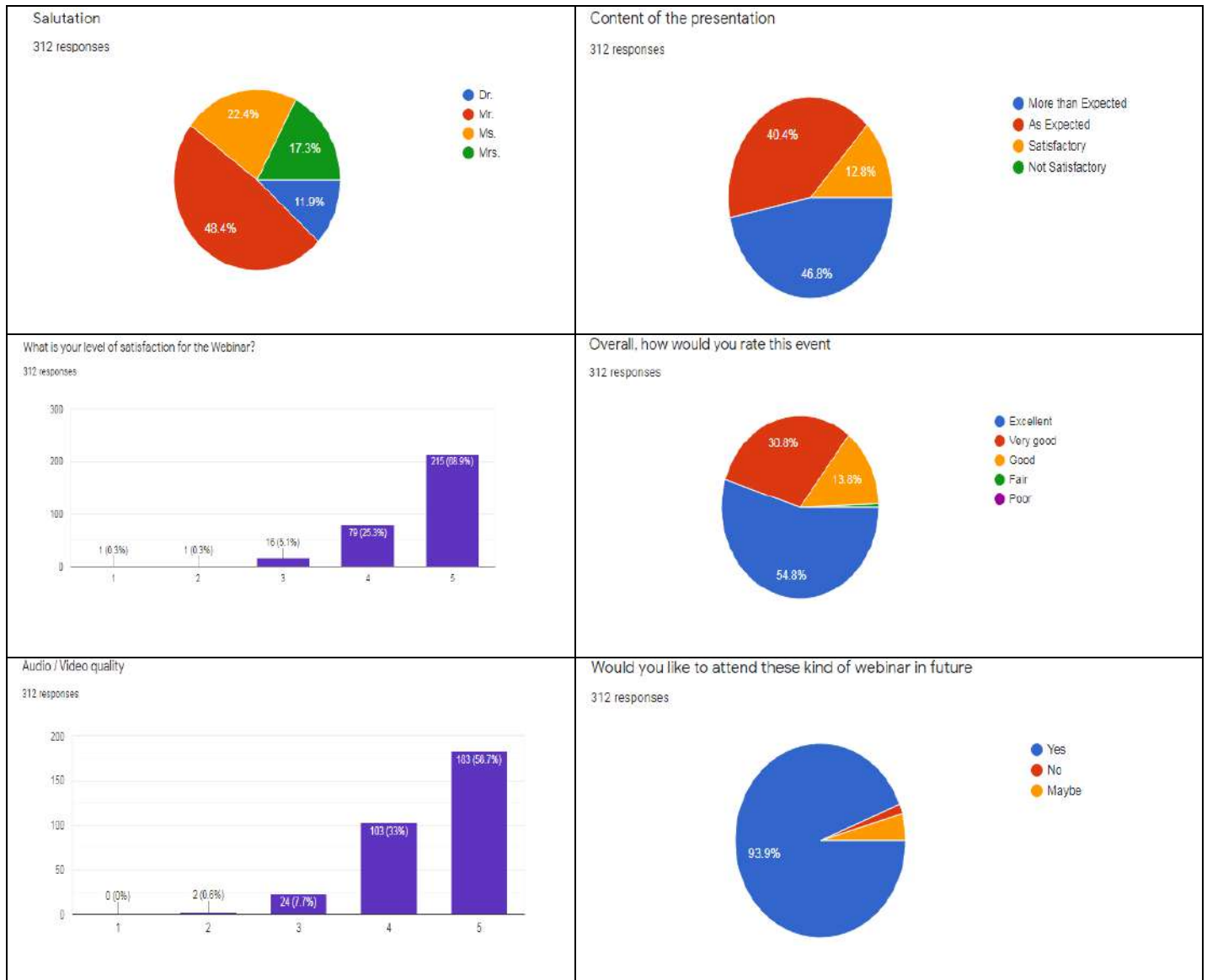


FEEDBACK FORM- WEBINAR ON "5G SKILLING"

Organized by Department of ECE, Kings College of Engineering, Punalkulam, Pudukkottai.

Annexure: IV

Feedback Response



Annexure: V
Resource Person Profile



Mr. Shone Jose

Industry – Academic Collaboration Expert

He is an Experienced GTM consultant and expert in executing industry – academia collaborative projects especially on 5G and IoT.

Currently serving as Student Activities Chair of IEEE Kerala Section overseeing IEEE activities across 120 SBs comprising of 11000 members.

He has taken on various positions within IEEE, including serving as the organizer of job fairs, facilitating industrial Memorandums of Understanding (MoUs), and mentoring technical projects.

- 12 year of experience in advisory and management consulting
- Lead the commercial device and technology market analysis for Microsoft Commercial business group
- Successfully designed India GTM strategies for businesses
- Lead a team of 6 consultants across India, Turkey, and Colombia
- Visited Turkey and Dubai for on-site project execution

Honors-Awards

- IEEE Student Enterprise Award 2011-2012 IEEE Kerala Section
- Outstanding Contribution to Hub Activities Award
- Star of the Quarter Award
- Outstanding Volunteer Award 2022

Annexure: VI
Sample Certificates





DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023-2024 (ODD SEMESTER)
ALUMNI TALK ON CAREER SUCCESS TIPS FOR FRESHERS

Venue: Class Room

Date: 13.09.2023

Time: 09:30 – 10:00 AM

In KCE, Department of Electronics and Communication Engineering had organized an Alumni talk by Ms.S.M.Swethaa (2019-2023) on 13-09-2023 for final year ECE students in Classroom.

Totally 39 students have enthusiastically attended this talk.

Resource Person Details:

1. Ms.S.M.Swethaa, Assistant system Engineer, Tata Consultancy services, Chennai.

Objective:

- The main objective of the program was to provide academic and professional interaction and networking among the Alumni and endeavor to create career opportunities for the Student-community.
- To provide job opportunities to fresh bachelors through references of professionals.

Alumni Session:

Ms.S.M.Swethaa, focussed on the career success tips for freshers by keeping the session interactive from the starting. She motivated the students and explained the strategies to apply at various levels of jobs in India and abroad. She shared vital information about various kinds of jobs, their grades and how training happens in the industry.

She also discussed in detail about the requirements to be fulfilled by freshers in order to secure their first job, in campus selection as well as in the other modes.

She emphasized that fresher's need to focus on soft skills like communication, body language, problem solving skills, basic software applications like MS Excel and MS PowerPoint as these are the minimum expected skills for any job.

She emphasized that the basics of subjects shall have its importance and students should be mastering their subjects well.

Students interacted with enthusiasm and they have asked so many queries during the session.



Alumni talk on “Career Success Tips for Freshers”

The session was very informative and interactive for the students and it was organized by Mrs. D.Vennila, IQAC member, Department of ECE.

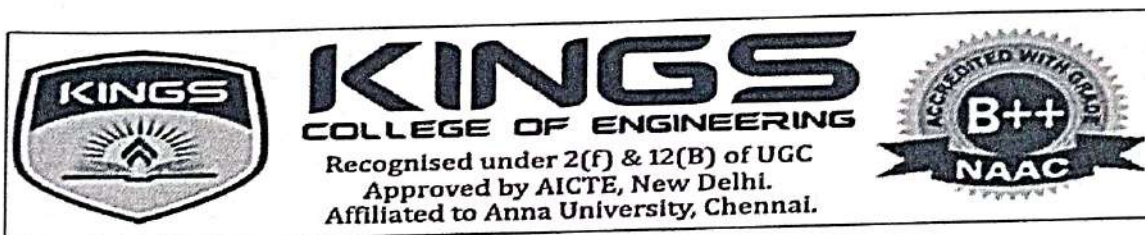
Outcome

The Alumni talk is a platform for the renowned alumni to share their views and experiences with the junior students. It is the stage for relishing and encouraging the students and to guide them forward towards their goal. Around 39 students of final year ECE attended this Alumni talk.

D. Vennila
5/12/23
IQAC MEMBER

[Signature]
5/12/23
HOD/ECE

[Signature]
05/12/2023
PRINCIPAL
PRINCIPAL
Kings College of Engineering
PUNALKULAM - 613 303.



26.08.2023

CIRCULAR

The students are hereby informed that GATE and Competitive Examination awareness programme for the academic year 2023-24/Odd semester will be conducted on **04.09.2023(Monday)** in **Chera Hall** from **10.00 a.m to 11.30 a.m** for III & IV year students of all departments (CIVIL,CSE,ECE,EEE and MECH).

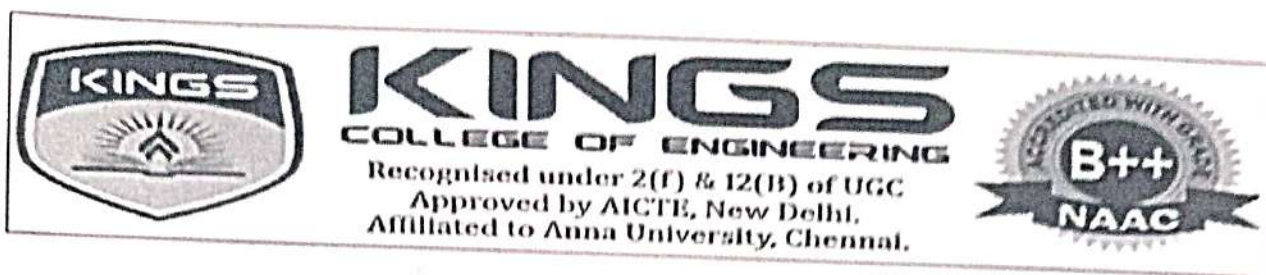
External Resource Person: Mr.S.Sivakumar,

Director
GATE FORUM,
Trichy

All students should attend the programme without fail for the best outcome in **2024 GATE and Competitive examination.**

A. Prabha
26/08/23
GATE CONVENER
(A.PRABHA, AP/EEE)

J. Arputha Vijaya Selvi
26/8/2023
PRINCIPAL
(DR.J.ARPUTHA VIJAYA SELVI)



GATE AND COMPETITIVE EXAMS AWARENESS PROGRAMME

YEAR: III & IV

VENUE: CHERA HALL

DATE: 04.09.2023

DEPARTMENT: COMMON TO CIVIL, CSE, ECE, EEE, MECHANICAL

AGENDA

- | | | |
|-----------|---|---|
| 10.00 A.M | - | Prayer song |
| 10.05 A.M | - | Welcome Address- Mrs.A.Prabha, AP/EEE – GATE CONEVENER |
| 10.10 A.M | - | Special Address by Vice Principal- Dr.S.Sivakumar |
| 10.15 A.M | - | Introduction to Chief Guest -Mr.W.Newton David Raj, AP/ECE |
| 10.25 A.M | - | Chief Guest Felicitation by Vice Principal- Dr.S.Sivakumar |
| 10.30 A.M | - | Session on “The significance and perks of Gate and Competitive Exams” by the Resource Person Mr.S.Sivakumar, Director, GATE FORUM, Trichy |
| 12.00 P.M | - | Interaction and Feedback Session |
| 12.25 P.M | - | Vote of Thanks by Mr.S.Sabanayagam, AP/MECH |
| 12.30 P.M | - | National Anthem |

MCs Desk : Mrs.N.Dhamayandhi, AP/CSE

Hospitality: Mr.A.Sagaya Albert, AP/CIVIL

A. Prabha
26/08/23
GATE CONVENER
(A.PRABHA, AP/EEE)

J. Arputha Vijaya Selvi
26/8/2023
PRINCIPAL
(DR.J.ARPUTHA VIJAYA SELVI)



ACADEMIC YEAR 2023-24 (ODD)

REPORT ON GATE AND COMPETITIVE EXAMS AWARENESS PROGRAMME HELD ON 04.09.2023

Gate awareness programme has been organized for all the departments (Civil, CSE, ECE, EEE & MECHANICAL) on **04.09.2023 (Monday)** in **Pallava Hall** from **10.00 a.m to 12.30 p.m** for III year students.

OBJECTIVE:

- ❖ To spread awareness about 'the significance and perks of GATE and COMPETITIVE examinations and its direct and indirect benefits'.
- ❖ To convey key rules, examination patterns, syllabus to the students.
- ❖ To give information about government schemes.

PROGRAMME SCHEDULE:

AGENDA

| | | |
|-----------|---|--|
| 10.00 A.M | - | Prayer song |
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Hospitality: Mr.A.Sagaya Albert, AP/CIVIL

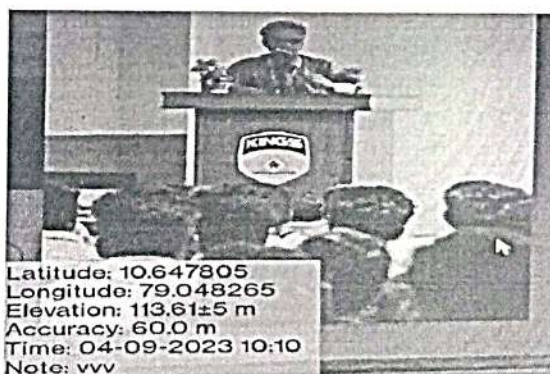
SESSION DETAILS:

The prayer hymn served as the official launch of the GATE awareness campaign. The gatherings were welcomed by Mrs. A. Prabha, the GATE Convener.



Mrs.A.Prabha delivering Welcome address

The vice principal of Kings College of Engineering, Dr. S. Sivakumar, gave a special speech to the GATE awareness programme attendees. He advised the participants to sign up for the exam and to study diligently, and he encouraged the students to attend the session with full interest.



Dr.S.Sivakumar,Vice Principal delivering a Special address

The resource person, Mr.S.Sivakumar, Director, GATE FORUM, Trichy, has been introduced by Mr.A.Sagaya Albert, AP/CIVIL. Dr.S.Sivakumar, Vice principal of Kings College of Engineering, presented the resource person with a shawl and a memento as a token of appreciation.



Mr.A.Sagaya Albert, AP/CIVIL is introducing the resource person



Honoring the resource person by Dr.S.Sivakumar

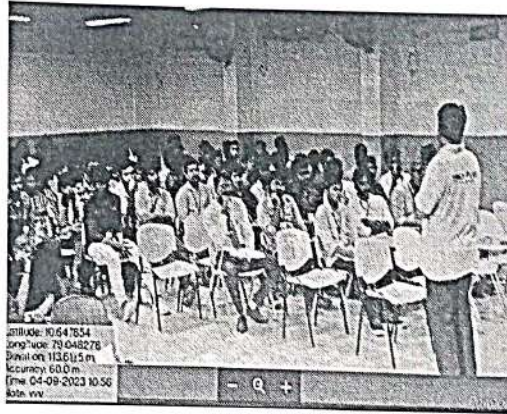
The resource person Mr.S.Sivakumar, Director , GATE FORUM, Trichy has delivered the session under the title '**The Significance and Perks of Gate and Competitive Exams**'. He has engaged the session with the complete details about GATE exam and preparatory works. Mr.S.Sivakumar said that the coaching for GATE exam is helping the students to clear TNEBAE Exam (TANCEDCO Assistant Engineer Exam), RRBJE Exam (Railway Recruitment Board Exam for the post of Junior Engineers), SSCJE Exam (Staff Selection Commission Exam), TNPSC AE (Tamilandu combined Engineering Service Exam), CES (Civil Service Exams), IES (Indian Engineering Service Exam).

He has also discussed the benefits of GATE exam. The resource person said that the students can

- ❖ pursue ME/M.Tech/MS/Ph.D. in prestigious colleges like NITs, IITs & IISc Bangalore
- ❖ pursue ME/M.Tech/MS in other recognized colleges and universities with a stipend of Rs.12400/- per month for 2 years.
- ❖ pursue Ph.D. in recognized colleges and universities with a stipend for Rs.30,000/- per month
- ❖ get Job at PSUs like BHEL, ONGC, IOCL, BARC, NLC, IRCON, RITES, etc.
- ❖ pursue MS at NTU (Singapore), NUS (Singapore), Dresden University (Germany)
- ❖ get a job at private companies with a minimum salary of Rs.50000/-

He said GATE exam is one the most prestigious exam in India not only because it is conducted by IITs but also because of the excess of opportunities available after the examination. He has listed the opportunities as follows.

- ❖ Postgraduate (MTech)
- ❖ Public Sector Undertaking (PSU)
- ❖ PhD
- ❖ Fellowship Program in Management (FPM)
- ❖ Post Graduate Diploma in Management
- ❖ MS Program
- ❖ Recruitment in State Electricity Boards and
- ❖ Research Opportunities



Mr.S.Sivakumar delivering a session and interacting with the students

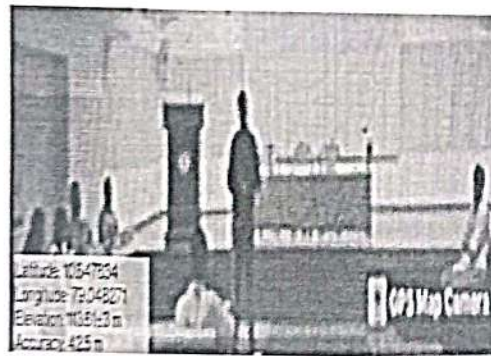
He provided information on the paperwork that must be brought to the test as well as the strategy to be used when taking the GATE. He has provided all the instructions that must be followed during the examination. Additionally, he gave the pupils last-minute advice and went over the syllabus details and exam structure. The pupils found the lesson to be very beneficial.

He claimed that the GATE and other competitive exams necessitate constant attention, inspiration, dedication, and tutoring. Many well-known private organisations, according to him, favour engineers who have passed the GATE exam. He claimed that a passing GATE score is good for three years. He enthused the students by saying that passing GATE sets them apart from the vast majority of engineering graduates who receive their degrees without a genuine GATE score. The class was highly engaged.



Break up session by Resource person

He cited a few GATE graduates and their current standing in this cutthroat society. That was genuinely very encouraging, and it inspired students to sign up and start studying for the GATE exam. The students gave him positive feedback when the class came to a close. The discussion was highly educational. Mr. S. Sabanayagam, AP/MECH, gave the session's vote of gratitude.



Mr.S.Sabanayagam proposing vote of thanks to the gatherings

The awareness programme ended up with national anthem.

OUTCOME:

At the end of session, the students should be able to,

- ❖ comprehend the GATE and competitive exams direct and indirect benefits.
- ❖ learn the essential guidelines, test formats, and GATE syllabus.
- ❖ understand the details of government initiatives.

[Signature] 27/09/23
GATE CONVENER
(APRABHA, AP/EEE)

[Signature] 27/09/2023
PRINCIPAL
(DR.J.ARPUTHA VIJAYA SELVI)



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR (2022-23) / ODD SEMESTER

GATE and Competitive Examination Awareness Programme- Attendance Statement

Class/Sem : III & IV ECE/05&07

Date : 04.09.2023

| IV ECE | | | | |
|---------|-------|-----------------|---------------------|-----------------------------|
| S.NO | R.NO. | REGISTER NUMBER | NAME OF THE STUDENT | SIGNATURE OF THE STUDENT |
| 01 | 01 | 821120106001 | AJAY A | <i>Ajay A</i> |
| 02 | 12 | 821120106014 | JAISHREE A | <i>Jaishree A</i> |
| 03 | 14 | 821120106016 | JOTHIKA G | <i>G. Jothika</i> |
| 04 | 16 | 821120106018 | KEERTIGA S | <i>S. Keertiga</i> |
| 05 | 25 | 821120106029 | PREETHI S | <i>P. Preethi</i> |
| 06 | 26 | 821120106030 | PRIYADHARSHINI J | <i>J. Priyadharshini</i> |
| 07 | 32 | 821120106037 | SHANMUGAPRIYA V | <i>V. Shanmugapriya</i> |
| 08 | 33 | 821120106038 | SIVASETHUMATHAVAN D | <i>D. Sivasethumathavan</i> |
| 09 | 34 | 821120106039 | SOLAIMANI G | <i>G. Solaimani</i> |
| 10 | 35 | 821120106040 | SURUTHI S | <i>S. Suruthi</i> |
| III ECE | | | | |
| S.NO | R.NO. | REGISTER NUMBER | NAME OF THE STUDENT | SIGNATURE OF THE STUDENT |
| 11 | 03 | 821121106005 | ARIVAZHAGAN G | <i>G. Arivazhagan</i> |
| 12 | 04 | 821121106006 | ARUN S | <i>S. Arun</i> |
| 13 | 05 | 821121106007 | ASHWINI R | <i>R. Ashwini</i> |
| 14 | 07 | 821121106010 | DINESH KUMAR K | <i>K. Dinesh Kumar</i> |
| 15 | 09 | 821121106012 | GAYATHRI S | <i>S. Gayathri</i> |
| 16 | 12 | 821121106015 | HARINILAKSHMI V | <i>V. Harinilakshmi</i> |
| 17 | 14 | 821121106017 | JAYA PRASAD P | <i>P. Jaya Prasad</i> |
| 18 | 19 | 821121106022 | KRISHNAMOORTHY V | <i>V. Krishnamoorthy</i> |
| 19 | 20 | 821121106031 | MOHICKARAN P | <i>P. Mohickaran</i> |
| 20 | 21 | 821121106024 | MADHUMITHA S | <i>S. Madhumitha</i> |
| 21 | 22 | 821121106025 | MAHESWARAN D | <i>D. Maheswaran</i> |
| 22 | 27 | 821121106030 | MOHAMED YASEEN M | <i>M. Yaseen</i> |
| 23 | 33 | 821121106036 | PANDI MEENA K | <i>K. Pandi Meena</i> |
| 24 | 36 | 821121106039 | PRAVEEN KUMAR R | <i>R. Praveen Kumar</i> |
| 25 | 39 | 821121106042 | RAJESHWARI T | <i>T. Rajeshwari</i> |
| 26 | 42 | 821121106046 | RENUGA DEVI S | <i>S. Renuga Devi</i> |
| 27 | 44 | 821121106048 | SAJJEEVAN M | <i>M. Sajjeevan</i> |
| 28 | 46 | 821121106050 | SARAVANAN S | <i>S. Saravanan</i> |
| 29 | 48 | 821121106052 | SNEHARAJ | <i>Raj. Sneharaj</i> |
| 30 | 51 | 821121106055 | SUDHARSAN P | <i>P. Sudharsan</i> |
| 31 | 53 | 821121106057 | SURIYA PRAKASH M | <i>M. Suriya Prakash</i> |
| 32 | 54 | 821121106058 | SWATHI V | <i>V. Swathi</i> |
| 33 | 55 | 821121106059 | THIRUNITHI K | <i>K. Thirunithi</i> |
| 34 | 60 | 821121106064 | YAMUNA D | <i>D. Yamuna</i> |
| 35 | 64 | 821121106701 | ANITHA PEL J | <i>J. Anitha Pel</i> |

W. Newton
04/09/2023
GATE Co-ordinator

[Signature]
4/9/23
HOD/ECE

[Signature]
04/09/2023
GATE Convener



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023-2024 (ODD SEMESTER)
ALUMNI TALK ON JOB OPPORTUNITIES IN SOFTWARE COMPANIES

Venue: Class room

Date: 01.09.2023

Time: 03:15 – 04:00 PM

Background:

The Department of ECE had organized Alumni Talk by Mr. S.Divakar (2016-2020) on 1st September 2023 for the students of Final year ECE.

Resource Person Details:

1. S.Divakar, Senior Software Engineer, Hexaware Technologies, Chennai.

Objective:

The main objective of the program was to build a bridge between college life and career life, so as to introduce present students to the professional world and to make them proactive to face the challenges that may emerge in their career path.

Alumni Session:

Mr. S. Divakar discussed about the importance of placement and answered questions on the 2–5 year corporate bond. He advised the students to concentrate on their final year project because it accounts for 40 to 60 % of the interview.

He clarified several fundamental issues on the Aptitude, Group Discussion, Technical (1 or 2), and HR rounds, and advised students to improve their abilities by obtaining certification or acquiring a higher degree.

He also said that Testing and developing test cases, as well as having a firm grasp on one subject is essential. He taught the participants about the degrees offered by renowned IT companies, as well as the significance of the company's training time.

He also answered students' questions on employment stability, job change, and pay hike and recommending them to focus on the company's position rather than the remuneration package for a strong start.



Alumni talk on "Job Opportunities in Software companies" for ECE students

Finally he answered the queries raised by students and made the session as an interactive one. The session was very informative and interactive for the students and it was organized by Mrs. D.Vennila, IQAC member, Department of ECE.

Outcome

The Alumni Speech is a platform for the renowned alumni to share their views with the junior students. It is the stage for sharing their experience and encouraging the students and to guide them forward with a sense of purpose and anticipation. Around 30 students of final year ECE attended the Alumni speech.

D. Vennila
5/12/23
IQAC MEMBER

[Signature]
5/12/23
HOD/ECE

[Signature]
05/12/2023
PRINCIPAL
PRINCIPAL
Kings College of Engineering
PUNALKULAM - 613 303.



A REPORT

ON

National Level Training Programme on “INNOVATIVE PROJECT DEVELOPMENT USING IOT”

21st August 2023 & 22nd August 2023



Organized by

Department of Electronics and Communication Engineering

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

A NAAC Accredited Institution

Recognized under 2(f) & 12(B) of UGC

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

Phone : 04362-282474, 282395 Website : www.kingsindia.net

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A Glimpse on the Background of the National Level Training Programme on “Innovative Project Development using IoT”:

In KCE, Department of Electronics and Communication Engineering and IEEE Student Branch of our college, organized a National Level Training Programme on “Innovative Project Development using IoT” on 21st August 2023 & 22nd August 2023.

Our main aim is to enable each one achieve their individual purpose in life, through the guiding light of knowledge. Each one is empowered to pursue dreams and passions in a meaningful and responsible manner. Each one is encouraged to foster professional development through imagination, innovation, specialized knowledge and critical-thinking. Our institution created such a platform, where individual can participate to share their unique thoughts and to add values in research.

The scope of this workshop is to share individual knowledge/concepts at a common platform, to support IoT experiments to benefit academic and research community in improving the knowledge of IoT hardware & software infrastructure and to provide solution to technical problems.

Objectives:

- National Level Training Programme provided a perfect platform for budding engineers to discuss their latest research results, ideas, developments and applications in all areas of Electronics.
- Furthermore, the workshop was a trigger for their further related research and technology improvements.

Thrust Areas:

- | | |
|----------------------------------|---|
| ➤ Embedded and Real Time Systems | ➤ Artificial Intelligence & Data Science |
| ➤ Signal & Image Processing | ➤ Wireless Sensor Networks |
| ➤ Internet of Things | ➤ Wireless Communication & |
| ➤ VLSI Design | ➤ Other emerging topics in the field of ECE |

OVERVIEW OF THE NATIONAL LEVEL TRAINING PROGRAMME ON “INNOVATIVE PROJECT DEVELOPMENT USING IOT”:

ABOUT THE ORGANIZING COMMITTEE & RESOURCE PERSON:

Mrs. N.Mangaiyarkarasi, HOD/ECE was the convener of the National Level Training Programme on “Innovative Project Development using IoT”. Mrs.U.Jeyamalar, AP/ECE & Mr.R.Thandayuthapani, AP/ECE were the Workshop Coordinators.

The resource person for the workshop was Ms.H.Hajitha Banu, Embedded Specialist in Jadayu Enterprises, Thanjavur, Mr.T.Jeyaseelan, M.E., Assistant Professor, Department of ECE and Dr.P.Narasimman, M.E., PhD., Assistant Professor, Department of EEE, Kings College of Engineering, Pudukkottai.

ABOUT THE REGISTRATION PROCESS:

The workshop was planned to conduct in physical mode. The registration link was created. The registration link through Google form and the link was posted in various whats app groups. External college students accepting our invitation and we have received responses from various colleges through registration link.

Registration Link: <https://tinyurl.com/kingsProjectDev>

We have received 39 responses from various institutions. Before three days of the workshop, we have stopped receiving the registration responses. Instructions were given to the participants through the respective whatsapp group.

ABOUT THE WORKSHOP:

The workshop was started at 10.00 a.m with 39 External participants.

The two day National Level Training Programme on “Innovative Project Development using IoT” was organized for the benefit of students community those who are interested to implement their innovative ideas using the arduino Kit. The workshop conducted on 21st August 2023 & 22nd August 2023. Totally 39 external participants have enthusiastically participated in this workshop.

The workshop started with Tamil Thaaai Vaalthu. Ms.U.Jeyamalar, Assistant Professor / ECE welcomes the gathering and introduced the Resource persons. Mrs.N.Mangaiyarkarasi, HOD/ECE delivered the Inaugural address. In her speech, she motivates the students towards innovation and how the workshop helps the students to do their ideas in implementation. The resource person details were as follows:

Day-1-Session -1: Ms.H.Hajitha Banu, Embedded Specialist, Jadayu Enterprises, Thanjavur.

Day-1-Session -2: Ms.H.Hajitha Banu, Embedded Specialist, Jadayu Enterprises, Thanjavur.

Day-2-Session -3 : Mr.T.Jeyaseelan, Assistant Professor/ECE, Kings College of Engineering.

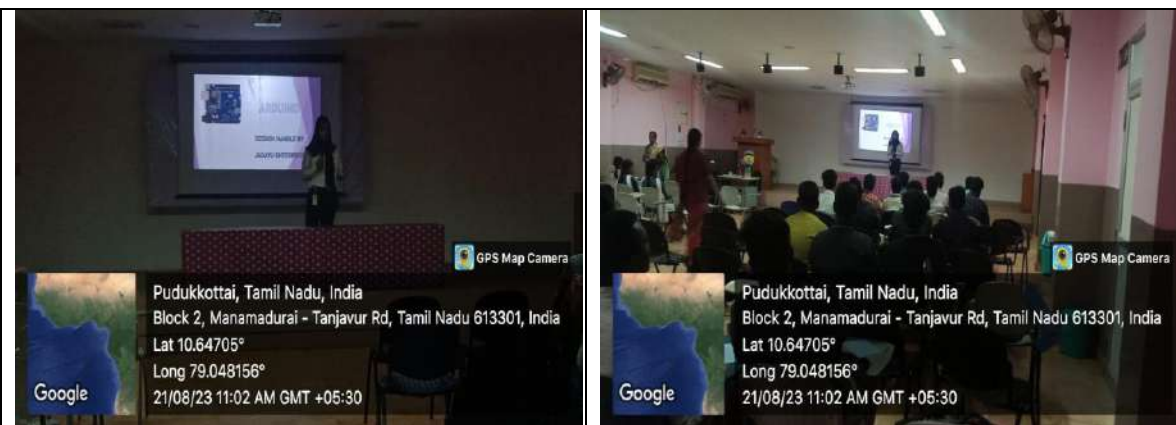
Day-2-Session-4 : Dr.P.Narasimman, Assistant Professor/EEE, Kings College of Engineering.

| | |
|---|--|
|  <p>Latitude: 10.647411 Longitude: 79.048205 Elevation: 113.1112 m Accuracy: 3.8 m Time: 21/08/2023 10:40 Note: last workshop w</p> |  <p>Latitude: 10.647603 Longitude: 79.048155 Elevation: 113.1118 m Accuracy: 3.6 m Time: 21/08/2023 10:52 Note: last workshop 7</p> |
| <p>Dignitaries on the dais</p> | <p>Honouring the Chief Guest Mr.K.Manimaran, Software Trainee, Jadayu Enterprises by Mrs.N.Mangaiyarkarasi, HOD/ECE</p> |
|  <p>Latitude: 10.647706 Longitude: 79.046115 Elevation: 113.1149 m Accuracy: 3.8 m Time: 21/08/2023 10:43 Note: last workshop 5</p> |  <p>Pudukkottai, Tamil Nadu, India Block 2, Manamadurai - Thanjavur Rd, Tamil Nadu 613301, India Lat 10.64705° Long 79.048156° 21/08/23 10:56 AM GMT +05:30</p> |
| <p>Welcome Address & Introduction to Chief Guest by Mrs.U.Jeyamalar Assistant Professor/ECE</p> | <p>Inaugural address delivered by Mrs.N.Mangaiyarkarasi, HOD/ECE</p> |

OBJECTIVE:

The main objective of this workshop is to train the students to do simple projects by interfacing LED's, Switches, Stepper motor and various sensors with arduino kit and programming to do various functionalities.

DAY 1 - Session 1: The resource person Ms.H.Hajitha Banu, Embedded Specialist, Jadayu Enterprises presented a brief technical note on the fundamentals of embedded system, features of Microprocessors, Microcontrollers and interfacing devices. He also explained how to develop applications in the industry based on embedded system. During the session, he demonstrated how arduino development platform is used for a typical embedded application. From the session the students have learned how to implement their ideas into projects in a simplest way of using arduino.



Resource Person Ms.H.Hajitha Banu, Embedded Specialist, Jadayu Enterprises delivering the lecture to the Participants



Participants eagerly listening the resource person's lecture & demonstration

DAY 1 - Session 2: The resource person Ms.H.Hajitha Banu, Embedded Specialist, Jadayu Enterprises, delivered a complete description about the arduino pin configuration, architecture and interfacing methods. He explained various blocks in the arduino development kit, he also trained the students about embedded C Programming using arduino IDE, which is freely available for the students. The session continues with hands on mode, the students are formed with small groups and were trained to do simple projects like LED interfacing, buzzer interfacing and switch interfacing. The participants actively performed their assigned work in an enthusiastic manner.

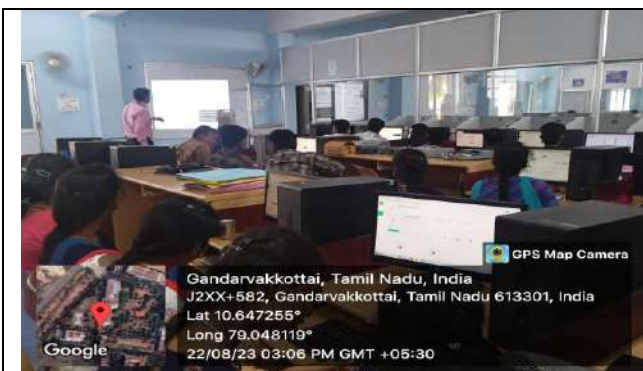
DAY 2 - Session 3: Mr.T.Jeyaseelan, Assistant Professor/ECE, demonstrate the students with LCD interfacing. He takes 2 x 16 LCD and explains the pin details and interfacing methodology and also trained the students, how to read temperature and humidity data from DHT11 sensor and display the sensor data's in the LCD display. In this session students had shown their interest to get the data from the sensor given to them and displayed the values in the LCD display. He demonstrated how analog to digital data conversion is used in temperature and humidity monitoring applications.

During the session, he explained about ultrasonic sensor interfacing with arduino board, he demonstrated a sample project titled ultrasonic based water level indication system. Students grouped into different batches. The batches were assigned with different projects. Students were interactive and also developed embedded c program for their project. Finally, they interfaced with ultrasonic sensor to Arduino board and assembled the project successfully and verified their output of the project.



Resource Person Mr.T.Jeyaseelan, AP/ECE , KCE delivering the lecture to the Participants

DAY 2 - Session 4: Dr.P.Narasasimman, Assistant Professor /EEE, he demonstrated Matlab interfaced with Arduino related projects with an example “IOT based temperature monitoring using Thingspeak and Arduino hardware”. He explained in detail about how to create a ThingSpeak™ channel and use MATLAB® functions to collect the temperature data from a BMP280 sensor connected to your Arduino® board, and then use MATLAB Analysis in ThingSpeak to analyze the maximum and minimum temperature and also shows how to set up an email alert if the room temperature exceeds a threshold value, by using MATLAB functions in ThingSpeak. Students implementing this project using three hardware components such as Arduino Uno, Arduino Sensor Kit – Base and BMP280 sensor. Finally he outlined typical project ideas and explained the methods for implementing these ideas. The students were interactive during the sessions and asked their queries.



Resource Person Dr.P.Narasimman, AP/EEE , KCE delivering the lecture to the Participants

Finally the session ends with valedictory. Mr.R.Thandayuthapani, AP/ECE, delivered the Vote of Thanks. The certificates were distributed by Mrs.N.Mangaiyarkarasi, HoD/ECE. Thus the workshop was successfully ended.



Certificate Distribution

Outcomes:

At the end of this workshop the students can able to

- Gained more knowledge on Arduino components and IDE.
- Do the small projects based on Embedded C Programming.
- Interfacing their projects using Analog and digital converter.
- Interfacing with sensor and wireless connectivity to arduino.
- Design the Mini projects using arduino.

G. S. Thandayuthapani

Coordinator(s)

Dr. P. Narasimman

HOD/ECE

N. Mangaiyarkarasi

PRINCIPAL

Annexure: I

BROCHURE






**National Level Training Programme
on Innovative Project Development
using IoT**

21/08/2023 to 22/08/2023



Jointly organized by
Department of
Electronics & Communication Engineering
&
IEEE STB 16621
Kings College of Engineering,
Punalkulam, Near Thanjavur,
Tamilnadu.

Chief Patron
Dr. R.Rajendren,
Secretary

Patron
Dr.J.Arputha Vijaya Selvi,
Principal

Convener
Mrs.N.Mangaiyarkarasi,
HOD/ECE

Coordinators
1. Mrs.U.Jeyamalar.
AP/ECE
2. Mr.R.Thandayuthapani
AP/ECE

REGISTRATION:
Participants are requested to apply via online using the link (or) QR code given below. Registration fee includes workshop kit, lunch and refreshment.

REGISTRATION LINK:
<https://tinyurl.com/KingsProjectDev>



IMPORTANT DATE :
Last date for Registration : 18-08-2023

FEE DETAILS :
Registration Fee : Rs. 300/-
GPay No
9943347956

For Queries Please Contact:
Mrs.U.Jeyamalar - 8248859710
Mr.R.Thandayuthapani - 9943347956

ABOUT OUR INSTITUTION

Kings College of Engineering (KCE) was born out of a dream and vision to provide education with unparalleled quality to the young and enthusiastic students of our nation. The College is approved by AICTE, New Delhi and affiliated to Anna University, Chennai and accredited by NAAC. The drives from our management and dedication of the faculty have seen KCE to rise to the status as one of the most prestigious institutions in this part of the country.

KCE, run by Raj Educational Trust (RET), Chennai, is a fast growing technical institution in the state of Tamil Nadu with a great promise to cater the educational demands of engineering aspirants in and around Thanjavur since 2001. Our institution offers five UG programmes namely CIVIL, CSE, ECE, EEE and Mechanical Engineering and four PG programmes namely CSE, VLSI Design, PED and Thermal Engineering. Department of ECE and Mechanical Engineering have approved research centers for pursuing research (Ph.D) under Anna University.

ABOUT THE DEPARTMENT

The department was established in the year 2001. It has well qualified and experienced staff and it continually updates it's laboratories with modern facilities. The Department imparts quality education to its students, in modern ICT class rooms equipped with appropriate teaching aids. Due to quality academic standard of the Department, the students of the Electronics and Communication Engineering programme have been consistently performing well by organizing seminars, conference and project expo regularly.

ABOUT THE WORKSHOP

Arduino workshop will focus on getting you up and running with Arduino quickly, so that you will understand the basic procedures for working with Arduino and can explore further on your own. An Arduino is a small computer that you can program to control things like lights or motors along with listening to components like motion detection sensors. It can give your project interactivity without needing an expensive and large circuit. Instead, you use a computer to program the Arduino, upload your code to the Arduino, and hook up your circuit.

SESSION DETAILS

Day 1:
Forenoon Session :

- Introduction to Arduino
- Arduino components and IDE

Afternoon Session :

- Programing with Arduino
- Tricolor LED and Push button interfacing with Arduino
- Analog to Digital Converter.
- Seven Segment Display , LCD
- Pulse Width Modulation

Day 2 :
Forenoon Session :

- ESP 32 NODE MCU IOT Platform.
- Applications using NODE MCU

Afternoon Session :

- Wireless connectivity to Arduino
- Mini Project Design Using Arduino

RESOURCE PERSONS



Dr.P.Narasimman
Assistant Professor /EEE



Dr.T.Pasupathi
Assistant Professor /ECE



Mr.T.Jeyaseelan
Assistant Professor /ECE

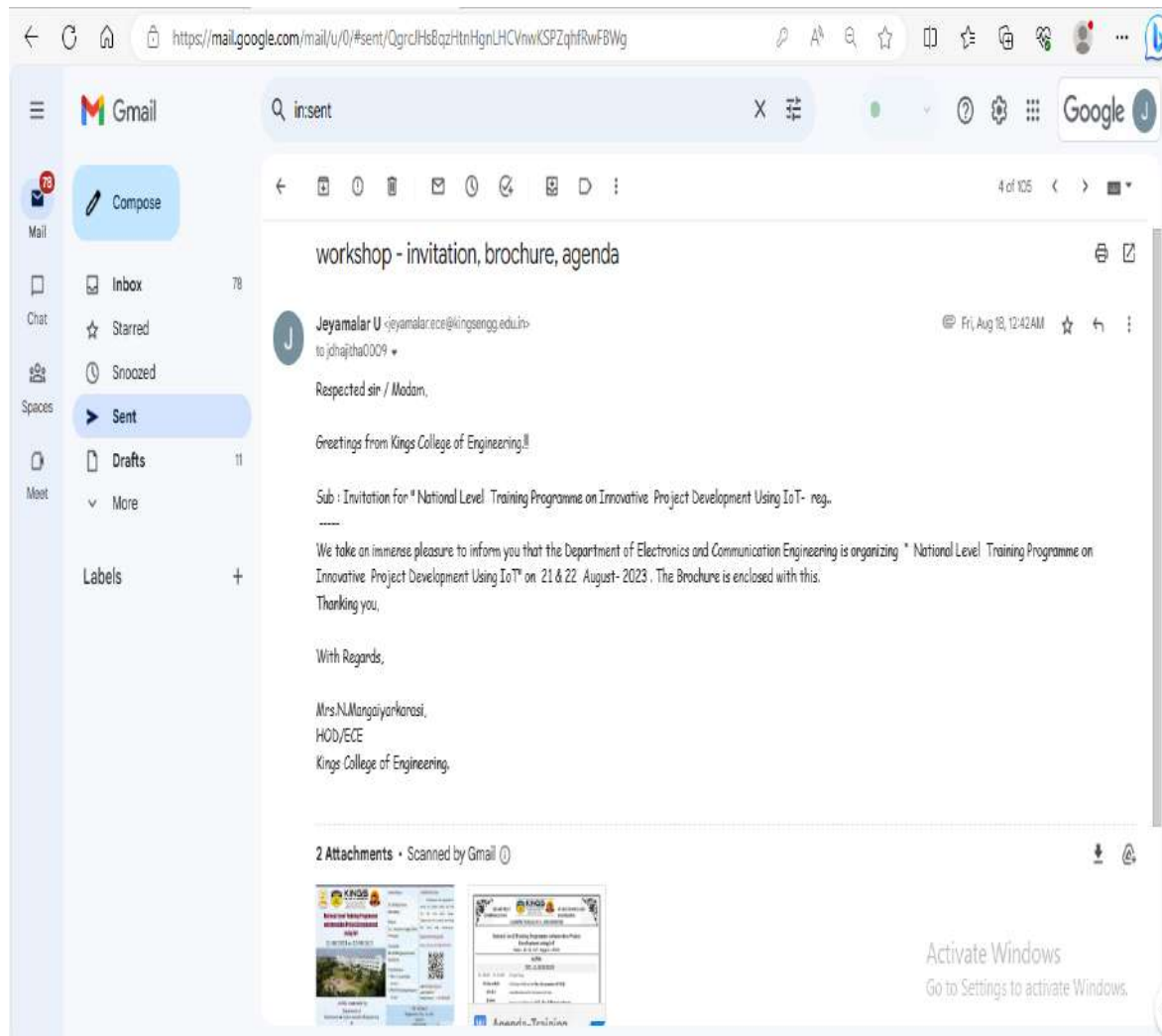


Mr.P.Raja Pirian
Assistant Professor /ECE

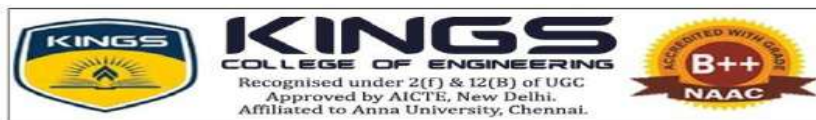
TECHNICAL PARTNER
JADAYU ENTERPRISES , THANJAVUR

Annexure: II

CHIEF GUEST INVITATION-MAIL



Annexure: III
AGENDA



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ACADEMIC YEAR 2023-2024 / ODD SEMESTER

National Level Training Programme on
Innovative Project Development using IoT
Date : 21st & 22nd August - 2023

AGENDA

DAY - 1 (21/08/2023)

| | | |
|-------------------------|--|------------------------|
| 10 : 00 AM – 10 : 30 AM | : Prayer Song. | |
| (Pallava Hall) | : Welcome Address by Mrs.U.Jeyamalar AP/ECE. | |
| Block- I | : Introduction to the Resource person. | |
| II Floor | : Inaugural Address by HOD : Mrs.N.Mangaiyarkarasi. | |
| 10 : 30 AM – 11 : 00 AM | : Session – 1 : Jadayu Enterprises | (Pallava Hall) |
| 11 : 00 AM – 11 : 15 AM | : Hi – Tea. | |
| 11 : 15 AM – 12 : 55 PM | : Session – 2 : Jadayu Enterprises | (Pallava Hall) |
| 01 : 00 PM – 02 : 00 PM | : LUNCH. | |
| 02 : 00 PM – 03 : 15 PM | : Session – 3 : Mr.T.Jeyaseelan AP / ECE. | (Venue : DSP LAB) |
| 03 : 15 PM – 03 : 30 PM | : Hi – Tea. | |
| 03 : 30 PM – 04 : 00 PM | : Session – 4 : Mr.T.Jeyaseelan AP / ECE. | (Venue : DSP LAB) |

DAY - 2 (22/08/2023)

| | | |
|-------------------------|--|-------------------|
| 9 : 30 AM - 11 : 00 AM | : Session – 5 : Mr.T.Jeyaseelan AP / ECE. | (Venue : DSP LAB) |
| 11 : 00 AM – 11 : 15 AM | : Hi – Tea. | |
| 11 : 15 AM – 12 : 55 PM | : Session – 6 : Mr.T.Jeyaseelan AP / ECE. | (Venue : DSP LAB) |
| 01 : 00 PM – 02 : 00 PM | : LUNCH. | |
| 02 : 00 PM – 03 : 00 PM | : Session – 7 : Dr.P.Narasimman AP /EEE. | (Venue : DSP LAB) |
| 03 : 00 PM – 03 : 15 PM | : Hi – Tea. | |
| 03 : 15 PM – 03 : 45 PM | : Session – 8 : Dr.P.Narasimman AP /EEE. | (Venue : DSP LAB) |
| 03 : 45 PM – 04 : 15 PM | : Valedictory. | |
| | : Vote of Thanks by Mr.R.Thandayuthapani | |

Annexure: IV

REGISTRATION DETAILS

| S.NO | Name of the Institution | City | No. of Participants |
|---|---|--------------|----------------------------|
| 1. | ARJ College of Engineering and Technology | Mannarkudi | 03 |
| 2. | Arasu Engineering College | Kumbakonam | 04 |
| 3. | Holy Cross College (Autonomous) | Trichy | 01 |
| 4. | KSK College of Engineering and Technology | Kumbakonam | 10 |
| 5. | PR Engineering College | Thanjavur | 04 |
| 6. | Sri Bharathi Engineering College for Women | Pudukkottai | 07 |
| 7. | Government College of Engineering | Sengipatti | 03 |
| 8. | EGS Pillai Engineering College | Nagapattinum | 02 |
| 9. | St.Joseph College of Engineering and Technology | Thanjavur | 02 |
| 10. | Mookambigai College of Engineering | Pudukkottai | 03 |
| Total No. of Participants Registered (External-39) | | | 39 |

Annexure: V

RESOURCE PERSON PROFILE

H.HAJITHA BANU

EMBEDDED SPECIALIST IN
JADAYU ENTERPRISES

Developed and maintained software for embedded systems with the end goal of providing reliable solutions. Performed system integration and debugging of embedded software, hardware, and firmware. Designed and implemented real-time embedded software applications for various systems.



ACHIEVEMENTS

- Participated international Conference in Parisutham institute of technology and science.
- Preside over Workshop Kongunadu College of Engineering and technology.
- Accompany Conference Dr.G.R.Damodaran College of Science.
- Conducted the workshop at Vetri Vinayaha College of Engineering and technology.
- Oversee the Workshop at PSG college of Technology.

QUALIFICATION

2013 - 2017
Anna University
Bachelor of Engineering in Communication Systems

2018 - 2020
Anna University
Master of Engineering in Communication Systems

CONTACT

 jdhajitha0009@gmail.com
Jadayu Enterprises

Resource person 1

Mr.T.Jeyaseelan

Assistant Professor equipped with extensive experience in academic and industry.



Experience

- 1 year Embedded Programmer, Sun Associates, Madurai.
- 2 years Project Engineer, Wipro Technologies, Bangalore.
- 2 years Lecturer, Shanmuganathan Engineering College, Thirumayam, Pudukkottai.
- 13 years experience Assistant Professor, Kings College of Engineering, Pudukkottai.

Field of Interest

- Embedded System
- Image Processing & Biomedical Instrumentation

Highlights

Published

- 10 International Conference
- 10 National Conference
- 10 Journal publications

Education

- B.E(ECE), Karunya Institute of technology, Coimbatore, in the year of 2003.
- M.E(BME), College of Engineering, Guindy Campus, Anna University, Chennai in the year of 2008.

Resource person 2

Dr.P.Narasimman

Assistant Professor equipped with extensive experience in Academic & Industry.



Experience

- 7 years 10 months Assistant Professor, Kings College of Engineering, Thanjavur.
- 1 years 6 months Electrical Design Engineer, Aathithyaan Automation, Thanjavur.
- 11 months Assistant Professor, OK College of Engineering & Technology, Cuddalore.
- 2 years 8 months Assistant Professor, Kings College of Engineering, Thanjavur.

Area of Interest

- Power Electronics,
- Power System,
- Renewable Energy System,
- Electromagnetic Interference,
- Control System a
- Robotics.

Membership in Professional Bodies

- Indian Society for Technical Education (ISTE)
- International Society for Research and Development (ISRDR)

Highlights

Published

- 7 International Conference,
- 6 National Conference
- 15 Journal publications
- 4 Patent Published
- 1 Patent Filed
- 1 Funding Proposal submitted
- 1 Book Chapter Published and 6 Reviewer in Journals

Education

- Diploma (EEE), Shanmuga Polytechnic, Thanjavur, year of 2002.
- B.Tech (EEE), SASTRA University, Thanjavur, year of 2007.
- M.E(PED), Government College of Technology, Coimbatore, year of 2010.
- Doctorate degree, Anna University, Chennai, year of 2020.

Technical Skills

Simulation Tools: ETAP, MATLAB® Simulink, PLECS, PSpice, LabVIEW, Arduino & Kell µVision, AutoCAD, REVIT, MEP Design (HVAC, Electrical, Plumbing, Fire Fighting), Lighting Design – Manual Calculation, Software (Relux & Dialux), Microsoft Office & Associated packages, Programming languages: C, C++ & Python, Real Time Power Electronics Projects

Resource person 3

Annexure: VI
PERMISSION LETTER

Punalkulam
18.08.2023

From

Mrs.U.Jeyamalar, AP/ECE,
Mr.R.Thandayuthapani, AP/ECE,
Workshop Coordinators,
ECE department,
Kings College of Engineering,
Punalkulam.

To

The Principal,
Kings College of Engineering,
Punalkulam.

Respected sir

Sub: Seeking permission to conduct 'Two day National Level Training Programme' - reg.

With reference to the above, hereby I wish to bring to your kind notice that department of Electronics and Communication Engineering is organizing 'Two day National Level Training Programme on Innovative Project Development using IoT' on 21.08.2023 & 22.08.2023.

In this regard, we request you to kindly grant us permission towards:

1. Utilization of Pallava Hall,
2. LCD projectors & PA system at Pallava Hall.
3. Genset during power interruption on 21.08.2023 & 22.08.2023.
4. Utilization of College Bus for two days.

Thanking You.

Your's faithfully,

1. Mrs.U.Jeyamalar, AP/ECE
2. Mr.R.Thandayuthapani, AP/ECE

Submitted to principal Nam

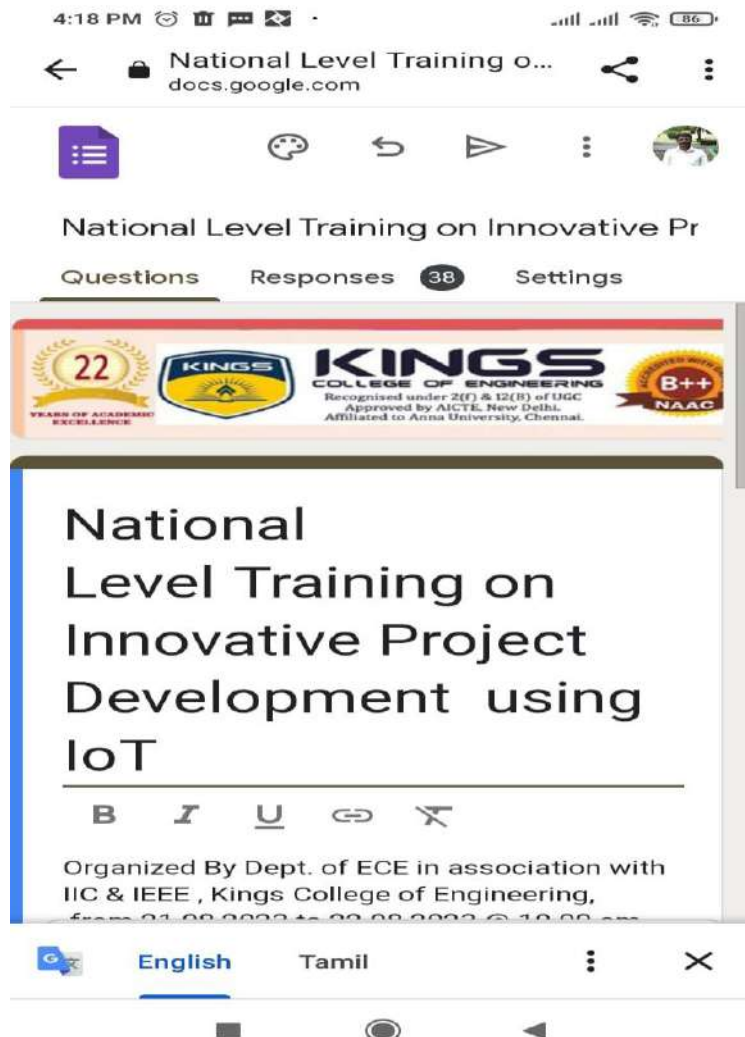
do 18/8/2023

Submitted to Secretary
for permission.
J. M. M. M.
18/8/2023

18/8/23

Annexure: VII
REGISTRATION FORM

Registration Link: <https://tinyurl.com/KingsProjectDev>



Annexure: VIII

SAMPLE CERTIFICATES

PARTICIPATION CERTIFICATE



The certificate template features a header with logos for Kings College of Engineering (23 Years of Academic), NAAC B++ accreditation, and IEEE Madras Section. The main title is "National Level Training Programme on Innovative Project Development using IoT". The body contains a line for the participant's name and a paragraph stating participation in the program organized by the Department of Electronics and Communication Engineering at Kings College of Engineering in association with Jadayu Enterprises, Thanjavur, on 21.08.2023 & 22.08.2023. The footer lists three officials: Mrs. U. Jeyamalar and Mr. R. Thandayuthapani as Coordinators, Mrs. N. Mangaiyarkarasi as Convener, and Dr. J. Arputha Vijaya Selvi as Principal.

  **KINGS**
COLLEGE OF ENGINEERING
Recognised under 2(F) & 12(B) of UGC.
Approved by AKTE, New Delhi.
Affiliated to Anna University, Chennai.  

**National Level Training Programme on
Innovative Project Development using IoT**

Certificate of Participation

This is to certify that _____ of

has participated in **National Level Training Programme on Innovative Project Development using IoT** organised by Department of Electronics and Communication Engineering, Kings College of Engineering in association with Jadayu Enterprises, Thanjavur on 21.08.2023 & 22.08.2023.

Mrs. U. Jeyamalar
Mr. R. Thandayuthapani
COORDINATORS

Mrs. N. Mangaiyarkarasi
CONVENER

Dr. J. Arputha Vijaya Selvi
PRINCIPAL

Department of Electrical and Electronics Engineering

3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

| S. No | Date | Details | Beneficiaries | Page No |
|-------|--------------------------|---|---------------|---------|
| 1. | 27.07.2023 | Orientation Session on “Electrical and Electronics Engineering Curriculum and Regulations” | 65 | 2 |
| 2. | 27.07.2023 & 28.07.2023 | Bridge Course for Third and Final EEE students on “Power System Analysis and Renewable Energy Systems” | 28 | 5 |
| 3. | 06.09.2023 | Alumni Interaction on “International Career Prospects for Electrical Engineers” | 50 | 11 |
| 4. | 20.09.2023 & 21.09.2023 | Bridge Course for II EEE students on “Introduction to Electrical Engineering Subjects” | 35 | 14 |
| 5. | 04.10.2023 | Workshop on “Recent Trends in Electrical Engineering” | 83 | 17 |
| 6. | 10.10.2023 | National Level Technical Symposium – (ENIGMA’23) | 40 | 26 |
| 7. | 12.10.2023 | Alumni Interaction on “Electric Vehicles and Its Future Prospect” | 53 | 47 |
| 8. | 12.10.2023 | Alumni Interaction - Seminar on “Motivational Talk” | 50 | 52 |
| 9. | 09.11.2023 | Internal Seminar on “Control System Applications” | 25 | 55 |
| 10. | 03.01.2024 | Internal Seminar on “Sustainable Energy Sources” | 55 | 57 |
| 11. | 28.02.2024 | Alumni Interaction - Seminar on “Mastering IELTS And TOEFL: Strategies for Success” | 30 | 60 |
| 12. | 13.03.2024 to 14.03.2024 | Bridge Course for II EEE students on “Introduction to Transmission and Distribution and Microprocessor and Microcontroller” | 45 | 64 |
| 13. | 22.03.2024 | Internal Students Seminar on “Smart Grids and Its Application” | 48 | 68 |
| 14. | 13.04.2024 | Technical Poster Presentation | 20 | 71 |
| 15. | 18.06.2024 | Internal Students’ Seminar on “Role of Power Converters in Electrical Engineering” | 45 | 72 |
| 16. | 20.06.2024 | Internal Seminar on “Smart Microgrid” | 55 | 75 |
| 17. | 24.06.2024 | Internal Seminar on “Electric Vehicle Charging Systems” | 50 | 79 |
| 18. | 24.06.2024 | Internal Seminar on “Introduction to Solid Liquid and Gaseous Dielectrics” | 45 | 82 |

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-2024 (ODD SEMESTER)

Orientation Programme Report - July 27th, 2023

The Department of EEE organized the Orientation Programme for third-year, and final-year EEE students on 27.7.2023. The main objective of the orientation programme is to provide an introduction to Electrical and Electronics Engineering subjects as per the Anna University curriculum, job opportunities, certifications, curricular activities, clubs & societies, GATE, T&P, IHT initiatives, VAC, and an overview of technical skills in the field of Electrical Engineering.

AGENDA

PROGRAMME SCHEDULE for III and IV EEE:

DATE & SESSION: 27.07.2023 & FN

| TIME | PROGRAMME | FACULTY INCHARGE |
|-----------------------|---|---|
| 09.15 A.M- 09.30 A.M | Announcement about department activities and introducing class incharges. | Mr. S. R. Karthikeyan, AP/EEE Mr. J. Arokiaraj, AP/EEE |
| 09.30 A.M - 10.45 A.M | Anna University curriculum /T&P Training system, Job Opportunities | Dr. S. Sivakumar , VP & Head T & P |
| 10.45 A.M - 11.00 A.M | BREAK | |
| 11.00 A.M - 11.30 A.M | Discipline, Dress code and Certifications(SWAYAM,NPTEL, MOOCs) Gate Orientation | Dr. P. Narasimman, AP/EEE |
| 11.30 A.M - 11.45 A.M | SCC, Co- curricular, Extra- curricular activities, Clubs | Mrs. P. Thirumagal, AP/EEE |
| 11.45 A.M - 12.15 P.M | Internship & IHT Initiatives, Programme Outcome and course outcome | Mr. S. R. Karthikeyan, AP/EEE |
| 12.15 P.M - 12.30 P.M | Precautions and Discipline inside the Lab, Prerequisites for Laboratories. | Mr. J. Arokiaraj, AP/EEE |

COORDINATOR:

Dr. G. Suganya, Assistant Professor/EEE

The orientation program for the EEE department was successfully conducted on 27.7.2023 from 09:15 AM to 12:30 PM. The program aimed to introduce the students to various aspects of their academic journey, departmental activities, and university systems. The schedule was meticulously organized to cover important topics and familiarize students with key faculty members.

Under the guidance of the Dr. A. Albert Martin Ruban, HOD/EEE, the orientation program proceeded seamlessly, ensuring that students received a comprehensive introduction to their academic life.

The event began at 09:15 AM with an opening announcement by Mr. S.R. Karthikeyan and Mr. J. Arokiaraj, Assistant Professors of EEE department. They introduced themselves as the class in charges and gave an overview of the department's upcoming activities.

Following this, from 09:30 AM to 10:45 AM, Dr. S. Sivakumar, Vice Principal and Head of Training and Placement (T&P), discussed the Anna University curriculum, T&P training system, and job opportunities. He provided valuable insights into the industry's expectations and the skills required for successful placements.

After a short break, from 11:00 AM to 11:30 AM, Dr. P. Narasimman, Assistant Professor of EEE, discussed important aspects such as discipline, dress code, certifications from platforms like SWAYAM and NPTEL, MOOCs, and provided information about the gate orientation process. This session aimed to familiarize students with the university's regulations and the importance of adhering to them.




The subsequent session, led by Mrs. P. Thirumagal, Assistant Professor of EEE, from 11:30 AM to 11:45 AM, shed light on the various co-curricular and extracurricular activities available, participations in clubs and participations in inter and intra college events. This session aimed to encourage students to engage in activities beyond their academic curriculum.

Continuing the program, Mr. S.R. Karthikeyan took the stage at 11:45 AM to discuss internship and IHT (Industry, Hands-on Training) initiatives. He also provided insights into the program outcomes and course outcomes, giving students a clear understanding of what they can expect from their academic journey.

The final segment of the program, from 12:15 PM to 12:30 PM, was presented by Mr. J. Arokiaraj. He focused on the precautions and discipline that should be followed within the laboratory settings. He also highlighted the prerequisites for laboratory sessions, emphasizing safety and effective learning.

The orientation program concluded on a successful note, ensuring that students received comprehensive information about the department's academic structure, extracurricular activities, industry exposure, and laboratory practices.

Captured Moments: Highlights of EEE Department Orientation Day

| | |
|--|---|
|  |  |
| <p>Session: II - Career Talk: Exploring opportunities with Dr. S. Sivakumar</p> | <p>Session: V - Real-world Learning: Exploring Internships & IHT Initiatives with Mr. S.R. Karthikeyan</p> |
|  | |
| <p>Session VI- Hands-On Learning: Navigating Laboratory Safety and Prerequisite with Mr. J. Arokiaraj</p> | |

[Signature]
FACULTY INCHARGE

[Signature] 29/8/23
HOD/EEE

[Signature] 29/8/2023
PRINCIPAL

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-2024(ODD)

REPORT – BRIDGE COURSE

The Department of Electrical & Electronics Engineering conducted a bridge course covering EE3501 - POWER SYSTEM ANALYSIS for third-year EEE students and EE8703 RENEWABLE ENERGY SYSTEMS for final-year students, spanning from July 27, 2023 (AN) to July 28, 2023 (FN & AN). The primary aim of this bridge course was to offer students an introductory overview of the respective courses, setting the foundation for their upcoming studies in these vital fields.

PROGRAMME SCHEDULE – III EEE

DATE & SESSION: 27.07.2023 & AN

SUB: EE3501 - POWER SYSTEM ANALYSIS

| TIME | TOPICS | FACULTY INCHARGE |
|---------------------|--|-------------------------------------|
| 01.10 P.M-02.40 P.M | POWER SCENARIO IN INDIA POWER SYSTEM COMPONENTS | DR.S.SIVAKUMAR VP & HEAD (T & P) |
| 02.50 P.M– 04.20P.M | RECENT TRENDS IN POWER SYSTEMS | MRS.A.PRABHA,AP/EEE |

DATE & SESSION: 28.07.2023 (FN & AN)

| TIME | TOPICS | FACULTY INCHARGE |
|-----------------------|------------------------------|-------------------------------------|
| 09.15 A.M – 10.45 A.M | POWER FLOW ANALYSIS | DR.S.SIVAKUMAR VP & HEAD (T & P) |
| 11.00 A.M – 12.30 P.M | SYMMETRICAL FAULT ANALYSIS | Mr. S. NAVEEN PRAKASH, AP/EEE |
| 01.10 P.M-02.40 P.M | UNSYMMETRICAL FAULT ANALYSIS | MRS.A.PRABHA,AP/EEE |
| 02.50 P.M– 04.20P.M | STABILITY ANALYSIS | Mr. S. NAVEEN PRAKASH, AP/EEE |

PROGRAMME CONTENT:

Power Scenario in India Power System Components

In the first session of the bridge course seminar, Dr. S. Sivakumar, Vice Principal and Head of Training and Placement, offered a comprehensive exploration of India's power scenario. He elucidated the essential role that power system components play in the functioning of the broader power grid, detailing how generation, transmission, and distribution systems collaboratively ensure a consistent power supply. Dr. S. Sivakumar also discussed the challenges facing the Indian power sector, such as infrastructure modernization, and highlighted the potential presented by innovative solutions and advancements in renewable energy integration and smart grid technologies. His extensive expertise in

power systems, coupled with his role as VP & Head, underscored the significance of this informative session in fostering a deeper understanding of the power sector's complexities and opportunities for progress.

Recent Trends in Power Systems

The second session of the bridge course seminar, led by Mrs. A. Prabha, Assistant Professor in the Electrical and Electronics Engineering (EEE) department, concentrated on illuminating recent trends in power systems. This session effectively outlined the remarkable progressions and innovations witnessed in power generation, transmission, and distribution domains. Mrs. Prabha underscored the significance of remaining well-informed about these trends, highlighting their pivotal role in ensuring efficient power management and sustainability. With her expert guidance, participants gained invaluable insights into the transformative potential of renewable energy integration, smart grids, and energy-efficient technologies, solidifying their understanding of the evolving landscape of power systems.

Power Flow Analysis

In the 9:15 AM - 10:45 AM session, led by Dr. S. Sivakumar, VP & Head of Training and Placement, participants delved into "Power Flow Analysis." This discussion encompassed the complexities of energy distribution within networks. Challenges like nonlinear equations, voltage drops, and system constraints were addressed, along with practical solutions including Gauss-Seidel and Newton-Raphson methods. This session equipped participants with both theoretical understanding and practical tools for effective power flow management.

Symmetrical Fault Analysis

From 11:00 AM to 12:30 PM, Mr. S. Naveen Prakash, Assistant Professor in the EEE department, led an insightful session on "Symmetrical Fault Analysis." Attendees delved into the intricacies of analyzing symmetrical faults within power systems. The session spotlighted challenges arising from short-circuits and symmetrical fault conditions, which can lead to disruptions and system failures. Mr. S. Naveen Prakash expertly navigated through these challenges, presenting effective solutions such as fault impedance calculations and protective relays. Participants gained a comprehensive understanding of how to identify and mitigate symmetrical faults, ensuring the reliability and stability of power systems.

Unsymmetrical Fault Analysis

During the session from 01:10 PM to 02:40 PM, Mrs. A. Prabha, Assistant Professor in the EEE department, led an insightful discussion on "Unsymmetrical Fault Analysis." The session delved into

the complexities of analyzing faults that deviate from symmetrical conditions. Participants gained insights into challenges posed by unsymmetrical faults, which can lead to imbalances and disruptions in power systems. Mrs. Prabha adeptly presented solutions, including sequence component analysis and fault location techniques, enabling attendees to effectively address unsymmetrical faults and ensure the stability and reliability of power networks.

Stability Analysis

From 02:50 PM to 04:20 PM, Mr. S. Naveen Prakash, Assistant Professor in the EEE department, led an engaging session on "Stability Analysis." Participants delved into the critical realm of assessing power system stability. The session illuminated challenges arising from dynamic fluctuations and disturbances, which can compromise system stability. Mr. Prakash expertly introduced solutions such as transient stability analysis and control mechanisms, enabling attendees to effectively assess and enhance power system stability. Through this session, participants gained valuable insights into maintaining a resilient power network even under challenging conditions.

PROGRAMME SCHEDULE - IV EEE

DATE & SESSION: 27.07.2023 & AN SUB: EE8703 RENEWABLE ENERGY SYSTEMS (RES)

| TIME | TITLE | FACULTY INCHARGE |
|---------------------|---|--------------------------------------|
| 01.10 P.M-02.40 P.M | RESOURCE AVAILABILITY IN INDIA | DR.A.ALBERT MARTIN RUBAN, HOD/EEE |
| 02.50 P.M– 04.20P.M | PRESENT INDIAN AND INTERNATIONAL ENERGY SCENARIO OF CONVENTIONAL AND RE SOURCES. | MRS.P.THIRUMAGAL, AP/EEE |

DATE & SESSION: 28.07.2023 (FN & AN)

| TIME | TITLE | FACULTY INCHARGE |
|-----------------------|---|----------------------------|
| 09.15 A.M – 10.45 A.M | SOLAR ENERGY CONVERSION SYSTEMS | MR.J.AROKIARAJ, AP/EEE |
| 11.00 A.M – 12.30 P.M | WIND ENERGY CONVERSION SYSTEMS | MR,S.R.KARTHIKEYAN, AP/EEE |
| 01.10 P.M-02.40 P.M | CHALLENGES AND HARVESTING POSSIBILITIES IN RES | MR.J.AROKIARAJ, AP/EEE |
| 02.50 P.M– 04.20P.M | RECENT TRENDS IN RES | MR,S.R.KARTHIKEYAN, AP/EEE |

PROGRAMME CONTENT:

Resource Availability in India

The session on "Resource Availability in India," conducted from 01:10 PM to 02:40 PM and led by Dr. A. Albert Martin Ruban, Head of the Electrical and Electronics Engineering (EEE) department, addressed the critical topic of resource availability in the Indian context. Dr. Ruban discussed

challenges like resource scarcity and uneven distribution, emphasizing the importance of sustainable practices to manage resources effectively. The session covered energy resources, water management, mineral extraction, and government initiatives, providing attendees with insights into the complexities of resource management and the need for responsible utilization to ensure a sustainable future for India.

Present Indian and International Energy Scenario of Conventional and Renewable Sources

The session on "Present Indian and International Energy Scenario of Conventional and Renewable Sources," conducted from 02:50 PM to 04:20 PM and led by Mrs. P. Thirumagal, Assistant Professor in the Electrical and Electronics Engineering (EEE) department, offered a comprehensive insight into the current global and Indian energy landscape. The discussion encompassed both conventional sources like fossil fuels and the expanding influence of renewable resources such as solar and wind energy. Mrs. Thirumagal highlighted the challenges of conventional energy reliance, the rapid growth of renewables, and the global push for sustainability. The session illuminated the potential of renewable energy sources to reshape the energy sector and fostered a deeper understanding of the ongoing energy transition's significance for a greener future.

Solar Energy Conversion Systems

In the morning session, Mr. J. Arokiaraj delved into the fascinating realm of Solar Energy Conversion Systems. He began by elucidating the fundamental principles of photovoltaic technology, which involves the use of solar cells to convert sunlight directly into electricity. Attendees learned about the various types of solar cells, including monocrystalline and polycrystalline, and how they function. Additionally, Mr. J. Arokiaraj discussed solar thermal systems, which harness the sun's energy to produce heat for applications like electricity generation and water heating. An essential aspect of this session was the emphasis on the environmental benefits of solar energy, such as reducing greenhouse gas emissions and contributing to a more sustainable future.

Wind Energy Conversion Systems

During the 2nd session, Mr. S.R. Karthikeyan provided a comprehensive overview of Wind Energy Conversion Systems. He began by explaining the key components of wind turbines, including rotor blades and generators, and how they work together to capture and convert wind energy into electricity. The importance of wind resource assessment was highlighted, as it helps identify suitable locations for wind farms by analyzing wind speed, consistency, and other factors. Challenges related to grid integration, such as managing intermittent wind power generation, were also discussed. The session concluded with insights into the global growth of wind energy, showcasing how many countries are increasingly adopting wind power as a clean and sustainable energy source.

Challenges and Harvesting Possibilities In Renewable Energy Systems


In the early afternoon session, Mr. J. Arokiaraj returned to shed light on the Challenges and Harvesting Possibilities in Renewable Energy Systems (RES). He addressed the various obstacles that the renewable energy sector faces, including intermittency issues, the need for efficient energy storage solutions, and regulatory barriers. However, the session also provided a hopeful perspective by highlighting the vast potential for harvesting renewable energy. Attendees gained insights into how technological advancements and growing global awareness of the importance of clean energy are driving solutions to these challenges. The overarching message was the crucial role that sustainable energy practices play in mitigating climate change and building a greener future.

Recent Trends In Renewable Energy Systems

In the final session of the day, Mr. S.R. Karthikeyan explored the cutting-edge developments and trends in Renewable Energy Systems (RES). The presentation covered recent technological advancements in renewable energy, such as innovations in energy storage systems, the implementation of smart grids, and breakthroughs in materials science that enhance the efficiency and affordability of renewable technologies. Attendees were also informed about emerging markets for renewable energy worldwide, with a focus on regions like Asia, Europe, and North America. Additionally, the session underscored the influential role of government policies and private sector investments in accelerating the growth and adoption of renewable energy sources, marking a compelling conclusion to a day of enlightening discussions on the future of clean and sustainable energy solutions.

Captured Moments: Highlights of Bridge Course Program

| | |
|--|---|
|  <p>GPS Map Camera Gandarvakkottai, Tamil Nadu, India J2XX+582, Gandarvakkottai, Tamil Nadu 613301, India Lat 10.647953° Long 79.048318° 27/07/23 02:01 PM GMT +05:30</p> |  <p>GPS Map Camera Gandarvakkottai, Tamil Nadu, India J2XX+582, Gandarvakkottai, Tamil Nadu 613301, India Lat 10.647948° Long 79.048313° 27/07/23 02:35 PM GMT +05:30</p> |
| <p>"Exploring India's Resource Potential" - Dr. A. Albert Martin Ruban, HOD/EEE</p> | <p>"Unveiling the Power System Trends" - Mrs. A. Prabha, AP/EEE</p> |
|  <p>GPS Map Camera Gandarvakkottai, Tamil Nadu, India J2XX+582, Gandarvakkottai, Tamil Nadu 613301, India Lat 10.647953° Long 79.048318° 28/07/23 11:31 AM GMT +05:30</p> | |
| <p>"Analyzing Symmetrical Faults" - Mr. S. Naveen Prakash, AP/EEE</p> | |


FACULTY INCHARGE


HOD/EEE


PRINCIPAL



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

SEMINAR ON

“INTERNATIONAL CAREER PROSPECTS FOR ELECTRICAL ENGINEERS”

06.09.2023

Resource Person:

Mr. M. Mohamed Thoufeek (Alumni: 2012-15 Batch)

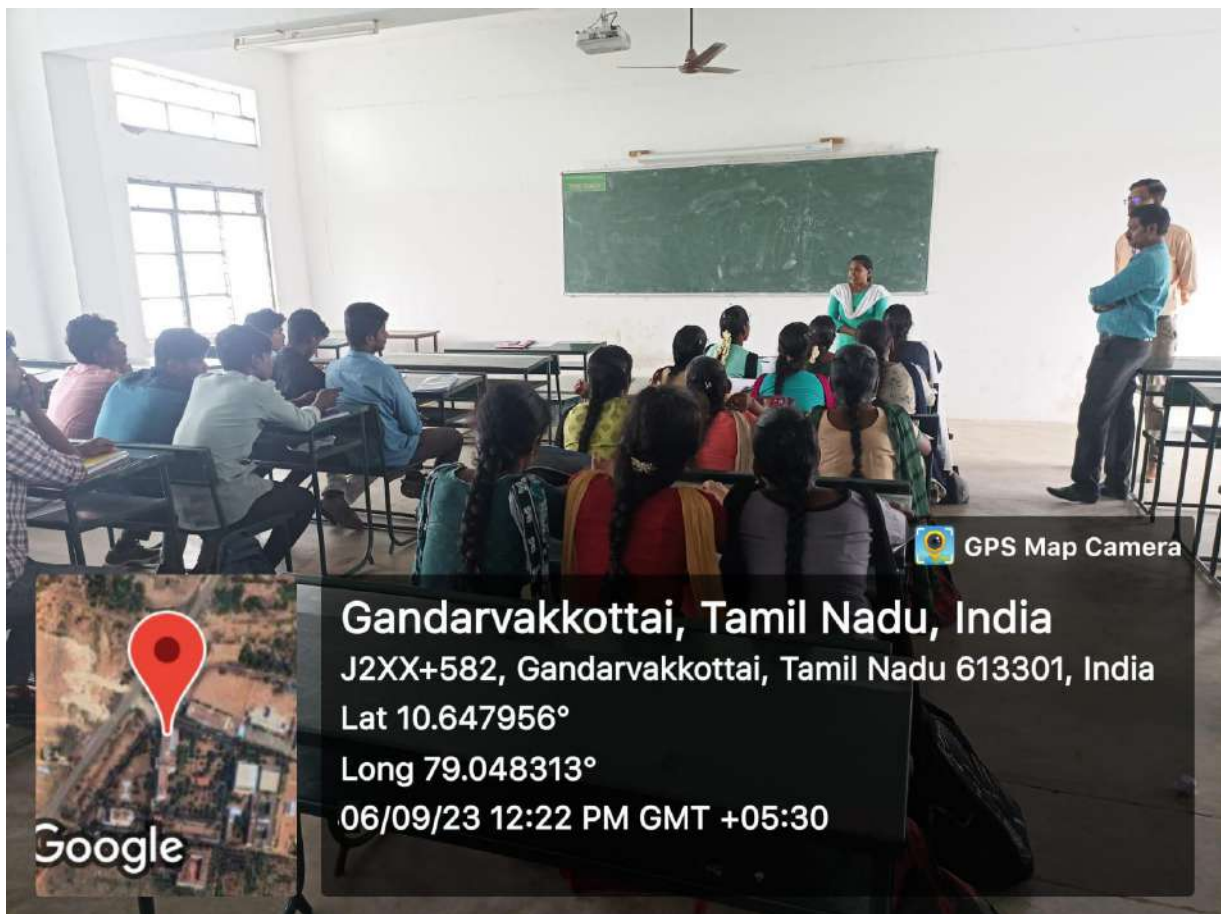
Higher Studies,

London

POST SEMINAR REPORT

The seminar organized by department of Electrical and Electronics Engineering on “International Career Prospects for Electrical Engineers” on 06.09.2023 for final year EEE students (35 Students). The session started with silent prayer and then the session continued with the welcoming address and introduction of resource person given by Mr. R. Sundaramoorthi AP/EEE.

Event photograph-1



Event photograph-2



Resource person interact with students about their career

In the session, Mrs. V. Gayathri (Resource Person), provided detailed insights into career opportunities for electrical engineers in foreign countries. The key points covered during this session are outlined below:

- 1) International Career Prospects for Electrical Engineers" opens doors to a global playground of opportunities.
- 2) Electrical engineers possess skills that transcend borders, making them valuable assets on the international stage.
- 3) In diverse nations, the demand for innovative electrical solutions is on the rise, creating a vast and dynamic job market.
- 4) As international professionals, electrical engineers contribute to shaping the infrastructure of smart cities and advancing renewable energy projects.
- 5) Working in foreign countries broadens their perspectives and exposes them to different technological landscapes.
- 6) The role of electrical engineers extends beyond circuits; they are instrumental in implementing cutting-edge technologies worldwide.
- 7) Collaboration with diverse teams from various cultures fosters creativity and innovation in problem-solving.
- 8) International exposure enhances the adaptability and resilience of electrical engineers, crucial skills in today's rapidly evolving tech landscape.
- 9) Opportunities for networking and collaboration with global experts pave the way for continuous learning and professional growth.
- 10) Embracing international career prospects as an electrical engineer opens up a world of challenges, achievements, and the chance to contribute to the global technological tapestry.

Conclusion:

During this session, students acquired insights into the dynamic and expansive international career prospects for electrical engineers. Their role as innovators extends beyond borders, actively shaping the global technological landscape. Seizing opportunities abroad not only broadens their professional horizons but also boosts adaptability and resilience. As global architects of progress, electrical engineers play a vital role in contributing to the ever-evolving challenges and achievements in their field.



Alumni Co-ordinator / EEE



HOD/EEE



Principal



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-2024(ODD)

REPORT – BRIDGE COURSE (II-EEE)

The Department of Electrical & Electronics Engineering conducted a bridge course for II-EEE students on September 20th (AN) and 21st (FN & AN), 2023. This program featured a diverse range of topics, including **Electromagnetic Fields, Mathematics, Digital Logic Circuits, C Programming and Electrical Machines**. The primary objective was to establish a strong foundation in these core subjects, equipping students with essential knowledge and skills as they continue their academic journey in the field of Electrical and Electronics Engineering.

PROGRAMME SCHEDULE

DATE & SESSION: 20.09.2023 & AN

SUB: EE3301 – ELECTROMAGNETIC FIELDS

| TIME | TOPICS | FACULTY INCHARGE |
|---------------------|-----------------------------------|----------------------------|
| 01.10 P.M-02.40 P.M | ELECTRIC CHARGES AND FIELDS | MRS. P. THIRUMAGAL, AP/EEE |
| 02.50 P.M– 04.20P.M | MAGNETIC FIELDS AND THEIR EFFECTS | Dr. S. VASANTHARAJ, AP/EEE |

PROGRAMME CONTENT:

The first session of the day was conducted by **Mrs. P. Thirumagal, Assistant Professor in the Electrical and Electronics Engineering Department**. She presented a comprehensive lecture on **"Electric Charges and Fields."** In this session, students were introduced to the fundamental concepts of electric charges, Coulomb's law, electric fields, and the behavior of charged particles. This forms the cornerstone of electromagnetism and provides students with a solid foundation for understanding electric phenomena in their future coursework.

Following a brief break, **Dr. S. Vasantharaj, Assistant Professor/EEE** discussed about the concept **"Magnetic Fields and Their Effects."** This session built upon the morning lecture, focusing on magnetic fields, magnetic materials, and their various practical applications in electrical engineering. Students learned about the interaction between magnetic fields and electric currents, the behavior of magnetic materials, and the principles of electromagnetic devices. This knowledge is essential for their future studies in electromagnetism and power systems.

| TIME | TOPICS | FACULTY INCHARGE |
|-----------------------|---|-----------------------------------|
| 09.15 A.M – 10.45 A.M | PROBABILITY AND RANDOM VARIABLES | Dr. G. SHANKARAKALIDOSS, AP/MATHS |
| 11.00 A.M – 12.30 P.M | NUMBER SYSTEMS AND DIGITAL LOGIC FAMILIES | MR. S. RAMARAJAN, AP/ECE |

PROGRAMME CONTENT:

The morning of the second day began with a mathematics session conducted by **Dr. G. Shankarakalidoss, Assistant Professor/ MATHS**. Students delved into "Probability and Random Variables," a crucial mathematical foundation for understanding uncertainty and randomness in engineering. He also explained the principles of probability, random variables, and probability distributions. This knowledge is vital for students when analyzing uncertain events and designing systems with probabilistic outcomes.

In the second half of the morning session, **Mr. S. Ramarajan, Assistant Professor /ECE** led an informative lecture on **"Number Systems and Digital Logic Families."** This session bridged the gap between mathematics and digital logic, providing students with essential knowledge for their electronics studies. Students learned about different number systems, such as binary and hexadecimal, and how they relate to digital logic circuits. Additionally, Mr. Ramarajan introduced students to various digital logic families, emphasizing their importance in designing electronic circuits.

| TIME | TOPICS | FACULTY INCHARGE |
|----------------------|-------------------------------------|-------------------------------|
| 01.10 P.M-02.40 P.M | BASICS OF C PROGRAMMING LANGUAGE | MS. S. ABIKAYILARTHI, AP/CSE |
| 02.50 P.M– 04.20 P.M | INTRODUCTION TO ELECTRICAL MACHINES | MR. S. NAVEEN PRAKASH, AP/EEE |

PROGRAMME CONTENT:



In the afternoon, **Ms. S. Abikayilaarathi, Assistant Professor /CSE** conducted a session on the "Basics of C Programming Language." This session is foundational for computer science students, as it provides essential programming skills for data structures and object-oriented programming. Ms.

Abikayilaarathi covered the basics of C programming, including syntax, data types, control structures, and functions. Students gained hands-on experience with writing and executing C programs, setting the stage for their future programming assignments.

The day concluded with an engaging session by **Mr. S. Naveen Prakash, Assistant Professor /EEE** on "Introduction to Electrical Machines." This session was designed to provide students with a comprehensive overview of electrical machines, a core subject in electrical engineering. He introduced the basic principles of electrical machines, different types of machines, and their applications in various industries. Students left the session with a solid understanding of the importance of electrical machines in modern society.

In summary, the program schedule for II EEE on 20th and 21st September 2023 provided students with a well-rounded introduction to various key subjects in their curriculum. Each session was conducted by experienced faculty members, ensuring that students received a solid foundation for their studies in electrical and electronics engineering, mathematics, digital logic, computer science, and electrical machines. These sessions equipped students with essential knowledge and skills necessary for their academic and professional growth in the field of electrical and electronics engineering.

Captured Moments: Highlights of Bridge Course Program (II-EEE)

| | |
|---|--|
|  |  |
| <p>Exploring Electric Charges and Fields, Ms. P. Thirumagal, AP/EEE.</p> | <p>Getting Acquainted with Electrical Machines, Mr. S. Naveen Prakash, AP/EEE.</p> |

G. Srinivas
25/9/23
FACULTY INCHARGE

S. Naveen Prakash
29/9/23
HOD/EEE

S. Naveen Prakash
30/9/2023
PRINCIPAL

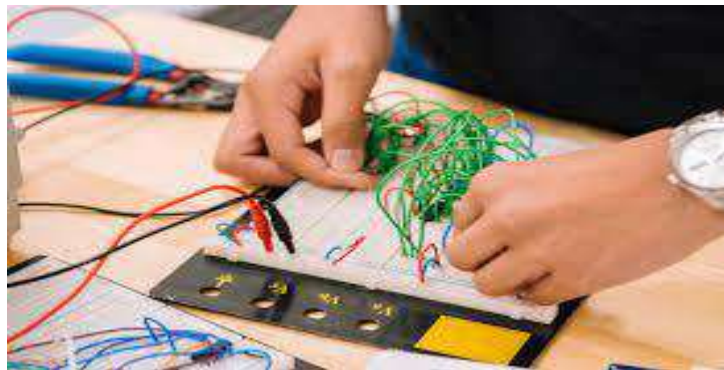
WORKSHOP REPORT

In the title of

“RECENT TRENDS IN ELECTRICAL ENGINEERING”

ON

04th OCTOBER 2023



Organized by

Department of Electrical and Electronics Engineering

KINGS COLLEGE OF ENGINEERING, PUNALKULAM

A NAAC Accredited Institution

Recognized under 2(f) & 12(B) of UGC

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

www.kingsengg.edu.in



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR (2023-2024) ODD SEM
REPORT ON ONE DAY WORKSHOP

Title of the Workshop : “Recent Trends in Electrical Engineering”

Date : 04.10.2023

Resource Person : 1. Dr.S.Sivakumar, Vice Principal & Head T&P, KCE
2. Dr.G.Suganya, AP/EEE, KCE
3. Dr.A.Prabha, AP/EEE, KCE
4. Dr.P.Narasimman, AP/EEE, KCE

No of students participated : Internal participants : 50
External participants : 35
Total No. of Participants: 85

Objectives of Workshop : To provide knowledge and exposure to students about:

- Introduction to MATLAB
- Exploring High Voltage: Applications and Innovations
- Optimization and Intelligent Algorithms
- Electrical Lighting Design and Calculation



Welcome address by workshop coordinator Dr. A.Prabha,AP\EEE



Felicitatation Address by Dr.S.Sivakumar, Vice Principal

Dr.S.Sivakumar, Vice Principal delivered the Presidential Address. He emphasized that; this workshop will provide more knowledge about the various technical skills and the future scope for electrical engineers. He insisted the students to ask more doubts and have a clear idea about the recent trends in Electrical Engineering.



Chief Guest Honoured by Dr.Albert Martin Ruban, HOD/EEE

Session: 1

Title: Introduction to MATLAB

Resource Person: Dr.S.Sivakumar, Vice Principal

The following points were discussed during the session 1:

- MATLAB is a software used for high-performance visualization, mathematical computation, and programming. MATLAB stands for "Matrix Laboratory," as it was originally known as the matrix programming language.
- MATLAB is a programming and numeric computing platform used by millions of engineers and scientists to analyze data, develop algorithms, and create models.
- MATLAB is used to analyze data for homework, conduct research, and develop programming skills that prepare the students for future career.



Snapshot of Session: 1

Session: 2

Title: Exploring High Voltage : Applications and Innovations

Resource Person: Dr.G.Suganya,AP\EEE

The following points were discussed during the session 2:

- High voltage engineering is a key technology used to ensure the power supply and also plays a major role in many technical sectors such as industrial manufacturing or the automotive industry.
- High voltage testing is a crucial kind of testing used to guarantee sufficient proper insulation in a wide variety of industrial processes.
- Evaluating the insulation is critical for establishing cable quality and safety and decreasing the likelihood of electrical shocks and accidents.
- They are used in electro spinning and electro spraying in the pharmaceutical and automobile industries.



Snapshot of Session: 2

Session: 3

Title: Optimization and Intelligent Algorithms

Resource Person: Dr.A.Prabha, AP\EEE

The following points were discussed during the session 2:

- In optimization of a design, the design objective could be simply to minimize the cost of production or to maximize the efficiency of production.
- An optimization algorithm is a procedure which is executed iteratively by comparing various solutions till an optimum or a satisfactory solution is found.
- The optimal size of DG is calculated at each bus using the exact loss formula and the optimal location of DG is found by using the loss sensitivity factor.
- The proposed technique is tested on IEEE bus test system and the obtained results are compared with the exhaustive load flows.



Snapshot of Session: 3

Session: 4

Title: Electrical Lighting Design and Calculation

Resource Person: Dr.P.Narasimman, AP\EEE

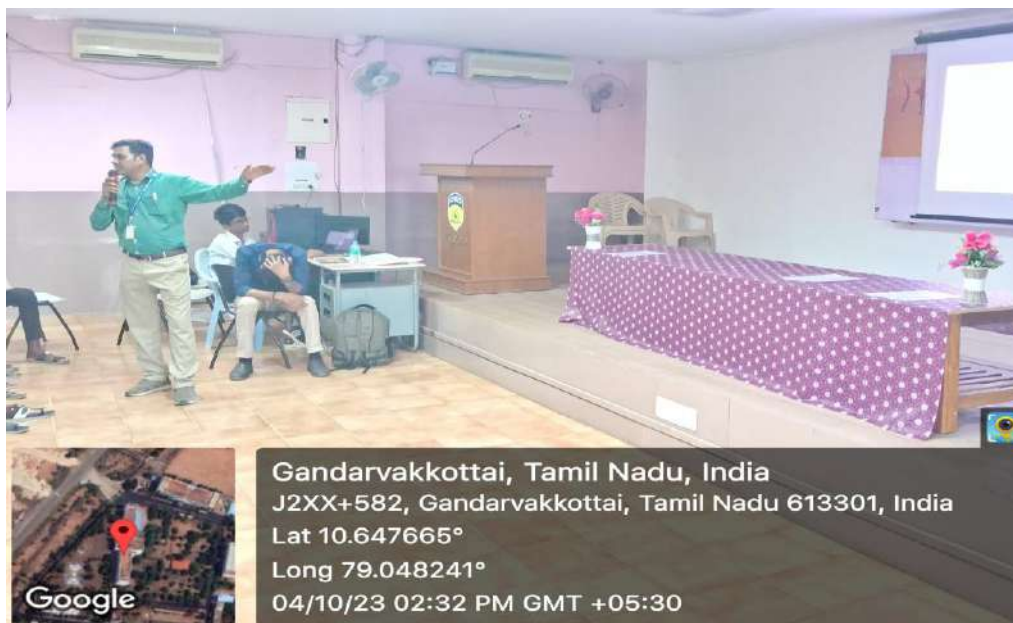
The following points were discussed during the session 2:

There are three basic types of lighting you should layer in a room in order to accomplish this:

- Ambient or general lighting.
 - Accent lighting.
 - Task lighting.
-
- LIGHTING DESIGN USING THE LUMEN METHOD

The lighting installation may be designed using the following steps:-

1. Decide upon the illumination required in Lux Calculate the room index
2. Calculate the room index 3. Find the utilization factor for the luminaire to be used.



Snapshot of Session: 4

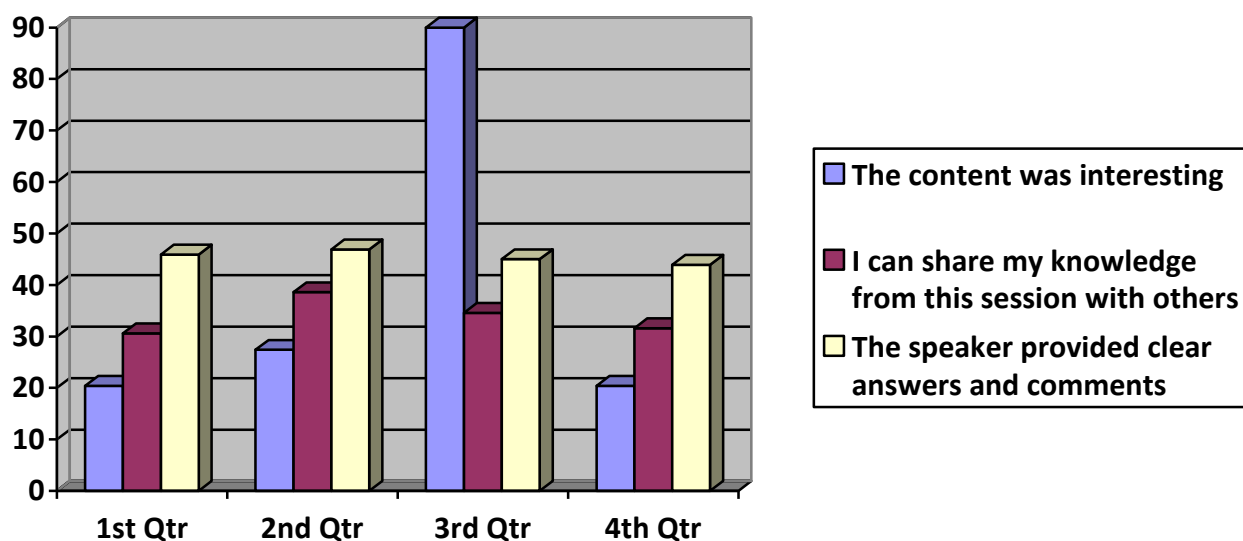
After the sessions was completed, Feedbacks were collected from the students to know their opinion about the Workshop.



Feedback from student

FEEDBACK ANALYSIS REPORT

| S.NO | CONTENTS | EXCELLENT | VERY GOOD | GOOD | SATISFIED |
|------|--|-----------|-----------|------|-----------|
| 1. | The content was interesting | 35 | 20 | 18 | 12 |
| 2. | I can share my knowledge from this session with others | 30 | 30 | 19 | 06 |
| 3. | The speaker provided clear answers and comments | 35 | 20 | 18 | 12 |



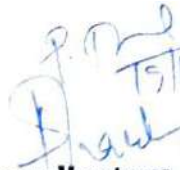


Students receiving the workshop completion certificate from the HoD/EEE.

Finally, Event coordinator Mrs.P.Thirumagal, AP/EEE delivered the vote of thanks. Workshop ended up with National Anthem successfully.

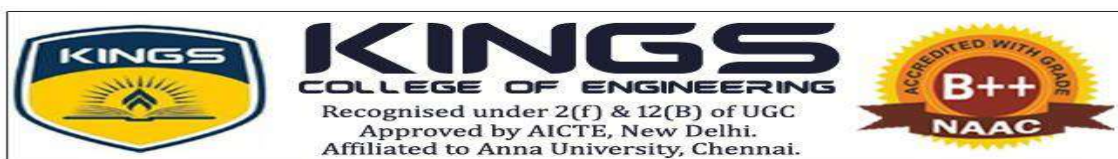
OUTCOME:

- At the end of the Workshop, students gathered more knowledge about the MATLAB, high voltage, optimization and electrical lighting.
- Students gained various technical skill sets needed regarding placement. Thus we created the way to get into the MNC through the technical skills in our core field.
- Students get more knowledge and exposure on recent trends in electrical engineering.


 TS/16/23
 19/10/23
Coordinators
 Dr. A. Prabha
 Mrs. P. Thirumagal


 19/10/23
HOD/EEE


 20/10/23
PRINCIPAL



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-2024

NATIONAL LEVEL TECHNICAL SYMPOSIUM

ENIGMA'23

Electrical Novel Imagination for Global Magnification'23

POST SYMPOSIUM – REPORT

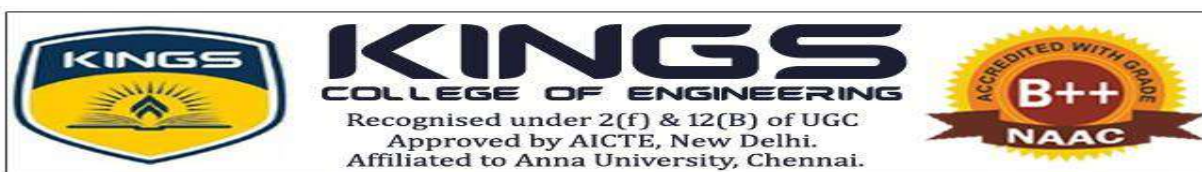


| | |
|--|---|
| DATE | : 10.10.2023 |
| VENUE | : Chera Hall & Pallava Hall |
| No. of Participants | : 40 |
| Resource Person: (Chief Guest) | : Dr.M.Venkata Kirthiga, Professor / EEE, National Institute of Technology, Trichy – 620015. |

Symposium Co-ordinator

HOD/EEE

Principal



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-2024

NATIONAL LEVEL TECHNICAL SYMPOSIUM

ENIGMA'23

POST SYMPOSIUM – REPORT

CONTENT

| SNo | Description | Page No |
|------------|---|----------------|
| 1. | Symposium Poster, Brochure & Invitation | 1 - 2 |
| 2. | Agenda | 3 - 4 |
| 3. | Objectives of Symposium, Inaugural, Presentation & Valedictory Sessions | 5 - 6 |
| 4. | Snapshot | 7 -13 |
| 5. | Prize Winners List | 14 |
| 6. | Feedback | 15 |
| 7. | Certificate Samples | 16 |
| 8. | Outcome | 17 |
| 9. | Chief Guest Profile | 18 -19 |

SYMPOSIUM POSTER, BROCHURE & INVITATION:

POSTER:



KINGS
College of Engineering
Recognized under 2(f) & 12(B) of UGC, Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai
Near Thanjavur, Punalakulam, Podukkottai - 613303

National Level Technical Symposium
10-10-2023

CISABZ'23
Resource Person
Mrs.B.Senthambiz Selvi
Talent Acquisition Lead,
vThink global technologies Pvt Ltd,
Chennai.

ELECTROVIBEZ'23
Resource Person
Dr.M.Senthil Sivakumar
Assistant Professor/ECE,
Indian Institute of Information Technology,
Tiruchirappalli.

ENIGMA'23
Resource Person
Dr.M.Venkata Kirthiga,
Professor/EEE,
National Institute of Technology,
Tiruchirappalli.

Welcome You All...



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Recognized under 2(f)&12(B) of UGC, Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai
Near Thanjavur, Punalakulam, Podukkottai - 613303

National Level Technical Symposium
10-10-2023

Department of Computer Science and Engineering
Proudly Presents
CISABZ'23
Resource Person
Mrs.B.Senthambiz Selvi
Talent Acquisition Lead,
vThink global technologies Pvt Ltd,
Chennai.

Department of Electronics and Communication Engineering
Proudly Presents
ELECTROVIBEZ'23
Resource Person
Dr.M.Senthil Sivakumar
Assistant Professor/ECE,
Indian Institute of Information Technology,
Tiruchirappalli.

Department of Electrical and Electronics Engineering
Proudly Presents
ENIGMA'23
Resource Person
Dr.M.Venkata Kirthiga,
Professor/EEE,
National Institute of Technology,
Tiruchirappalli.

Welcome You All...

BROCHURE:



KINGS COLLEGE OF ENGINEERING
 NAAC B++ Accredited Institution, Recognized Under 2(F) & 12(B) of UGC, Punalikulam, Near Thanjavur,
 Gandarvakkottai Taluk, Pudukkottai District-615505

DEPARTMENT OF
 ELECTRICAL AND ELECTRONICS ENGINEERING

PROUDLY PRESENTS
ENIGMA 2K23
 ELECTRICAL NOVEL IMAGINATION FOR GLOBAL MAGNIFICATION
ON 10.10.2023

TECHNICAL EVENTS
 Minds Unfolded
 Circuit Dilemma
 Brain Buster

NON-TECHNICAL EVENTS
 Spotify Vibes
 Paper Wings

Reg. Fees
 Rs 200/ Per Head

Student Incharges
 C.Praveen Kumar - 9585029606
 P.Milton Infant Rai - 9791927202

Staff Incharges
 Mr.J.Arokia Raj, AP/EEE
 Mr.S.R.Karthikeyan, AP/EEE

Convener
 Dr.A.Albert Martin Ruban
 HOD/EEE

Principal
 Dr.J.Arputha Vijaya Selvi

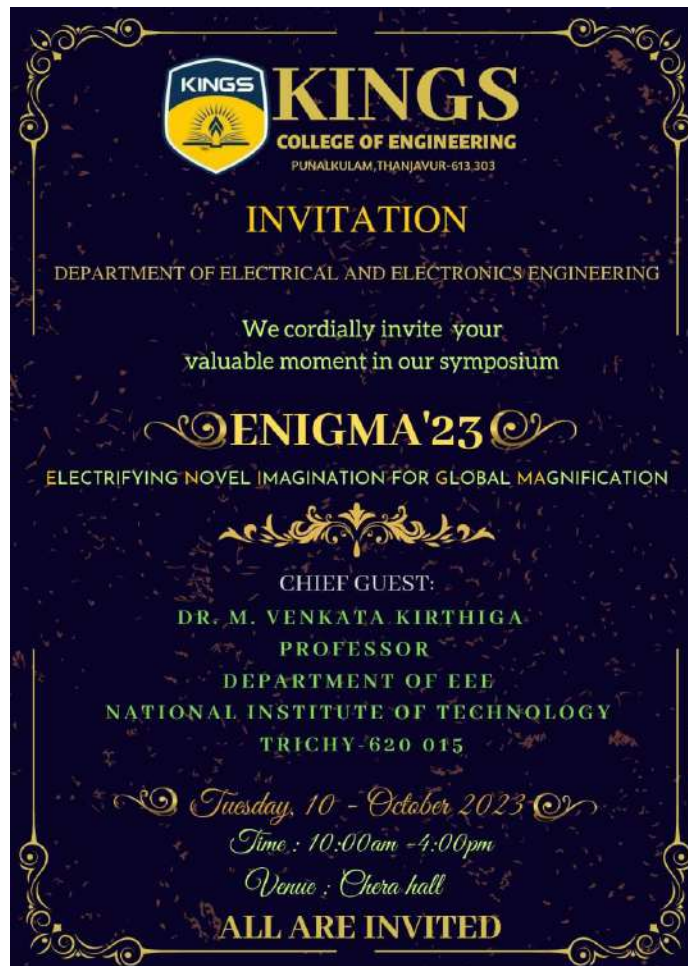
Secretary
 Dr.R.Rajendran

Reg. Fees
 Rs 200/ Per Head

Last date for Paper Submission : 06.10.2023
Last Date for Registration : 09.10.2023

eeenigma2k23@gmail.com
<http://bit.ly/enigma2023>

INVITATION:



KINGS COLLEGE OF ENGINEERING
 PUNALKULAM, THANJAVUR-613 303

INVITATION
 DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

We cordially invite your
 valuable moment in our symposium

ENIGMA'23
 ELECTRIFYING NOVEL IMAGINATION FOR GLOBAL MAGNIFICATION

CHIEF GUEST:
DR. M. VENKATA KIRTHIGA
 PROFESSOR
 DEPARTMENT OF EEE
 NATIONAL INSTITUTE OF TECHNOLOGY
 TRICHY-620 015

Tuesday, 10 - October 2023
Time : 10:00am - 4:00pm
Venue : Chera hall

ALL ARE INVITED

AGENDA:

OVER ALL AGENDA:

ENIGMA '23

Date : 10.10.2023

Venue : Chera & Pallava Hall

Time: 10.00 a.m.

| | | |
|------------|---------------------|---|
| 10.00 a.m. | Inaugural Function | Chera Hall |
| 11.30 a.m. | Refreshment | Electrical Machines Lab |
| 11.45 a.m. | Paper Presentation | Pallava Hall & Smart Classroom |
| 01.15 p.m. | Lunch | Power Electronics Lab |
| 02.00 p.m. | Other Events | Pallava Hall & Electrical Machines Lab |
| 03.30 p.m. | Validatory Function | Pallava Hall |
| 04.00 p.m. | National Anthem | Students |

INAUGURAL AGENDA:

National Level Technical Symposium – 2023

Organized by

Departments of CSE, ECE & EEE

Date: 10.10.2023

| | | |
|--------------------|--------------------------------|---|
| 10:00 - 10:02 a.m. | Prayer Song | |
| 10:02 - 10:06 a.m. | Welcome Address | Ms. Thahseen Akbar, IV Year/ CSE, KCE |
| 10:06 - 10:08 a.m. | Lamp Lighting | Dignitaries |
| 10:08 - 10:12 a.m. | Honouring the Guests | Dignitaries |
| 10:12 - 10:20 a.m. | Inaugural Address | Dr. J. Arputha Vijaya Selvi, Principal, KCE. |
| 10:20 - 10:30 a.m. | Presidential Address | Dr. R. Rajendran, Secretary, RET. |
| 10:30 - 10:35 a.m. | Felicitation | Dr. S. Sivakumar, Vice Principal, KCE |
| 10:35 - 10:38 a.m. | Introduction to Chief Guest | Mr. S. Mohamed Sameer IV Year/ CSE, KCE |
| 10:38 - 10:43 a.m. | Special Address | Ms. B. Senthamizh Selvi, Talent Acquisition Lead, vThink Global Technologies Pvt. Ltd, Chennai |
| 10:43 - 10:45 a.m. | Introduction to Chief Guest | Mr. S. Krithick Vasan IV Year/ECE, KCE |
| 10:45 - 10:50 a.m. | Special Address | Dr. M. Senthil Sivakumar, Assistant Professor/ECE, Indian Institute of Information and Technology, Tiruchirappalli. |
| 10:50 - 10:53 a.m. | Introduction to Chief Guest | Mr. M. Mukash IV Year/EEE, KCE |
| 10:53 - 11:03 a.m. | Special Address | Dr. M. Venkata Kirthiga, Professor/EEE, National Institute of Technology, Tiruchirappalli. |
| 11:03 - 11:10 a.m. | Souvenir Release | Dignitaries |
| 11:10 - 11:12 a.m. | Vote of Thanks | Ms. V. Shanmuga Priya IV Year/ECE, KCE |

OBJECTIVES OF SYMPOSIUM:

The objectives of this symposium are:

- To enhance the student's creativity, thinking ability, team work, problem solving skill etc.
- To provide a common platform for all the participants to congregate and interact with peers.

PROGRAM CONDUCTED:

The brochure of ENIGMA'23 was sent to 50 colleges before one month. The last date for submission of papers was 07.10.2023. The registration form circulated through whatsapp, website and other social media platform. We received 17 papers and 40 members registered for various technical and non technical events from various colleges. 12 teams have been participated in the paper presentation. A one day national level technical symposium ENIGMA'23 organized by Department of EEE started with inaugural session on 10.10.2023. The session started with the prayer song Tamizhthai vazhthu. Then the session continued with the welcoming address by student. Lighting the holy lamp is considered as an important ceremony.

The Chief Guest, Secretary, Principal, Vice Principal and a Participant from the student are invited to light the lamp. The session is followed by honoring the chief guest. Here our Secretary Dr.R.Rajendran honored the chief guest Dr.M.Venkata kirthiga, Professor, NIT, Trichy with a memento. After this Dr.R.Rajendran, Secretary of Kings College of Engineering delivered his presidential address. Dr.J.ArputhaVijaya Selvi, Principal of Kings College of Engineering delivered her Inaugural address. Dr.S.Sivakumar, Vice Principal of Kings College of Engineering delivered his Special address. The symposium souvenir has been released by chief guest and received by HOD/EEE and

other dignitaries. It is followed by the introduction of the chief guest by Mr.M.Mukesh of IV Year EEE. Then chief guest address given by Dr.M.Venkata kirthiga, Professor, NIT, Trichy.

After the refreshment, presentation started at 11:45 am. This session is extended up to 01:15pm. The lunch was arranged and served. After that, Circuit Dilemma, Minds Unfolded, Brain Buster, Paper Wings & Spotify Vibes conducted and Extended up to 3.30 pm.

The valedictory session started with feedback from the participants. The winners for the paper presentation were selected by the juries and awarded with the cash prize. Finally, Vote of thanks was delivered by Mr.C.PraveenKumar of final year EEE. The symposium ENIGMA'23 was successfully ended with the valediction during 3:30 pm 4:00 pm followed by National Anthem.

SNAPSHOT DURING INAUGURAL:







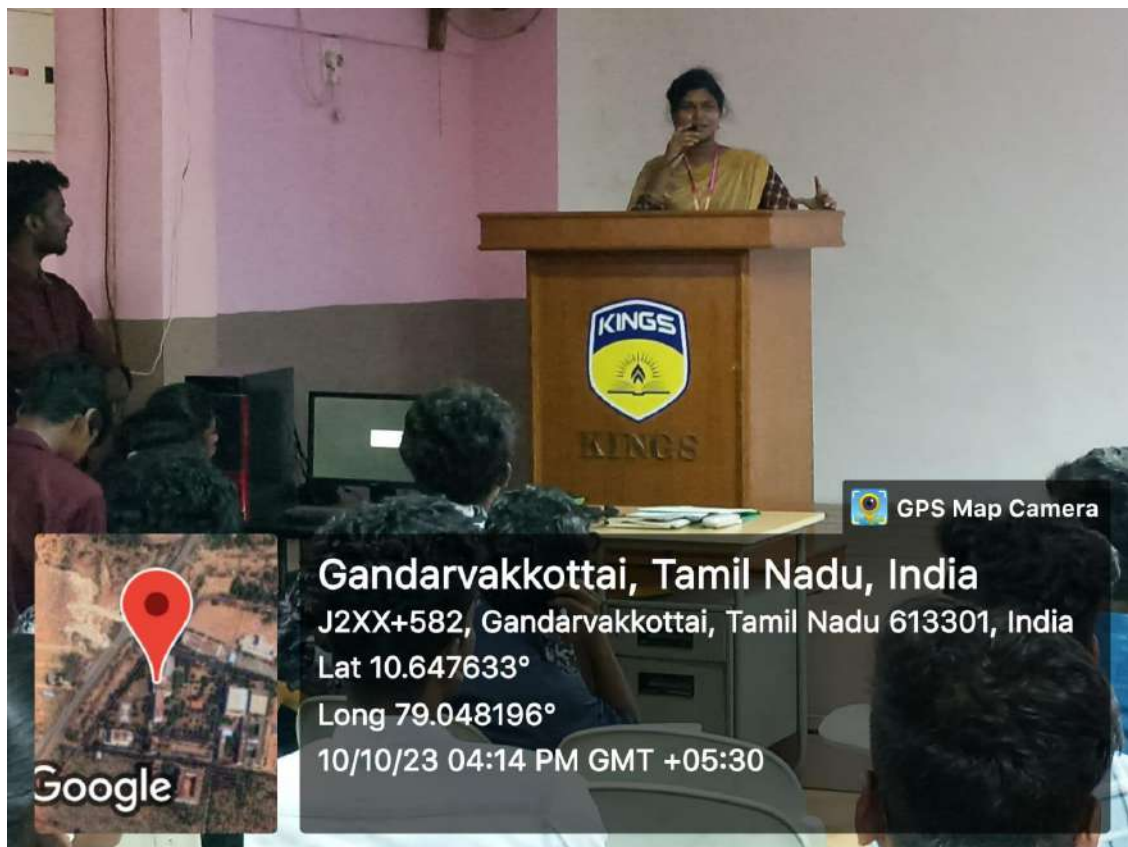


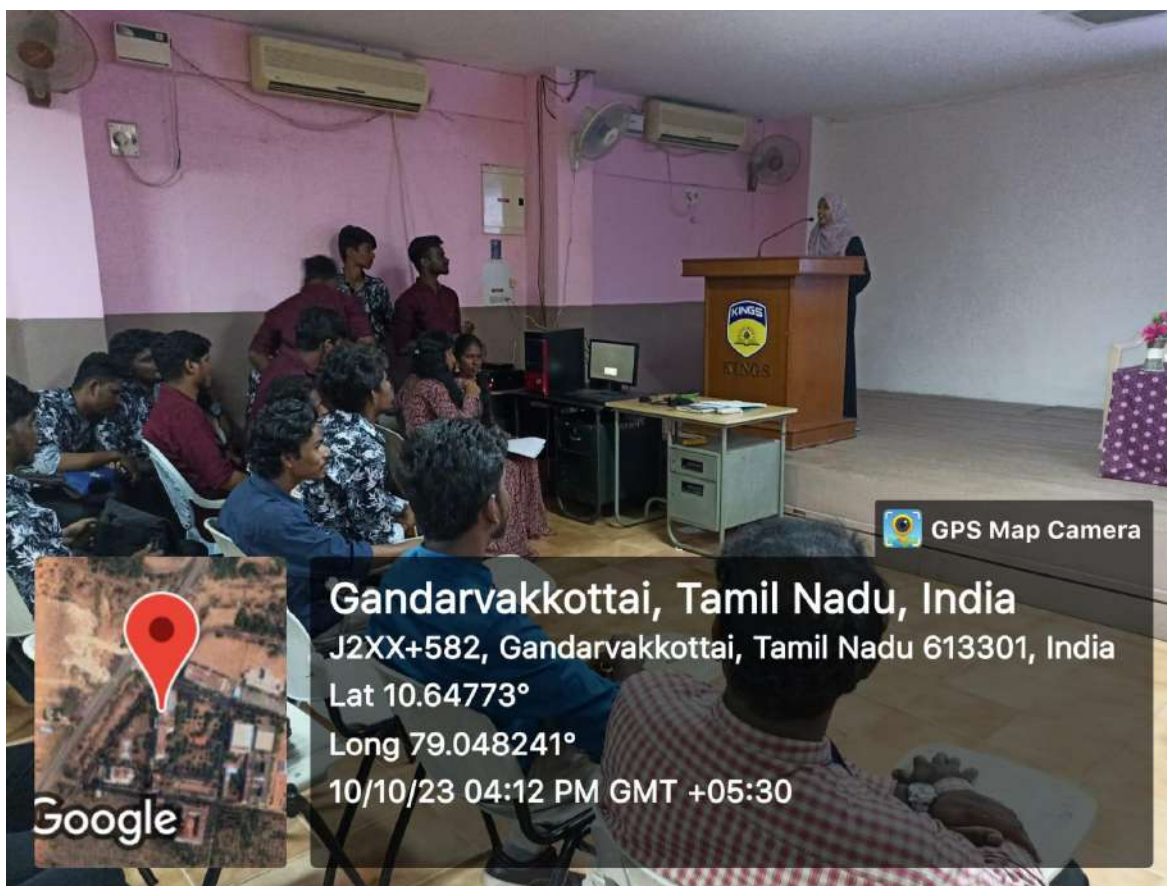
SNAPSHOT DURING PRESENTATION:



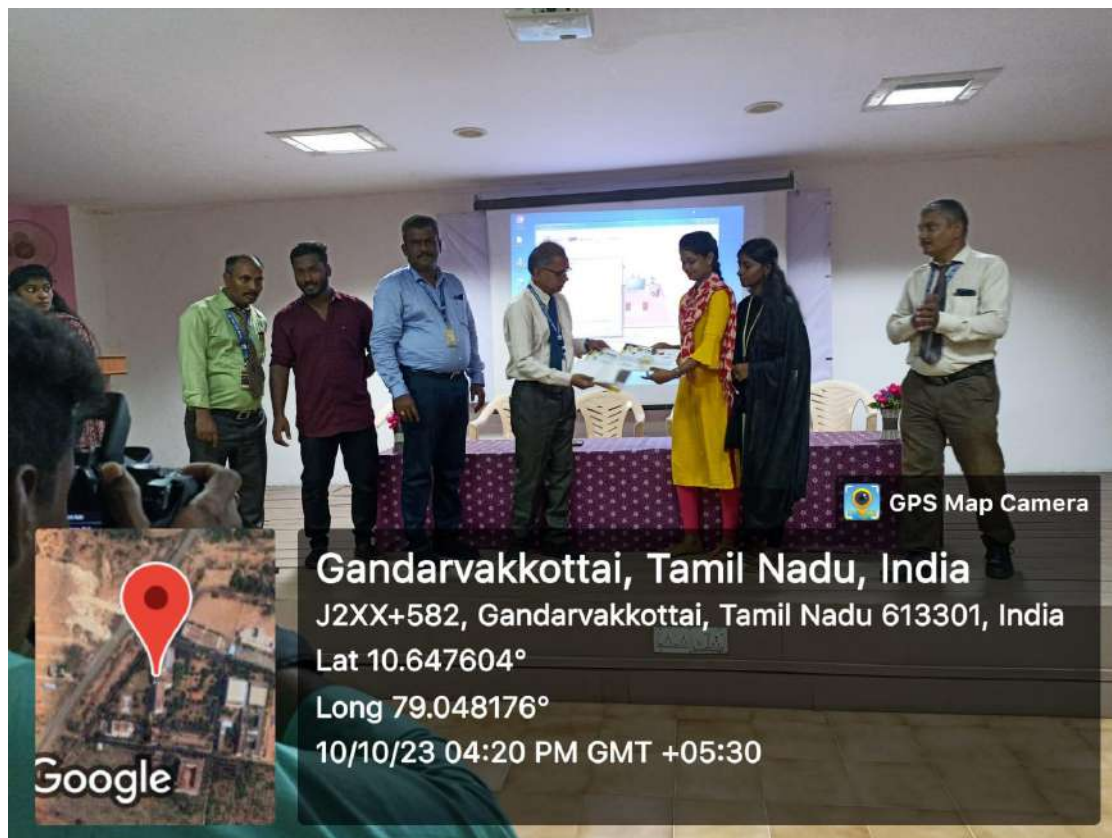


SNAPSHOT DURING FEEDBACK SESSION:





SNAPSHOT DURING CERTIFICATE DISTRIBUTION:





ENIGMA'23 WINNER'S

PAPER PRESENTATION WINNERS:

First place – V.Raghavi & E.Arundhathi, GCE, Thanjavur (Rs.1000)

Second place –A.Mohamed Imrankhan & R.Thineshkumar, Chendhuran College of Engineering and Technology (Rs.750)

Third place - Priyaniranjani P & Uma S, Kings College of Engineering (Rs.500)

CIRCUIT DILEMMA WINNERS:

First place – S.Ranjitha & s.sushmitha, K. S. K College of Engineering and Technology

Second place - – V.Raghavi & E.Arundhathi, GCE, Thanjavur

MINDS UNFOLDED WINNERS:

First place - A.Mohamed Imrankhan & R.Thineshkumar, Chendhuran College of Engineering and Technology

Second place- S.Ranjitha & s.sushmitha, K. S. K College of Engineering and Technology

BRAIN BUSTER WINNERS:

First place – S.Dinesh, GCE, Thanjavur

Second place- M.Anandhi, PITS, Thanjavur

PAPER WINGS WINNERS:

First place – S.Ruban, PITS, Thanjavur

Second place - A.Mohamed Imrankhan & R.Thineshkumar, Chendhuran College of Engineering and Technology

SPOTIFY VIBES WINNERS:

First place – A.Devi & M.Arunkumar, Chendhuran College of Engineering and Technology

Second place - S.Ruban, PITS, Thanjavur

FEEDBACK:

| SNo | QUESTIONS | EXCELLENT | GOOD | SATISFACTORY |
|-----|--|-----------|------|--------------|
| 1. | How useful did you this event was for you? | 28 | 12 | - |
| 2. | This workshop was well organized? | 26 | 14 | - |
| 3. | Hospitality | 30 | 10 | - |



Sample Feedback Form:

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
Academic Year 2023-2024 / ODD Semester
"SYMPOSIUM ENIGMA-2K23" - 10.10.2023
Feedback Form

Student Name : A. Mohamed Imran Khan

College Name : Chendhuran College Of Engg & Tech.

1. How useful did you this event was for you?

2. This workshop was well organized?

3. Hospitality

4. Which element of the event did you like the most?

5. Other Comments:

Good

Excellent

Good

Satisfactory

| |
|--|
| |
| |
| |

| |
|---|
| ✓ |
| ✓ |
| |

| |
|--|
| |
| |
| |

Spotify and Pk

✓

Student Signature

A. Mohamed Imran Khan

SAMPLE CERTIFICATES:



OUTCOME:

- Expertise and showcased the talents of the students in various technical and non technical events and improving the practical knowledge apart from the theoretical concepts in the course of their study.
- Provides a platform for the students to think independently cum leadership quality and come up with recent technology cum innovations.

CHIEF GUEST PROFILE:



Dr. M. Venkata Kirthiga,
Professor,
Room No. G15, EEE Department,
National Institute of Technology,
Trichy-620 015,
TamilNadu-India.

Qualification

- B.E. - Electrical And Electronics Engineering (Anjalai Ammal Mahalingam College of Engineering, Kovilvenni, Bharathidasan /University, Tiruchirappalli)
- M.Tech. - Power Systems (National Institute of Technology, Tiruchirappalli)
- Ph.D. - Distributed Generation and Micro-grids (National Institute of Technology, Tiruchirappalli)

Publications

- National Conferences : 11
 - International Conferences :21
 - International and National Journals : 17
- <https://scholar.google.co.in/citations?hl=en&user=efjmhflAAAAJ>

Projects supervised

- 70 PG Projects
- 22 UG Projects

Research supervision

- **M.S. (by Research) - Completed**
Stability Constrained Optimal allocation of DGs in Autonomous Micro-grids - Ms. K. Kanimozhi, July 2014 - July 2017
- **M.S. (by Research - sponsored) - Ongoing**
High Voltage Testing - Mr. Vignesh, since July 2019

➤ **Ph.D. (Completed)**

Hybrid Analyzing Techniques for Active Island Detection in Micro-grids - Mr. M. Suman,
July 2014 - February 2019.

➤ **Ph.D. (On going)**

1. Optimal Siting and Sizing of DGs in Non-autonomous Micro-grid - Ms. S. Srividya, since July 2015.
2. Special Electrical Machines - Mr. M. H. Ravichandran, since July 2015.
3. Grid Integration of Wind Energy based DGs - Mr. Ravulakari Kalyan, since July 2016.
4. Power Systems - Mrs. Dwija Desiredy, since January 2018.
5. IoT applications in Smart Grid - Mrs. S. Nethravathi (QIP), since July 2019.
6. Distributed Generation - Mrs. Arya Vijayan since July 2019.

Foreign Visits

| Place of visit | Purpose of visit |
|--------------------|---|
| Bali, Indonesia | IEEE International Conference, TENCON, 21 st – 25 th November, 2011 |
| Singapore | Study tour under the guidance of Dr. Lalit Goel at Nanyang Technological University, from 29 th June – 9 th July 2013 |
| Mauritius | IEEE International Conference AFRICON 13 during 9 th – 12 th September 2013 |

Reviewer - International Journals

1. Electric Power Components and Systems – Taylor and Francis Journal – since 2012
2. IEEE Transactions on Smart Grids since June 2013.
3. International Journal of Emerging Electric Power Systems since November 2013.
4. International Journal of Energy Conversion and Management – Elsevier since 2013.
5. IEEE Systems Journal - since 2018

Professional Societies Membership

- Fellow Institution of Engineers (FIE) India - Life Membership
- Senior Member - IEEE (Member since last seven years)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

**Guest Lecture on
Electric Vehicles and its Future Prospect**

REPORT

The department of Electrical and Electronics Engineering has organized a Guest Lecture on “**Electric Vehicles and its Future Prospect**” on 12th October, 2023.

Beneficiaries : III Year Students (9) & IV Year Students (15)
Date : 12-10-2023
Session Time : 07.30 P.M to 08.30 P.M
Venue : Online (Meet Link: [http:// meet.google.com/kyx-uhfj-rje](http://meet.google.com/kyx-uhfj-rje))
Resource Person : Mr. R. Venkedesh, M.E., (Ph.D)
HOD/Assistant Professor
Department of EEE
Shri Venkateshwaraa College of Engineering & Technology,
Puducherry.

The main objective of this Guest Lecture is to impart knowledge on various applications of Electric vehicles in the field of Power System Engineering.

The Guest Lecture session started with the welcome address delivered by Mr.S.Naveen Prakash AP/EEE. After the welcome address, Mr.S.Naveen Prakash AP/EEE has introduced the resource person, Mr.R.Venkedesh to the participants and in addition he also mentioned the various academic and research contributions of the resource person in the field of Power System and Power Electronics.

The resource person started the session through interaction with the students about their basic knowledge in the field of Electric Vehicles in Power System. He also asked few questions regarding the applications of Electric Vehicle in the various fields of engineering to the students. Then, the resource person started the presentation by explaining the basic concept of electric vehicle and its operation. Later, he explained the basic Electric Vehicle operation using a simple block diagram. During the block diagram presentation, he explained the functions of various blocks involved in the operation of Electric Vehicle. Further, he demonstrated the different types of Electric Vehicle available in Power System. He gave a detailed explanation about each and every function by addressing its basic function, types of Electric Vehicle, type of batteries used and the various functionalities involved in Electric Vehicle operation.

After the detailing of different types of EV, batteries used in EV and various strategy used for charging and discharging in EV he explained the application of EV. Finally, he explained about the application of Electric Vehicles in power system and how the involvement of Power Electronic devices in Electric Vehicle to improves the efficiency of the system. Along with discussing the numerous uses and benefits of electric vehicles in power systems.

Finally, he gave a deeper insight on thrust areas of research in the field of Power System and also the scope for future research. He also motivated the students to do their projects in Power System domain and also gave useful inputs regarding higher studies in Power System in India and foreign countries. At the end, he invited the queries and doubts from the students for discussion and clarification. Students asked some interesting questions and the resource person clarified their queries with the help of real time examples.

The guest lecture was completely motivating and it kindled student's interest towards the growing technologies in power system and its positive impact in power system operation. The session was absolutely very useful to our student community and it serves as a greater input to their final year projects. Finally, the Guest Lecture ended with the vote of thanks delivered by Mr.S.Naveen Prakash, AP/EEE.

Photographs of Lecture Sessions

Top Screenshot: Title Slide

Mr. R. Vengadesh AP-EEE (Presenting)

ELECTRIC VEHICLES AND IT'S FUTURE PROSPECT

DATE: 12.10.2023
TIME: 7.30 PM TO 8.30 PM

R. VENKEDESH
HOD & AP-EEE
SVJET, PUDUCHERRY

Bottom Screenshot: Content Slide

TYPES OF ELECTRIC VEHICLE

Battery Electric Vehicle (BEV)

- Compared to an internal combustion engine, battery powered electric vehicles have approximately 90% fewer moving parts that need maintenance.
- Creates very little noise.
- No exhaust, spark plugs, clutch or gears.
- Doesn't burn fossil fuels, instead uses rechargeable batteries.
- The typical charging time for an electric car ranges from 20 minutes and up to more than 12 hours. This all depends on the speed of the charging station and the size of the battery.
- In the real world, range is one of the biggest concerns for electric vehicles, but a something that is being addressed by industry.

BEV can be charged at home overnight, providing enough energy for average driving. However, longer journeys or those that require a lot of hill climbs may mean that the fast-charging stations are needed. Although regenerative braking or steering control can help mitigate against this by charging the battery packs.

Rechargeable Electric Vehicle (BEV)

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    graph TD
        Battery[Battery] --> Motor[Motor]
        Motor --> Transmission[Transmission]
        Transmission --> Wheels[Wheels]
    
```

People Panel (Top): Contributors: 32. Naveen Prakash (You) Meeting host, 20EE07-Elanangai G, 21EE02 AKASH, 21EE06 Gokul.M, 21EE08 R.Harishma, 21EE16 SHANMUGAESW..., 21EE19 Sujitha.

People Panel (Bottom): Contributors: 33. Naveen Prakash (You) Meeting host, 20EE07-Elanangai G, 20EE26 Shivarjanjani, D, 21EE02 AKASH, 21EE06 Gokul.M.

System Tray (Bottom): 30°C Haze, Search, Taskbar icons, ENG US, 19:45 12-10-2023.

280

Mr. R. Vengadesh AP-EEE (Presenting)

7:54 PM | kyx-uhfj-rje

Mr. R. Vengadesh AP-EEE (Presenting)

7:56 PM | kyx-uhfj-rje

Mr. R. Vengadesh AP-EEE (Presenting)

8:10 PM | kyx-uhfj-rje

People

Add people

Meeting host

Pragadeshwaran Siva

Priyaniranjani Prabhakar...

R. Dhanaaree B. E

SK SIVA

Suba Shini

Suriya G

THAVATHEESH .S

thirumagal thiru

Yuvarej .A

People

Add people

Presentation

Naveen Prakash

Meeting host

Pragadeshwaran Siva

Priyaniranjani Prabhakar...

R. Dhanaaree B. E

SK SIVA

Suba Shini

Suriya G

THAVATHEESH .S

Yuvarej .A

People

Add people

Search for people

is meeting

Raised hands

1

Yuvarej .A

Contributors

32

Naveen Prakash (You)

Meeting host

20EE07-Daranger G

21EE06 Gokul M

21EE06 R.harithma

[Signature]
16/10/23
Faculty In-Charge

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16/10/23
HOD/EEE

[Signature]
16/10/23
Principal



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

SEMINAR ON

“Motivational Talk”

12.10.2023

Resource Person:

Er. Mohan (Alumni: 2012-16 Batch)

Electro Technical Officer,

Gearbulk,

Switzerland.

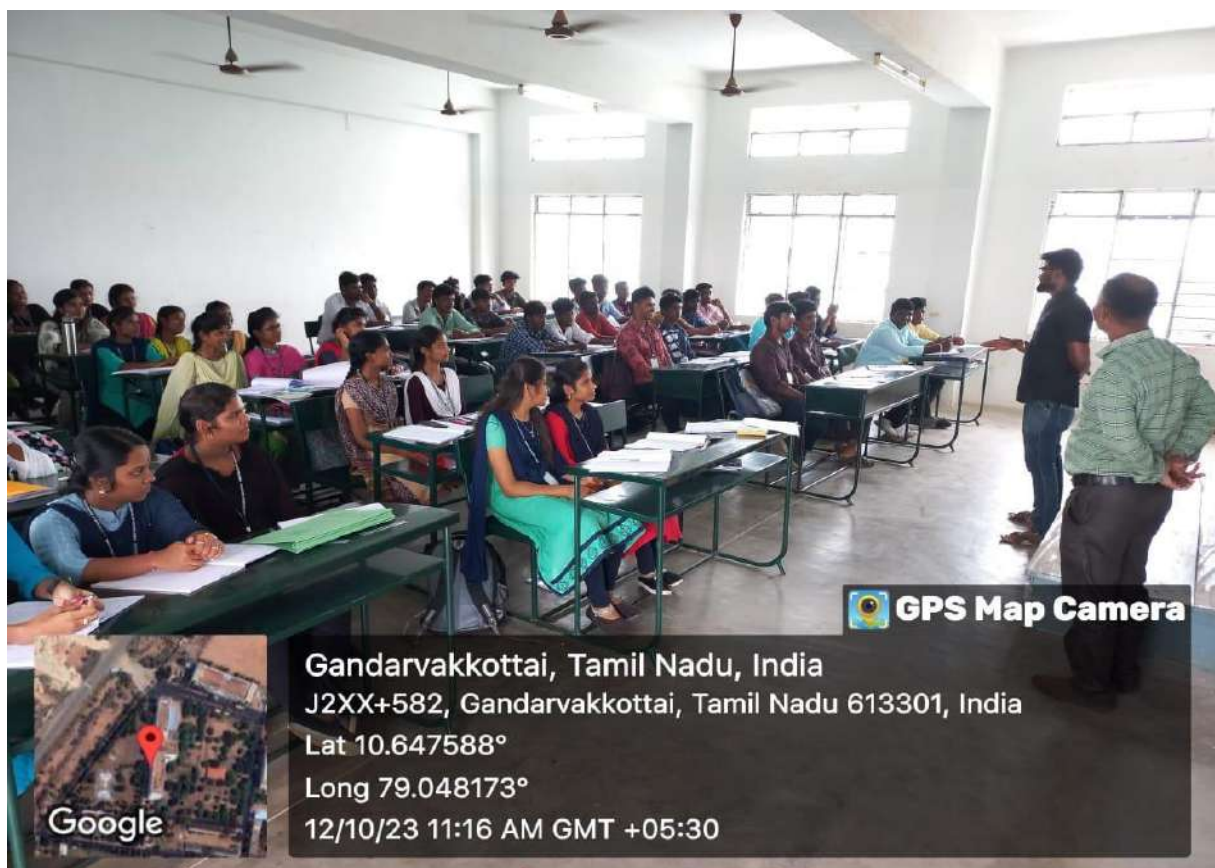
POST SEMINAR REPORT

The seminar organized by department of Electrical and Electronics Engineering on “Motivational Talk” on 12.10.2023 for Second year EEE students (50 Students). The session started with silent prayer and then the session continued with the welcoming address and introduction of resource person given by Mr. S. R. Karthikeyan AP/EEE.

Event photograph-1



Event photograph-2



Resource person interact with students about their career

During the session, Er. Mohan (Resource Person), elaborated on the motivational aspects and opportunities available for Electrical Engineers in the maritime industry. During his seminar, he inspired students with insights into global opportunities in electrical engineering. He elaborated on the pivotal role of electrical engineers as catalysts for progress, adept at transforming challenges into innovative opportunities. Encouraging the students to embrace complexities as pathways to growth, he emphasized the expansive impact of their work beyond circuits. Their contributions, he noted, play a crucial part in shaping the future of renewable energy, smart technologies, and artificial intelligence. With a reminder of the transformative power of their skills, he urged them to embrace their roles as visionaries, allowing their passion for innovation to illuminate a path towards a more connected and brighter future.

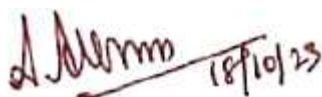
He detailed the employment prospects in the maritime sector. For electrical engineers entering this industry, picture your contribution as pivotal to the smooth and innovative functioning of ships. Your proficiency forms the foundation for powering propulsion systems, integrating cutting-edge navigation technologies, and ensuring maritime safety. Embrace the extensive possibilities within this dynamic field, where your skills enhance the efficiency and advancement of maritime projects. As you progress in your career, allow your fervor for electrical engineering to drive you towards a fulfilling odyssey at sea, where innovation meets the evolving challenges of the maritime landscape.

Conclusion:

Through this session, students gained information about choosing the right career and will get a better way of life. Students got inspired and motivated for successful carrier and future life.



Alumni Co-ordinator / EEE



HOD/EEE



Principal



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 / ODD SEMESTER

Date: 09.11.2023

INTERNAL SEMINAR REPORT

Objective:

- To impart knowledge to students on recent developments, technological advancements and applications in the field of Control System Engineering.

Beneficiaries: Total: 25 (III-Year Students)

Time: 11.00 A.M to 12.00 P.M

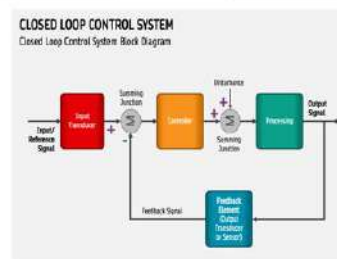
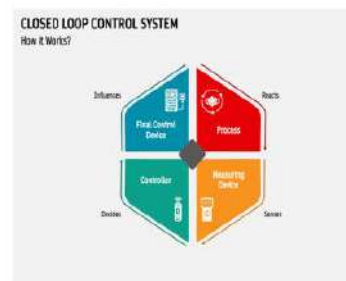
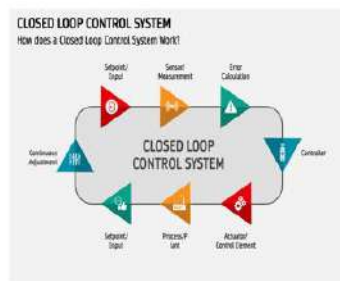
Venue: Smart Class Room

Resource Person (Internal): Dr. P. Narasimman, AP/EEE

Internal seminar for students of Electrical and Electronics Engineering department was conducted on 08.11.2023 from 11.00 A.M to 12.00 P.M. Dr. P. Narasimman, AP/EEE discussed about the topic on "Control System Applications".

He explained the basic concepts of control system, introduced the fundamentals of modeling and control of linear time invariant systems. Control systems are used in a wide variety of applications to automatically monitor and control various processes and systems. Some examples of control system applications are also explained by the resource person.

SNAPSHOTS



Dr.P.NarasimmanAP/EEEdeliveringlectureduringInternalSeminar

Outcomes:

- Enhanced the knowledge on control system application.
- Understand the concept of transfer function and use it for obtaining system response, analyze dynamic systems for their stability and performance and design of controllers.

P. Narasimman
9/11/23
FACULTY INCHARGE

A. Narasimman
9/11/23
HoD/EEE

J. Narasimman
9/11/2023
PRINCIPAL

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 ODD
Internal Seminar– Report

Title of the seminar : “Sustainable Energy Sources”
Date : 03.01.2024
Resource Person : Mr.S.R.Karthikeyan, AP/EEE, KCE
Beneficiaries : II-EEE - 55
Venue : <https://meet.google.com/ewk-ceqq-txj>

The Department of EEE (Project club) organized an Internal Seminar on “**Sustainable Energy Sources**” for second year EEE students on **03.01.2024**. The main objective of the internal seminar is:

- To impart knowledge to students on the basics of sustainable energy.
- To provide adequate knowledge on various types of sustainable energy sources available in nature.
- To facilitate the use of these energies and utilize for their mini and main projects.

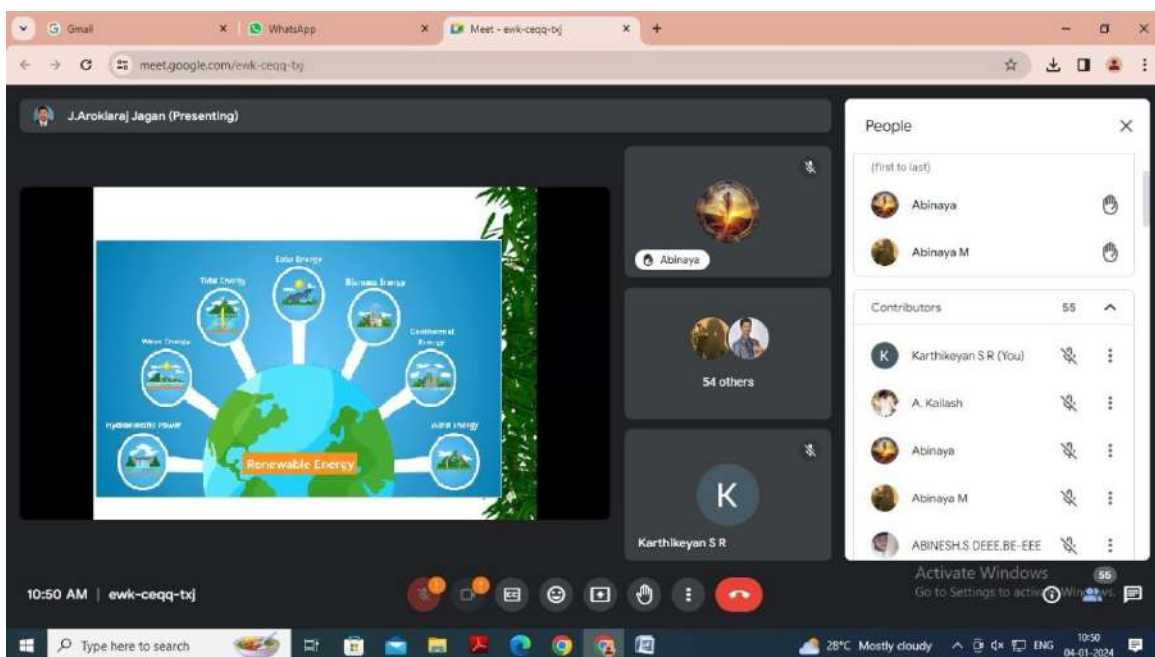
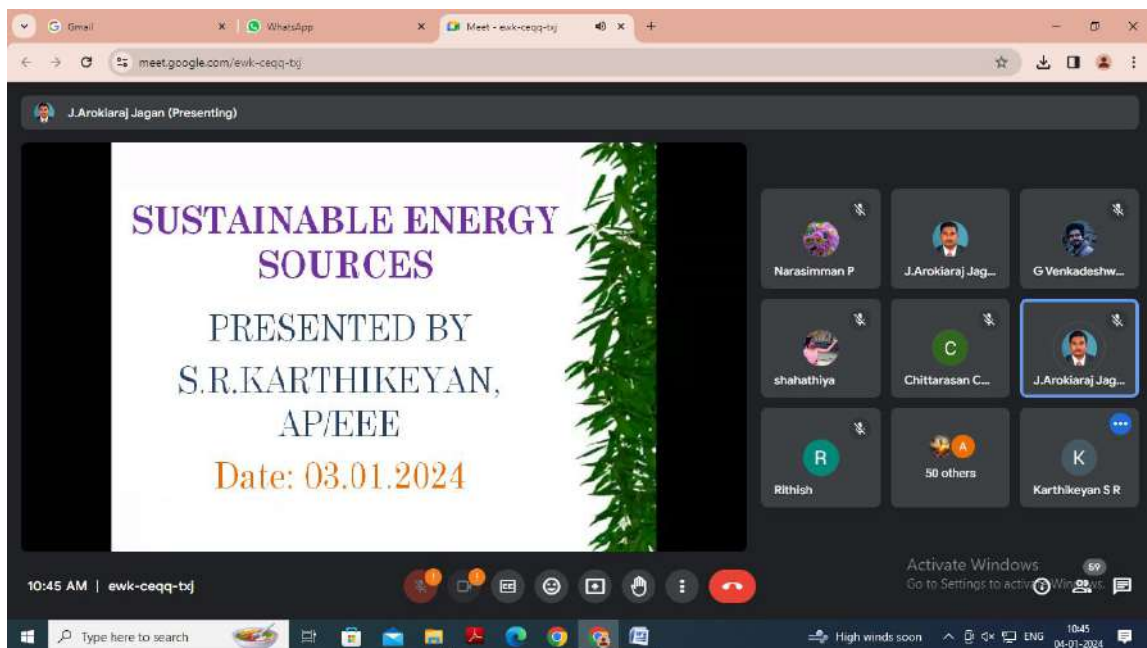
The following points were discussed during the session:

- Different types of sustainable energy sources
 - Solar Energy
 - Wind Energy
 - Geothermal Energy
 - Biomass Energy
 - Tidal Energy
 - Wave Energy
 - Hydroelectric power
- Sustainable Energy for All (SEforALL) is an international organization that works in partnership with the United Nations and leaders in government, the private sector, financial institutions, civil society and philanthropies to drive faster action towards the achievement of Sustainable Development Goal 7 (SDG7)

- Renewable energy in the future is predicted that by 2024, solar capacity in the world will grow by 600 gigawatts (GW), almost double the installed total electricity capacity of Japan. Overall, renewable electricity is predicted to grow by 1 200 GW by 2024, the equivalent of the total electricity capacity of the US.
- Recent studies show that a global transition to 100% renewable energy across all sectors – power, heat, transport and desalination well before 2050 is feasible.

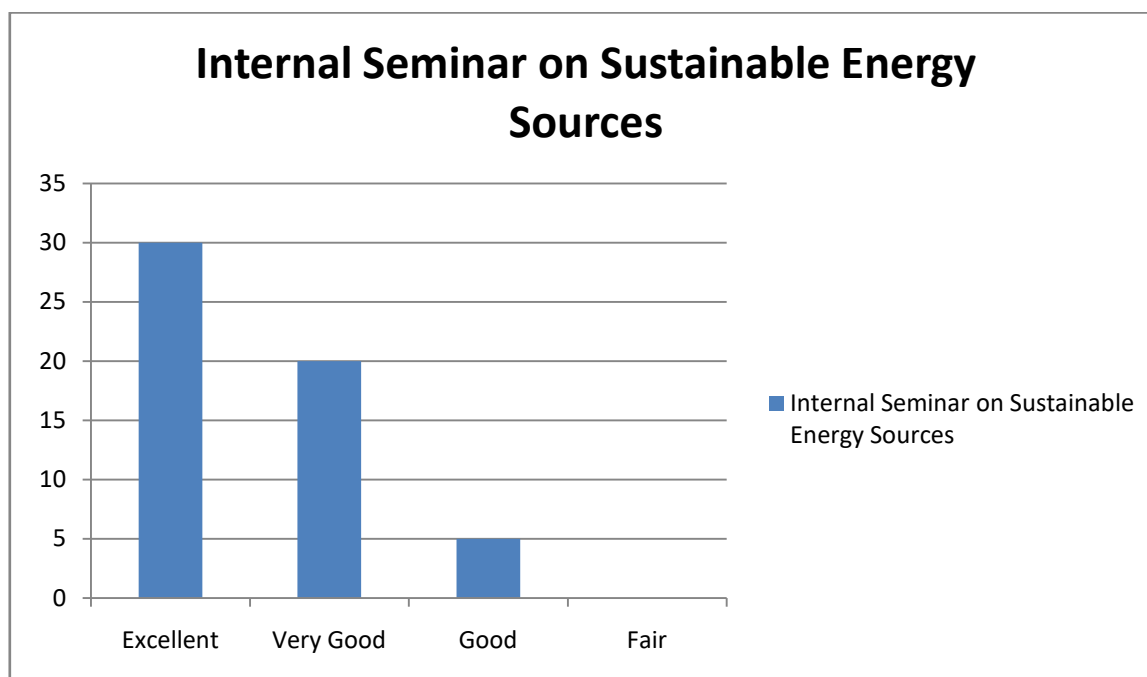
Outcome:

- Students can realize the impact of different sources of renewable energy in our real life.
- Students can understand the importance of sustainable energy sources.



Snapshot from Seminar

Feedback Analysis:



References:

- [1] www.maine.gov/dep
- [2] <https://www.engpaper.com/eee/renewable-energy-2020.html>
- [3] https://ieeexplore.ieee.org/document/9837910?utm_source=ieeespectrum&utm_medium=web&utm_campaign=ieeespectrum
- [4] <https://www.edfenergy.com/energywise/renewable-energy-sources>
- [5] <https://www.energy.gov/eere/renewable-energy>

Faculty In-Charge

S. R. Karthikeyan 8/1/24
(Mr.S.R.Karthikeyan, AP/EEE)

A. Abhinav 8/1/24
HOD/EEE

J. Praveen 08/1/2024
Principal



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

SEMINAR ON

“MASTERING IELTS AND TOEFL: STRATEGIES FOR SUCCESS”

28.02.2024

Resource Person:

Mr. M. Mohamed Thoufeek (Alumni: 2012-15 Batch)

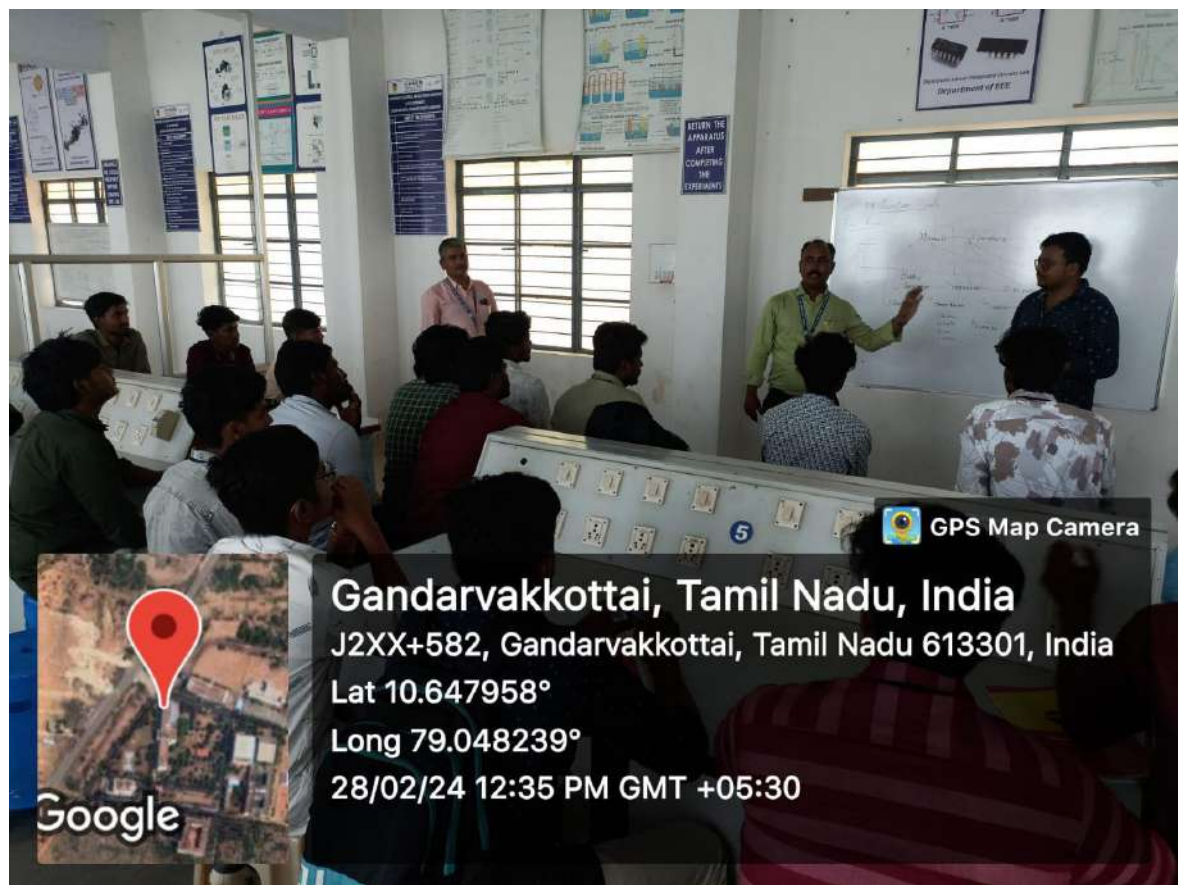
Higher Studies,

London.

POST SEMINAR REPORT

The seminar organized by department of Electrical and Electronics Engineering on “Mastering IELTS and TOEFL: Strategies for Success” on 28.02.2024 for third year EEE students (30 Students). The session started with silent prayer and then the session continued with the welcoming address and introduction of resource person given by Mr. S. R. Karthikeyan, AP/EEE.

Event photograph-1



Event photograph-2



Resource person interact with students about IELTS and TOEFL exam preparation

When interacting with students about IELTS and TOEFL exam preparation, Mr. M. Mohamed Thoufeek, our esteemed resource person should cover several key points to ensure comprehensive understanding and effective strategies. Here are some key points:

- 1) Understanding Exam Structure:** Explain the format and structure of both the IELTS and TOEFL exams, including the different sections (Reading, Writing, Listening, Speaking), question types, and timing for each section.
- 2) Assessment Criteria:** Discuss the assessment criteria used in both exams, emphasizing key aspects such as coherence and cohesion in writing, comprehension skills in reading, pronunciation and fluency in speaking, and accuracy in grammar and vocabulary usage.
- 3) Test-Taking Strategies:** Provide students with test-taking strategies tailored to each section of the exams, including time management techniques, skimming and scanning for reading comprehension, note-taking for listening tasks, and structured approaches to writing essays and speaking responses.
- 4) Vocabulary Enhancement:** Offer guidance on expanding and improving vocabulary, with a focus on academic and formal language appropriate for both exams. Provide tips for effective vocabulary acquisition and retention, including using flashcards, reading extensively, and practicing word usage in context.
- 5) Grammar and Language Skills:** Review essential grammar rules and language skills needed for success in the exams, including sentence structure, verb tenses, subject-verb agreement, and punctuation. Offer practice exercises and resources for grammar reinforcement.
- 6) Speaking and Pronunciation:** Provide guidance on improving speaking fluency, pronunciation, and intonation. Offer tips for building confidence during speaking tasks, organizing responses coherently, and using varied vocabulary and sentence structures.
- 7) Listening Comprehension:** Offer strategies for improving listening comprehension skills, such as predicting content, identifying key points, and recognizing contextual clues. Provide practice exercises with audio recordings to familiarize students with different accents and speech patterns.
- 8) Writing Skills:** Discuss effective writing techniques for both tasks in the writing section, including brainstorming ideas, organizing an essay structure, developing cohesive paragraphs, and using appropriate transitions and linking words.
- 9) Mock Tests and Practice Materials:** Emphasize the importance of regular practice and provide students with access to mock tests and practice materials to simulate exam conditions. Offer feedback on practice tasks and encourage students to identify areas for improvement.
- 10) Test-Day Preparation:** Provide guidance on test-day preparation, including what to expect on the day of the exam, tips for managing test anxiety, advice on staying focused and calm during the exam, and reminders about bringing required identification documents.

Conclusion:

In conclusion, Mr. M. Mohamed Thoufeek provided valuable insights into exam preparation strategies tailored specifically for electrical engineers aiming to excel in the IELTS and TOEFL exams. Throughout the session, students gained a deeper understanding of the unique challenges they may encounter and learned effective techniques to overcome them. Mr. Thoufeek's expertise and guidance have equipped attendees with practical tools, including time management strategies, vocabulary enhancement techniques, and approaches to tackle each section of the exams with confidence. By implementing the knowledge gained from this session, students are now better prepared to achieve their desired scores, unlocking new academic and professional opportunities in their field.



Alumni Co-ordinator / EEE



HOD/EEE



Principal

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-2024(EVEN)

REPORT – BRIDGE COURSE (II-EEE)

The Department of Electrical & Electronics Engineering conducted a bridge course for II-EEE students on March 13th and 14th, 2024. This program featured two subjects, **Transmission and Distribution** and **Microprocessor and Microcontroller**. The primary objective was to establish a strong foundation in these core subjects, equipping students with essential knowledge and skills as they continue their academic journey in the field of Electrical and Electronics Engineering.

PROGRAMME SCHEDULE

DATE & SESSION: 13.03.2024 (FN & AN)

SUB: EE3401 – TRANSMISSION AND DISTRIBUTION

| TIME | TOPICS | FACULTY INCHARGE |
|-----------------------|---|---------------------------------------|
| 09.15 A.M – 09.30 A.M | Introduction by HOD and Class In charge | |
| 09.30 A.M – 10.45 A.M | Overview of power systems and their components | Dr. S. Sivakumar VP & HEAD (T & P) |
| 11.00 A.M – 12.30 P.M | Basics of generation, transmission, and distribution. | Dr. P. Narasimman, AP/EEE |
| 01.10 P.M-01.55 P.M | Basics of transmission lines and conductors. | Dr. S. Naveen Prakash, AP/EEE |
| 01.55 P.M-02.40 P.M | | |
| 02.50 P.M– 04.20 P.M | Types of faults and their effects on power systems. | Dr. A. Prabha, AP/EEE |

PROGRAMME CONTENT:

The bridge course commenced with an informative introduction by **Mr. R. Sundaramoorthi, HOD/EEE**, setting a welcoming tone for the day ahead. He also introduced the class in charge, **Dr. S. Vasantharaj, AP/EEE**, who would play a pivotal role in the management of classes. They both provided a brief overview of the course objectives, encouraging everyone to actively participate and engage in the learning process.

Dr. S. Sivakumar, our esteemed **Vice Principal and Head of Training & Placement**, took the stage to delve into the fascinating world of power systems. With clarity and enthusiasm, Dr. Sivakumar elaborated on the **Fundamental Concepts of Electricity Generation**,

Transmission, and Distribution. He emphasized the importance of power systems in our daily lives, making complex topics accessible to all attendees.

Following the enlightening overview, **Dr. P. Narasimman, Assistant Professor/EEE**, delved deeper into the intricacies of power generation, transmission, and distribution. Through engaging explanations and real-world examples, Dr. Narasimman demystified the complexities of various generation sources, transmission lines, and distribution networks, fostering a deeper understanding among the participants.

In the subsequent session, **Dr. S. Naveen Prakash, Assistant Professor/EEE**, guided attendees through **The Essential Concepts of Transmission Lines and Conductors**. With clarity and expertise, Dr. Prakash elucidated the role of transmission lines in delivering electricity efficiently and safely. Participants gained insights into the different types of transmission lines and their applications in power distribution networks.

As the afternoon session unfolded, **Dr. A. Prabha, Assistant Professor/EEE**, shed light on the **Different Types of Faults** that can occur in power systems and their impact. Through engaging discussions and practical examples, Dr. Prabha underscored the importance of fault detection and mitigation strategies in ensuring the reliability and safety of power systems.

At the end of the first day of the bridge course, participants found themselves enriched with a comprehensive understanding of power systems. From the intricate processes of electricity generation to the vital role of transmission and distribution networks, attendees gained valuable insights into the backbone of modern infrastructure.

DATE & SESSION: 14.03.2024 (FN & AN)

SUB: EE3404- MICROPROCESSOR AND MICROCONTROLLER

| TIME | TOPICS | FACULTY INCHARGE |
|-----------------------|--|--------------------------------|
| 09.15 A.M – 10.45 A.M | Introduction to Microprocessors and Microcontrollers: | Mr. R. Sundaramoorthi, HOD/EEE |
| 11.00 A.M – 12.30 P.M | Basics of digital logic gates and circuits. | Dr. P. Narasimman, AP/EEE |
| 01.10 P.M-01.55 P.M | Overview of microprocessor architecture, including registers, ALU, and control unit. | Mr. S. R. Karthikeyan, AP/EEE |
| 01.55 P.M-02.40 P.M | | |
| 02.50 P.M– 04.20 P.M | Basics of writing and compiling C programs for microcontrollers. | DR. S. Vasantharaj, AP/EEE |

PROGRAMME CONTENT:

The second day of the bridge course focused on **Microprocessor and Microcontroller**, aiming to provide a comprehensive understanding of these essential components in electronics. **Mr. R. Sundaramoorthi, HOD/EEE**, commenced the day with an **Introductory Session on Microprocessors and Microcontrollers**, elucidating their significance in contemporary technology and setting the stage for our learning journey. Through insightful discussions and practical examples, participants gained valuable insights into the functions and applications of these components.

Following the introduction, **Dr. P. Narasimman, Assistant Professor/EEE**, led a session on **The Basics of Digital Logic Gates and Circuits**, enhancing participants' understanding of digital electronics through interactive discussions. Dr. Narasimman's expertise and engaging teaching style facilitated an enriching learning experience, empowering participants to grasp the concepts with clarity.

In the subsequent session, **Mr. S. R. Karthikeyan, Assistant Professor/EEE**, provided a comprehensive **Overview of Microprocessor Architecture**, immersing participants in a detailed exploration of registers, ALU, and control units to gain a deeper understanding of their collaboration in processing data and executing instructions. Mr. Karthikeyan's in-depth explanations and illustrative examples reinforced participants' comprehension of microprocessor fundamentals.

During the afternoon session, **Dr. S. Vasantharaj, Assistant Professor/EEE**, expanded participants' knowledge by delving into the intricacies of **Writing and Compiling C Programs for Microcontrollers**. The students acquired essential programming skills and learned how to apply them in controlling microcontroller-based systems. Dr. Vasantharaj's interactive teaching approach and practical insights provided participants with valuable learning experiences.

In summary, the program scheduled for II EEE on **March 13th and 14th, 2024**, provided students with a well-rounded introduction to the key subjects in their curriculum. Each session was conducted by experienced faculty members, ensuring that students received a solid foundation for their studies in **Transmission and Distribution and Microprocessor and Microcontroller** subjects.

Captured Moments: Highlights of Bridge Course Program (II-EEE)

| | |
|--|--|
|  |  |
| <p>Overview of Electricity Generation, Transmission, and Distribution by Dr. S. Sivakumar, Vice Principal.</p> | <p>Intricacies in power generation, transmission, and distribution by Dr. P. Narasimman, AP/EEE.</p> |
|  | |
| <p>Overview of writing and compiling C-program for Microcontrollers by Dr. S. Vasantharaj, AP/EEE</p> | |

(Signature)
18/3/24
FACULTY INCHARGE

(Signature)
18/3/2024
HOD/EEE

(Signature)
PRINCIPAL

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 EVEN
Internal Seminar– Report

Title of the seminar : “Smart Grid and its Applications”
Date : 22.03.2024
Resource Person : Mr.J.Arokiaraj, AP/EEE, KCE
Beneficiaries : II-EEE - 48
Venue : Smart Classroom - EEE

The Department of EEE (Project club)organized an Internal Seminar on “**Smart Grid and its Application**” for second year EEE students on **22.03.2024**.

The main objective of the internal seminar is:

- To understand smart grid technologies and application of smart grid concept in hybrid electric vehicles etc..
- To have knowledge on smart substations, feeder automation and application for monitoring and protection.
- To have knowledge on micro grids and distributed energy systems.

The following points were discussed during the session:

- Overview of Smart Grid Technology
- Smart Grid Components
- Smart Power Meters
- Integrated communications systems
- Smart substations
- Super Conducting cables
- Key Considerations for Integrated Communication
- Technology comparison and risk profile
- IOT Based Electricity Energy Meter Reading Through Internet
- Benefits of Smart Grid
- Advantages of Smart Grid

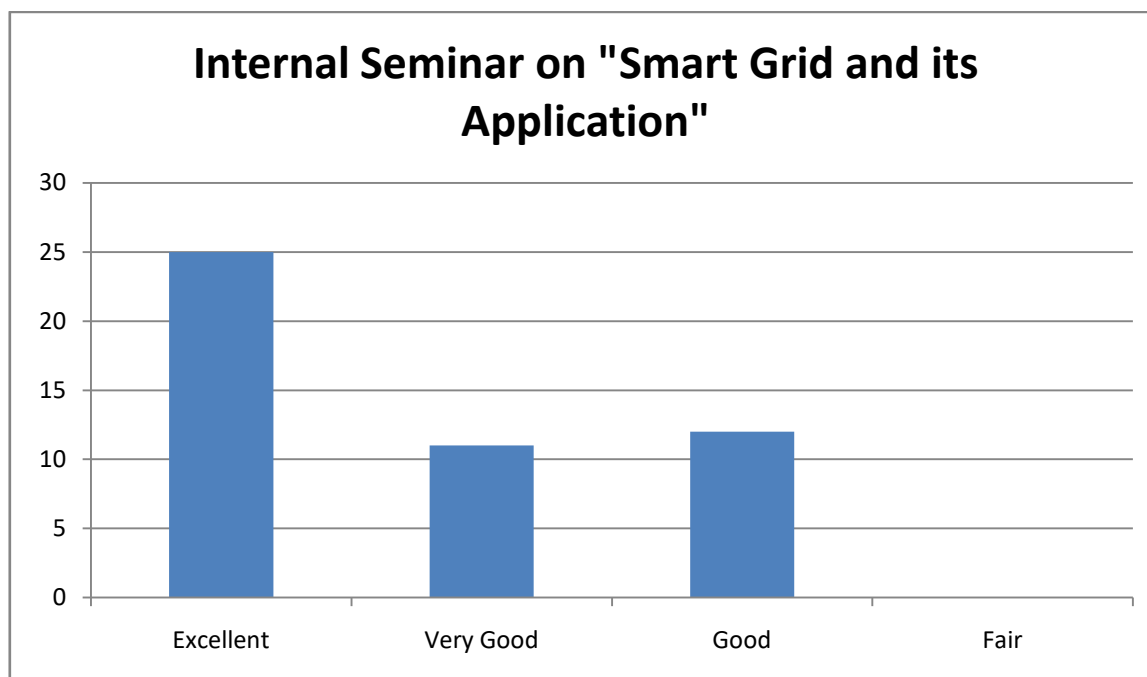
Outcome:

- Students can Understand the fundamental element of the smart grid and power grid.
- Students Understand different communication technologies used in smart grids.



Snapshot from Seminar

Feedback Analysis:



References:

- [1] <https://home.iitk.ac.in/~ansharma/SGTA.pdf>
- [2] <https://www.lem.com/en/smart-grid>
- [3] <https://www.elprocus.com/overview-smart-grid-technology-operation-application-existing-power-system/>
- [4] <https://www.sciencedirect.com/science/article/abs/pii/S1364032116304191>
- [5] <https://www.iiot-world.com/industrial-iot/connected-industry/the-role-of-iiot-in-smart-grid-technology-and-applications/>
- [6] <https://www.wiley.com/en-us/Smart+Grid%3A+Technology+and+Applications-p-9780470974094>

Faculty In-Charge


(Mr.) Arokia Raj, AP/EEE


HOD/EEE


Principal

ISTE STUDENTS CHAPTER (TN 217)
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)

Report on Technical Poster Presentation
Competition

The ISTE Students Chapter(TN217), Kings College of Engineering, Organized a competition on Technical Poster Presentation on the topics

- **Smart grid**
- **AI based Electrical Machine**
- **Electrical Vehicles**

On 13.04.2024 between 11A.M-12.30P.M at Power Electronics Lab for the ISTE student members of EEE department. 20 students actively participated in this competition.

The following students are the prize winners.

| YEAR | NAME OF THE STUDENT | POSITION |
|------|--------------------------------|----------|
| II | GURUPRASATH.N MANISHKUMAR.S | First |
| II | NITHYASRI.S VAISHNAVI.C | Second |
| II | RAJA GOWRI.S ABINAYA.M | Third |



Students actively presenting the Paper under the banner of poster presentation


 DEPT CO-ORDINATOR


 ISTE CO-ORDINATOR 6/5/24


 PRINCIPAL

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 EVEN
Internal Seminar– Report

Title of the seminar : “Role of power converters in Electrical Engineering”
Date : 18.06.2024
Resource Person : Mr.S.R.Karthikeyan, AP/EEE, KCE
Beneficiaries : II-EEE - 45
Venue : Electrical Machines Lab

The Department of EEE (Project club)organized an Internal Seminar on “**Role of power converters in Electrical Engineering**” for second year EEE students on **18.06.2024**.

The main objective of the internal seminar is:

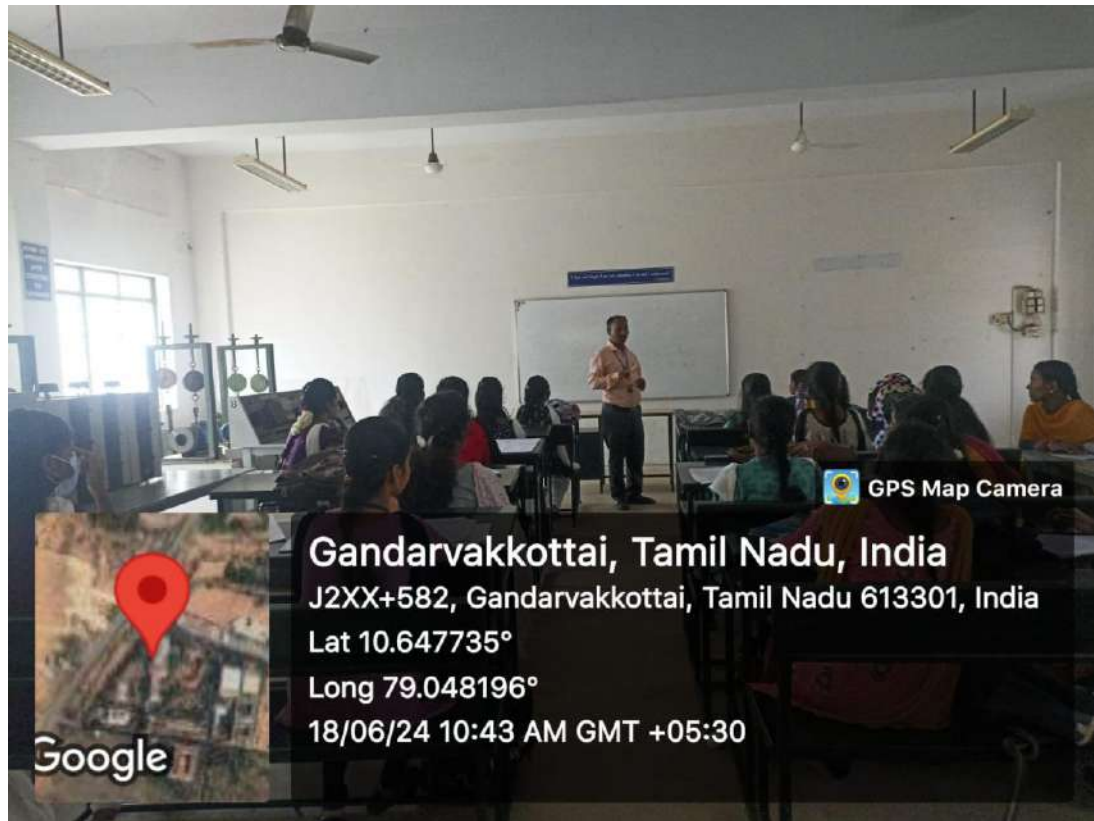
- To impart knowledge to students on the basics of power electronics.
- To provide adequate knowledge on various types of electrical drives.
- To facilitate the use of these concepts and utilize for their mini and main projects.

The following points were discussed during the session:

- Applications of power electronics
- Why power electronics in electrical engineering?
- Classic electrical drives for variable speed application
- Modern electrical drive systems
- Example of VSD application
- Overview of AC and DC drives
- Power electronics converters in electrical drive systems

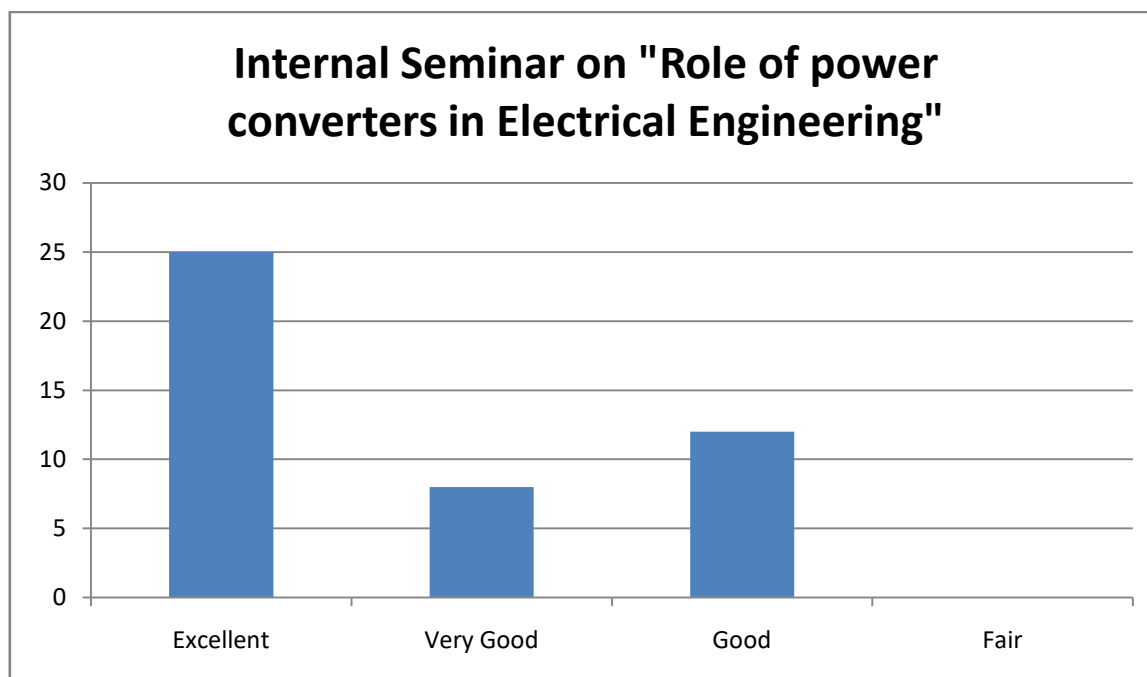
Outcome:

- Students can understand the working of various power electronic circuits and components used in industrial applications.
- Students will gain knowledge regarding electrical drives and apply them for real time applications.



Snapshot from Seminar

Feedback Analysis:



References:

- [1] <https://mace.ac.in/files/Power%20Electronics.pdf>
- [2] <https://skill-lync.com/student-projects/analytical-study-of-traction-motor-of-the-vehicle-3>
- [3] <https://www.sciencedirect.com/topics/engineering/power-electronic-converter>
- [4] <https://cds.cern.ch/record/987498/files/p13.pdf>
- [5] <https://www.power-and-beyond.com/an-introduction-to-power-converters-a-eb614dea1550964045574dc8e548f625/>
- [6] <https://www.sciencedirect.com/topics/engineering/power-converter>
- [7] [https://www.mdpi.com/journal/energies/special issues/Power Converter Electric Machines Renewable Energy Systems Transportation](https://www.mdpi.com/journal/energies/special%20issues/Power%20Converter%20Electric%20Machines%20Renewable%20Energy%20Systems%20Transportation)

Faculty In-Charge

S. R. Karthikeyan 19/6/24
(Mr.S.R.Karthikeyan, AP/EEE)

S. R. Karthikeyan
HOD/EEE 19/6/24

J. R. Ramesh 19/6/2024.
Principal



**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 EVEN**

Internal Student Seminar – Report

| | |
|-----------------------------|-----------------------------------|
| Title of the seminar | : Smart Microgrid |
| Date | : 20.06.2024 |
| Resource Person | : Dr. S. Vasantharaj, AP/EEE, KCE |
| Beneficiaries | : II – year, EEE Students – 55 |
| Venue | : EEE – Machines Lab |

On behalf of the Department of EEE, an Internal Student Seminar on "*Smart Microgrid*" for second-year students will be held on June 20, 2024. The main objective of an internal student seminar is to provide a platform for students to present and discuss their research, ideas, and findings within a supportive academic environment.

The following points were discussed during the session:

- During a session on smart microgrids, some key points to discuss could include:
- **Technological Components:** Explanation of the components comprising a smart microgrid such as sensors, actuators, energy storage systems, and renewable energy sources.
- **Control and Management Systems:** Discussion on advanced control algorithms and management strategies enabling efficient energy distribution, demand response, and grid stability.
- **Integration of Renewable Energy:** Exploration of how smart microgrids integrate renewable energy sources like solar and wind power, addressing intermittency and variability challenges.
- **Resilience and Reliability:** Analysis of the resilience and reliability advantages offered by smart microgrids, including their ability to operate autonomously during grid outages or emergencies.
- **Cybersecurity:** Consideration of cybersecurity measures crucial for protecting smart microgrid infrastructure from potential cyber threats and ensuring data integrity.
- **Economic Benefits:** Examination of the economic benefits associated with smart microgrids, including reduced energy costs, improved grid efficiency, and potential revenue streams through grid services.

- **Environmental Impact:** Assessment of the environmental impact of smart microgrids, including their role in reducing greenhouse gas emissions and promoting sustainable energy practices.
- **Case Studies:** Presentation of real-world case studies demonstrating successful implementation of smart microgrid projects in various contexts, highlighting lessons learned and best practices.
- **Regulatory and Policy Considerations:** Discussion on regulatory frameworks and policy initiatives needed to support the deployment and scalability of smart microgrid technologies, including incentives for investment and innovation.
- **Future Trends and Challenges:** Exploration of emerging trends in smart microgrid development, such as the integration of blockchain technology and artificial intelligence, along with potential challenges like interoperability and scalability issues.

Conclusions:

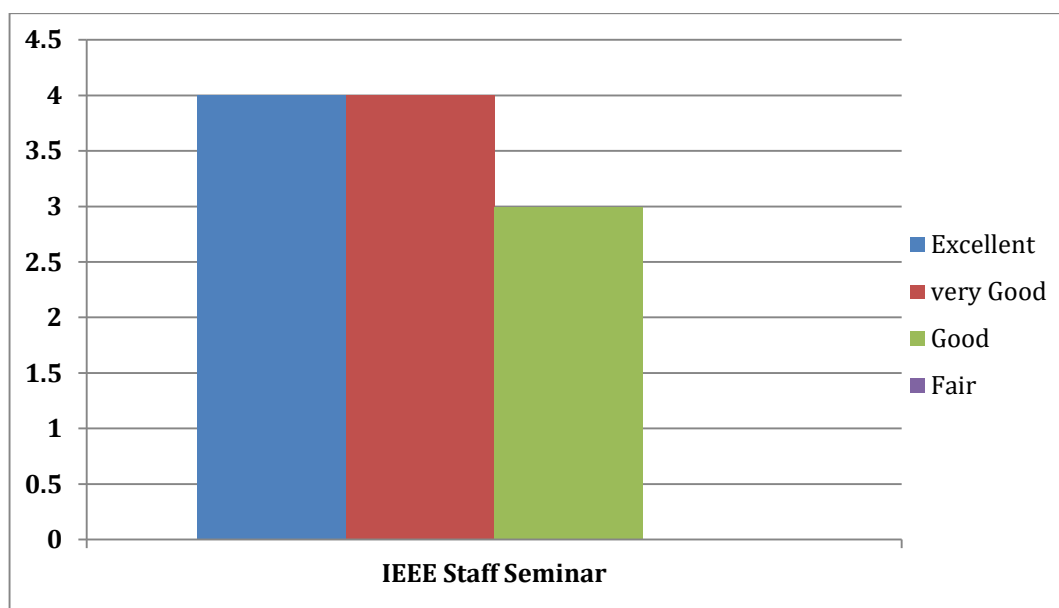
In conclusion, the session on smart microgrids provided valuable insights into the evolving landscape of energy distribution and management. We explored the intricate technological components, control systems, and integration of renewable energy sources that characterize smart microgrids. Through case studies and discussions, we witnessed how these systems enhance grid resilience, reliability, and efficiency while promoting sustainability and reducing environmental impact.

Moreover, we recognized the critical importance of addressing cybersecurity concerns and establishing supportive regulatory frameworks to facilitate the widespread adoption of smart microgrid solutions. As we look to the future, it is evident that continued innovation, collaboration, and investment will be key to unlocking the full potential of smart microgrids in meeting our energy needs while advancing towards a more sustainable and resilient energy future. Thank you to all participants for engaging in this enriching dialogue, and we look forward to further exploration and advancement in this dynamic field.



Snapshot from Seminar

Feedback Analysis:



References:

1. López-Erauskin, R., González, A., Petrone, G., Spagnuolo, G., & Gyselinck, J. (2020). Multi-variable perturb and observe algorithm for grid-tied PV systems with joint central and distributed MPPT configuration. *IEEE Transactions on Sustainable Energy*, 12(1), 360-367.
2. Faith Cingoz, Ali Elrayyah and Yilmaz Sozer. Optimized Resource Management for PV-Fuel-cell-based microgrids using load characterizations. *IEEE Trans. Ind. Appl.* 2016; 52 (2): 1723-1735.
3. Ramon Zamora and Anurag K. Srivastava, Multi-Layer Architecture for Voltage and Frequency Control in Networked Microgrids. *IEEE Transactions on Smart Grid* 2018;9(3): 2076–2085.
4. Vazquez, S., Acuna, P., Aguilera, R. P., Pou, J., Leon, J. I., & Franquelo, L. G. (2019). DC-link voltage-balancing strategy based on optimal switching sequence model predictive control for single-phase H-NPC converters. *IEEE Transactions on Industrial Electronics*, 67(9), 7410-7420.

Faculty In-Charge

HOD/EEE

Principal

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 EVEN
Internal Seminar– Report

Title of the seminar : “Electric Vehicle Charging systems ”
Date : 24.06.2024
Resource Person : Ms.P.Thirumagal, AP/EEE, KCE
Beneficiaries : II-EEE - 50
Venue : Electrical Machines Lab

The Department of EEE (Project club)organized an Internal Seminar on “**Electric Vehicle Charging systems** ” for second year EEE students on **24.06.2024**.

The main objective of the internal seminar is:

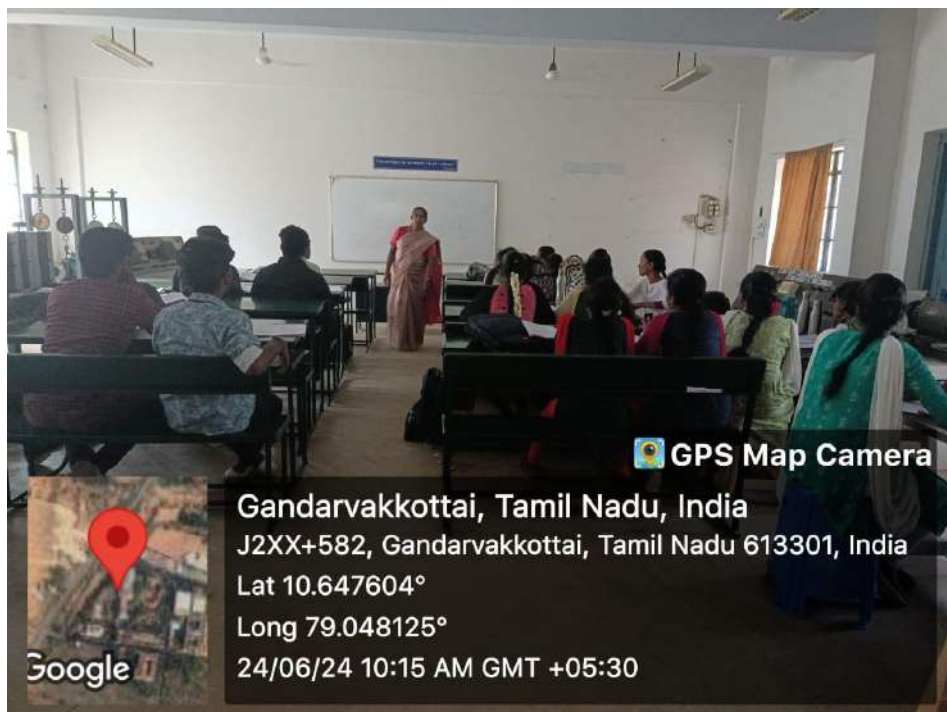
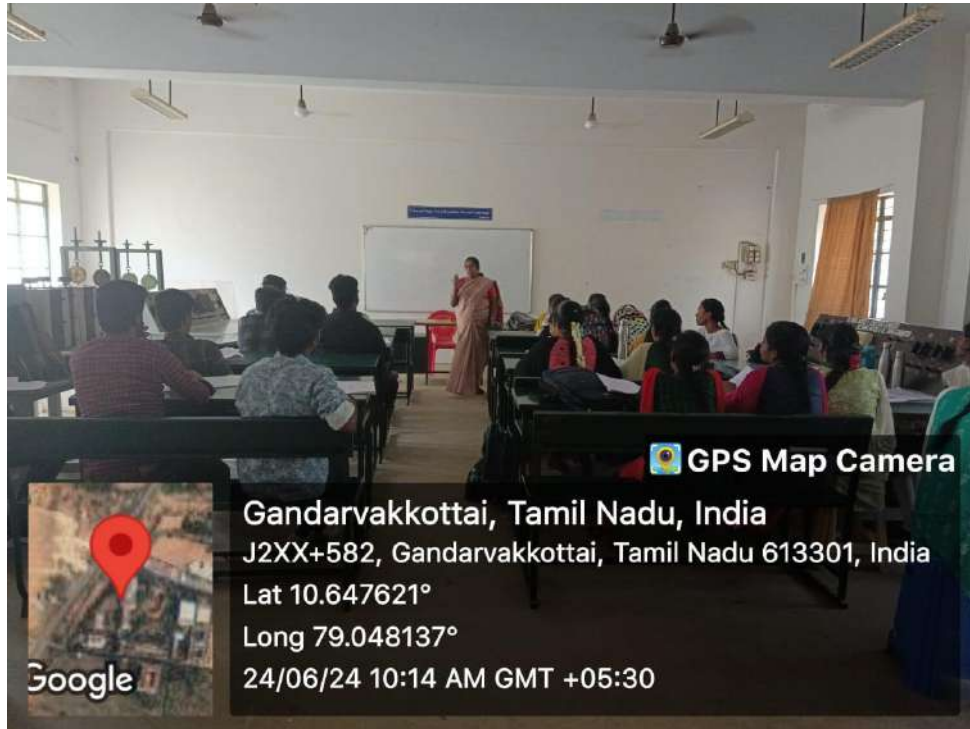
- Understand the importance and need of Electric Vehicles
- Know the charging Standards & Communication Protocol
- Understand different Charging technologies, Batteries and Connectors
- Know the Importance of a Battery Management System

The following points were discussed during the session:

- Battery Electric Vehicles (BEVs)
- Hybrid Electric Vehicle (HEV)
- Plug-in Hybrid Electric Vehicle (PHEV)
- Fuel Cell Electric Vehicle(FCEV)
- Benefits of EVs
- Top EV Manufacturing Companies in india
- Motor Drives Used in EVs
- Batteries used in EVs
- Electric vehicle Components
- Electric Vehicle Design Procedure
- Design Calculation for 1KW EV Rating
- Battery Calculation
- Battery Charging Time
- State of charge (SOC)
- Design Challenges

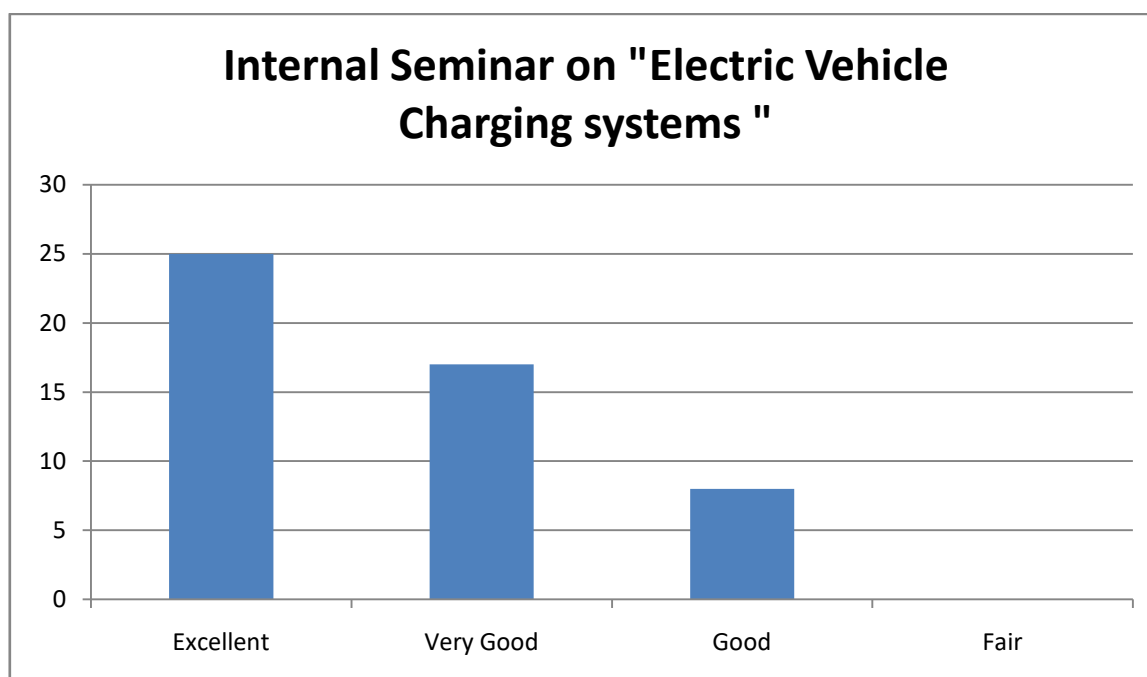
Outcome:

- Students get introduced to electric vehicles, understand how are EVs different from ICE vehicles and identify various parts of an electric vehicle
- Learn the fundamentals of Lithium-ion cells
- Analyse EVs based on power sources and calculate range of an EV



Snapshot from Seminar

Feedback Analysis:



References:

- [1] <https://www.purepower.com/blog/electric-vehicle-charging-systems>
- [2] <https://afdc.energy.gov/fuels/electricity-stations>
- [3] <https://new.abb.com/ev-charging>
- [4] <https://www.kia.com/eu/about-kia/experience-kia/technology/electrification/charging-methods-for-electric-cars/>
- [5] <https://bacancysystems.com/blog/types-of-ev-chargers>
- [6] <https://evocharge.com/resources/how-does-ev-charging-work/>
- [7] <https://www.duke-energy.com/energy-education/electric-vehicles/charging-your-ev/types-of-chargers>

Faculty In-Charge


(Ms.P.Thirumagal, AP/EEE)


HOD/EEE


Principal



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-24EVEN

Internal Student Seminar- Report

| | |
|-----------------------------|--|
| Title of the seminar | : Introduction to Solid Liquid and Gaseous Dielectrics |
| Date | : 24.06.24 |
| Resource Person | : Dr. G. Suganya, AP/EEE, KCE |
| Beneficiaries | : II-EEE - 45 |
| Venue | : Electrical Machines Lab |

On behalf of the Department of EEE (Project Club), an Internal Student Seminar on '**Introduction to Solid, Liquid, and Gaseous Dielectrics**' was conducted for the 2nd-year EEE students on **24.06.2024**. The main objective of the seminar was to provide exposure to these topics, serving as a foundational knowledge base for their upcoming subjects in the next semester.

The following points were discussed during the session:

- Dielectrics, essential in electrical and electronic applications, come in solid, liquid, and gaseous forms, each with unique properties and uses.
- Solid dielectrics, like ceramics, polymers (e.g., polyethylene, polytetrafluoroethylene), and mica, offer high dielectric strength, mechanical stability, low dielectric loss, good thermal conductivity, and long-term reliability. They are used in high-voltage equipment insulation, capacitors, and electronic circuit substrates.
- Liquid dielectrics, including mineral oil, silicone oil, and synthetic esters, provide high dielectric strength, good cooling properties, lower viscosity, and higher flash points. They are used for cooling and insulating transformers, immersion cooling of high-power electronics, and as dielectric fluids in high-voltage capacitors, effectively filling complex shapes and voids.

- Gaseous dielectrics, such as sulfur hexafluoride (SF₆), nitrogen, and air, have low dielectric constant and density, high dielectric strength at low pressures, and the ability to quench electrical discharges. They are ideal for insulation in high-voltage switchgear, circuit breakers, gas-insulated transmission lines, and as dielectric mediums in particle accelerators and high-energy physics experiments. Gaseous dielectrics also provide insulation and cooling in electronic equipment where liquids and solids are impractical.

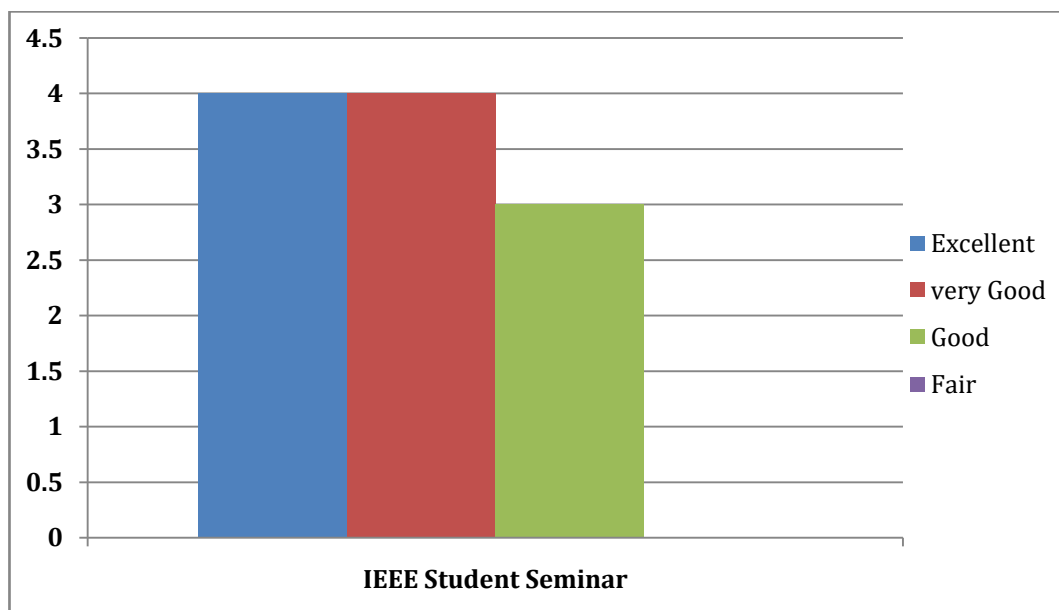
Conclusion:

Understanding the properties and applications of solid, liquid, and gaseous dielectrics is crucial for selecting the appropriate material to ensure optimal performance and safety in electrical systems. Solid dielectrics provide mechanical strength and stability, liquid dielectrics offer cooling and insulating capabilities, and gaseous dielectrics feature low density and high dielectric strength at low pressures. Each type of dielectric uniquely contributes to the effectiveness of electrical insulation and energy storage, making them indispensable in modern electrical and electronic technology.



Snapshot from Seminar

Feedback Analysis:



Reference:

1. High Voltage Insulation Engineering - Behaviour of Dielectrics; Their Properties and Applications, by Ravindra Arora, Wolfgang Mosch, New Age International, 2008.
2. E. Kuffel and W.S. Zaengl, J.Kuffel, 'High voltage Engineering fundamentals', Newnes Second Edition, Elsevier , New Delhi, 2005.

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Faculty in charge

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5/7/2024
HOD/EEE


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05/7/2024
Principal

Department of Mechanical Engineering

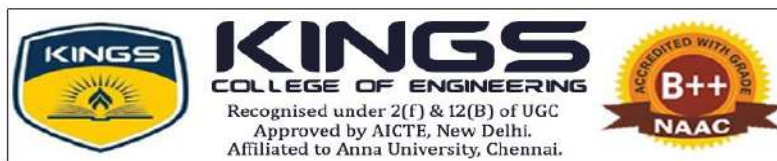
3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

| S. No. | Date | Details | Beneficiaries | Page No. |
|-------------|--------------------------------|---|---------------|----------|
| MECH | | | | |
| 1 | 30.05.2024 | Internal Staff Seminar on "Heat Treatment Processes" | 12 | 03 |
| 2 | 27.05.2024 | Internal Staff Seminar on "Advanced Machining Processes" | 12 | 06 |
| 3 | 14.05.2024 | Internal Staff Seminar on "Electrical Vehicles" | 13 | 09 |
| 4 | 29.04.2024 | Webinar "Product Development Processes" | 170 | 12 |
| 5 | 27.03.2024 | Internal Staff Seminar on "The technology ahead in Mechanical Engineering" | 13 | 19 |
| 6 | 13.03.2024 | Orientation Programme on "Career Opportunities and Importance of GATE" | 63 | 25 |
| 7 | 19.02.2024 | Seminar on "Recent Trends in 3D Printing" | 75 | 30 |
| 8 | 01.02.2024 to 03.05.2024 | Certification Course on "Advanced Welding Technologies" | 61 | 35 |
| 9 | 01.02.2024 to 03.05.2024 | My Credit Course on "Condition Monitoring and Maintenance Management" | 61 | 40 |
| 10 | 20.09.2023 to 18.12.2023 | Bridge Course on "Basics of Mechanical Engineering" | 63 | 44 |
| 11 | 27.08.2023 to 17.11.2023 | Refresher Course on "Automation in Engineering" | 76 | 47 |
| 12 | 27.08.2023 to 17.11.2023 | Value Added Course on "Smart Materials and Structures" | 48 | 51 |
| 13 | 17.11.2023 | Career Guidance on JOB OPPORTUNITIES IN INDIA AND ABROAD | 45 | 56 |
| 14 | 09.11.2023 | Webinar on "Advanced Heat Treatment Techniques" | 123 | 60 |
| 15 | 04.11.2023 | Internal Staff Seminar on "Recent Trends in Welding Technology" | 11 | 62 |
| 16 | 01.11.2023 | Internal Staff Seminar on "FRP Composite Materials" | 10 | 65 |
| 17 | 25.10.2023 | Internal Staff Seminar on "Plasma Arc Sintering and its Process Parameters" | 11 | 68 |
| 18 | 20.10.2023 | Internal Staff Seminar on "Vacuum and Surface Hardening" | 12 | 71 |
| 19 | 11.10.2023 | National Level Technical Symposium "MECH STORM 2K23" | 102 | 74 |
| 20 | 30.09.2023 | Career Guidance session for IV Year Mechanical students | 59 | 85 |

| | | | | |
|----|------------|--|----|-----|
| 21 | 20.09.2023 | Orientation Session was organized for II-year Mechanical Engineering students | 61 | 88 |
| 22 | 15.09.2023 | Intra-Department Paper presentation | 13 | 92 |
| 23 | 26.08.2023 | Internal Staff Seminar on "Hydrogen Fuel Cell Vehicles" | 13 | 97 |
| 24 | 27.07.2023 | Orientation Session was organized for III-year Mechanical Engineering students | 47 | 102 |


 4/18/24
H.O.D
 DEPARTMENT OF MECHANICAL ENGINEERING
 KINGS COLLEGE OF ENGINEERING
 PUNALKULAM

HoD/Mech



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)
INTERNAL STAFF SEMINAR REPORT

Date& time : 30.05.2024 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on “Heat treatment process”
Resource person : Mr. N. Magesh
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on “Heat treatment process” for faculty members of the Mechanical Department on 30.05.2024 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in materials and metallurgy.

The Following Points were discussed during the Session:

- Thermally assisted surface hardening techniques have led to a surge in research efforts and industrial applications, with emphasis on strengthening of metallic materials with high work hardening, high strength and poor deformability.
- The common surface hardening techniques such as warm shot peening, warm laser shock peening and thermally assisted ultrasonic surface hardening are discussed. Also the development and working principle for each of the techniques are discussed.
- As compared with conventional surface hardening techniques, thermally assisted surface hardening techniques with optimum processing temperatures can further increase the surface and subsurface hardness, thickness of the hardening layer, fatigue life and wear resistance of mechanical components.
- Thermal energy can soften the materials, allowing plastic deformation to produce higher magnitude and deeper region of work hardening, allowing plastic deformation to produce higher magnitude and deeper region of work hardening.
- The coupled thermal-dynamic effect enables a broader design space for alloy hardening,

- The thermo mechanical treatment can also induce dynamic strain aging and dynamic precipitation in some metallic alloys, which leads to precipitation strengthening and enhanced stability of dislocations and compressive residual stress.



Snapshots of the Session

Chapters Discussed:

- Surface Hardening Techniques
- Metallurgical Properties Changing During the Vacuum and Surface Hardening.
- Benefits and Limitations.
- Research Scopes in Heat Treatment Techniques.

Outcomes:

Upon listing of this seminar the participants can able to

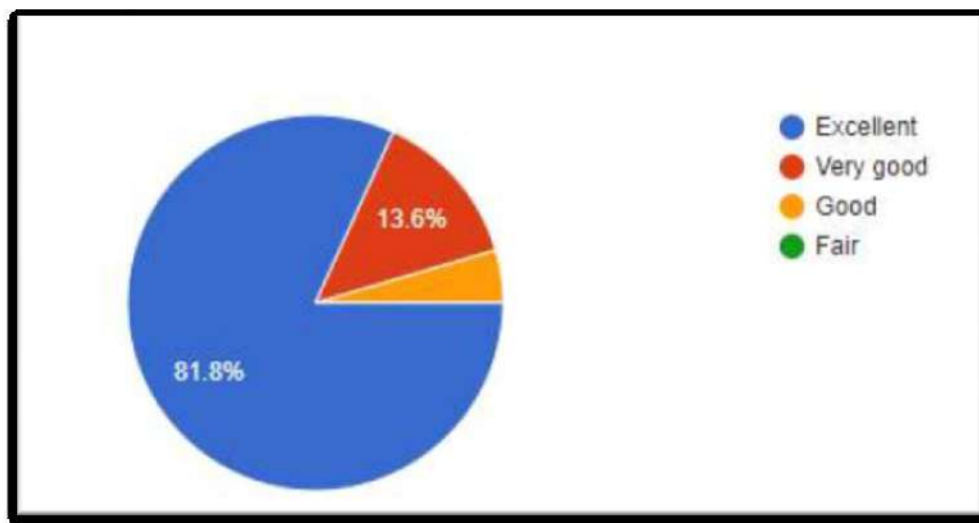
- Understand the various types heat treatment techniques.
- Understand the concepts work hardening and surface hardening.
- Able to understand the concept of metallurgy in recent advancements.

References:


1. W.H. Peng, et all. "Effects of WC Grain Size on Surface Hardening of WC-10 Co Cemented Carbides by Pulsed Electron Beam Irradiation" - Vacuum, Volume 207, January 2023, 111613.

2. Gang Hee Gu, et all. "Unprecedented Bake Hardening Responses of Interstitial High-Entropy Alloy by Synergistic Effect with Lattice Distortion" - Materials & Design, Volume 233, September 2023, 112289.
3. Ziwei Qin et all. "Strain-Hardening, Impact Protective and Self-Healing Supramolecular Polyurethane Nanocomposites Enabled by Quadruple H-Bonding, Disulfide Bonds and Nanoparticles" - Chemical Engineering Journal, Volume 467, 1 July 2023, 143434.
4. Shixiong Wu et all." Microstructure and Mechanical Properties of Superficial Surface and Subsurface Layers in the Cutting of Hardened Steel Under Cryogenic Cooling" - Journal of Materials Processing Technology, Volume 322, September 2023, 118165.
5. Jun Liu et all. "Recent Development of Thermally Assisted Surface Hardening Techniques" - Advances in Industrial and Manufacturing Engineering - Volume 2, May 2021, 100006.

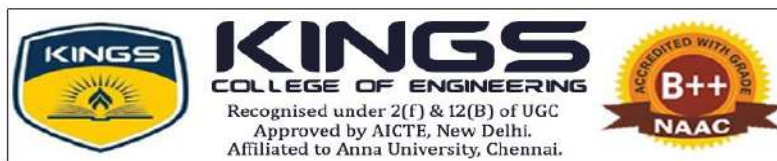
Feedback Analysis:




Staff Incharge


HOD/MECH


Principal



**DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)
INTERNAL STAFF SEMINAR REPORT**

Date& time : 27.05.2024 & 12.30 P.M.
Venue : Smart Classroom, Mechanical Department, Block II
Topic : Seminar on “Advanced Machining Processes”
Resource person : Dr. R. Shankar
Associate Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on “Advanced Machining Processes” for faculty members of the Mechanical Department on 27.05.2024 at smart class room Mechanical department, Block II. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in materials and metallurgy.

THE FOLLOWING POINTS WERE DISCUSSED DURING THE SESSION:

- Advanced Machining processes are the material-removing processes different from conventional machining processes, in which a well-guided wedge-shaped tool removes the material in the form of chips by producing contact stresses. There are a variety of ways in which material is removed using these processes.
- During this seminar, various machining process are explained in detail. Chemical Machining, Electrical Discharge Machining & Electron Beam Machining .
- Chemical machining is the material removal process for the production of desired shapes and dimensions. It is done by selective or overall removal of material by a controlled chemical attack with acids or alkalies.
- Electrical Discharge machining is the process of metal removal from the work surface due to an erosion of metal caused by electric spark discharge between the two electrodes tool (cathode) and the work (Anode).

- Electron-beam machining (EBM) is a process where high-velocity electrons concentrated into a narrow beam that are directed towards the work piece, creating heat and vaporizing the material. EBM can be used for very precise cutting or boring of a wide variety of metals.



Snapshots of the Session

CHAPTERS DISCUSSED:

- Chemical Machining Process
- Electrical Discharge Machining Process
- Electron Beam Machining Process

OUTCOMES:

Upon listing of this seminar the participants can able to

- Understand the various types of Chemical Machining Process..
- Understand the machining method of Electrical Discharge Machining Process
- Able to understand the characteristics of Electron Beam Machining Process..

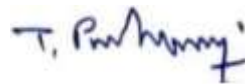
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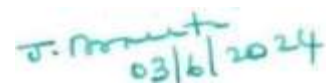
1. W.H. Peng, et all. "Effects of WC Grain Size on Surface Hardening of WC-10 Co Cemented
2. Alting, Leo. (1982). Manufacturing Engineering Processes. Marcel Dekker, New York.
3. Amstead, B.H; et. al. (1987). Manufacturing Processes. John-Wiley and Sons, New York.
4. Armarego, E.J.A. and Brown, R.H. (1969), Machining of Metals. Prentice Hall, NJ.
5. Ashby, M.F; (1992). Materials Selection in Mechanical Design. Pergamon, New York.
6. Avitzur, B. (1983). Handbook of Metal Forming Processes. Wiley-Interscience, New York.

FEEDBACK ANALYSIS:




Staff Incharge


HOD/MECH


Principal



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)
INTERNAL STAFF SEMINAR REPORT

Date& time : 14.05.2024 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "**Electric vehicles**"
Resource person : **Mr. R.Rajadurai**
Assistant professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "**Electric vehicles**" for faculty members of the Mechanical Department on 14.05.2024 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on recent technologies evolving in electric vehicles.

The Following Points were Discussed During the Session:

Mechanical engineering has always been at the forefront of technological innovation, driving progress in various automobile industries. With the rapid pace of technological advancement, new developments in mechanical engineering are continually emerging. This report aims to highlight some of the upcoming technologies in the field of automobile engineering.

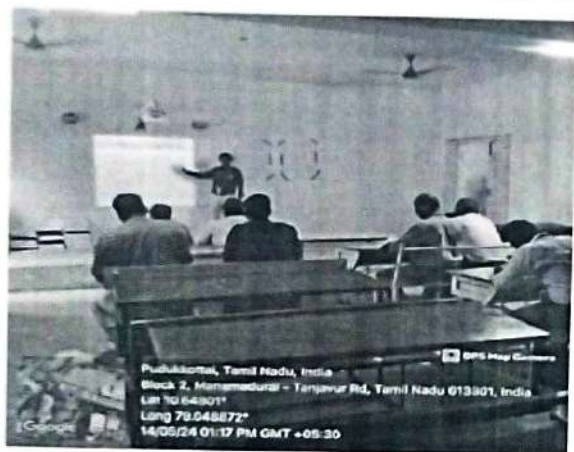
Market Growth: The EV market has been consistently growing globally. Various governments are offering incentives to both manufacturers and consumers to drive adoption. Additionally, advancements in battery technology are making EVs more affordable and practical for everyday use.

Environmental Impact: EVs have a significantly lower carbon footprint compared to traditional internal combustion engine vehicles. As the electricity grid becomes greener with more renewable energy sources, the environmental benefits of EVs continue to improve.

Technological Advancements: The technology behind EVs is rapidly advancing. This includes improvements in battery efficiency, charging infrastructure, and autonomous driving features. These advancements not only make EVs more attractive to consumers but also contribute to a more sustainable transportation ecosystem.

Challenges: Despite the progress, challenges remain. Infrastructure, particularly charging stations, needs to expand to accommodate the growing number of EVs on the road. Battery technology still faces limitations in terms of energy density, charging speed, and longevity, although research and development efforts are actively addressing these issues.

Overall, discussions about electric vehicles encompass a wide range of topics, reflecting their significance in the transition to a more sustainable transportation system.



Snapshots of the Session

Outcomes:

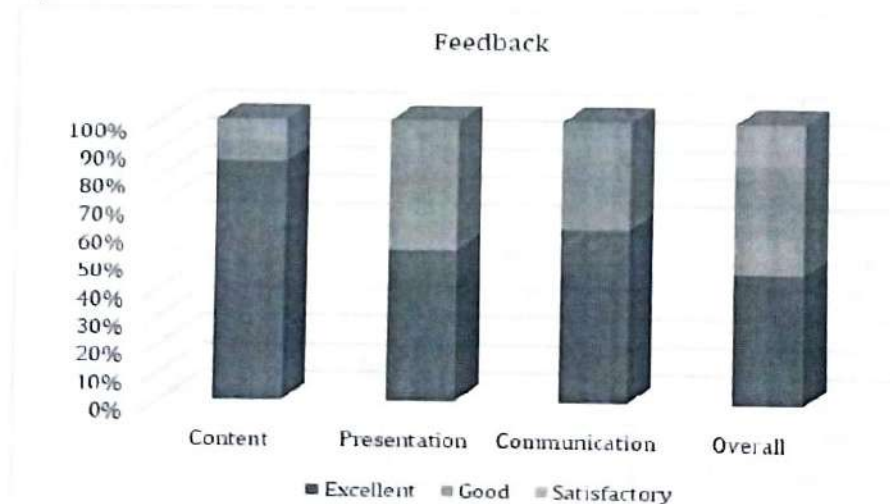
Upon listing of this seminar the participants can able to

- Understand the case studies and real-world applications of E-vehicles for different industries.
- Understand the basic difference between E-vehicles and hybrid vehicles.
- Know how the automation integration in automobile sectors that transforms traditional manufacturing paradigms into leading productivity, efficiency and safety, while also fostering innovation and skill development within the workforce.

References:

1. Hwang, Foo Shen, et al. "Review of battery thermal management systems in electric vehicles." Renewable and Sustainable Energy Reviews 192 (2024): 114171.
2. Nawaz, Muhammad Usman, Muhammad Salik Qureshi, and Shayan Umar. "Integration of Solar Energy Systems with Electric Vehicle Charging Infrastructure: Challenges and opportunity." Revista Espanola de Documentacion Cientifica 18.02 (2024): 1-18.
3. Saputra, Muhammad Candra, and Erna Andajani. "Analysis of Factors Influencing Intention to Adopt Battery Electric Vehicle in Indonesia." ADI Journal on Recent Innovation 5.2 (2024): 100-109.
4. Ullah, Irfan, et al. "Electric vehicles charging infrastructure planning: a review." International Journal of Green Energy 21.7 (2024): 1710-1728.
5. Kosuru, Venkata Satya Rahul, and Ashwin Kavasseri Venkitaraman. "Trends and challenges in electric vehicle motor drivelines-A review." International journal of electrical and computer engineering systems 14.4 (2023): 485-495.

Feedback Analysis:



[Signature]
Staff In charge

[Signature]
HOD/MECH 20/6/24

[Signature]
20/6/2024
Principal



KINGS
COLLEGE OF ENGINEERING
AUTONOMOUS

Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai
Recognized under 2(f) & 12B, UGC
NAAC Accredited Institution

Department of Mechanical Engineering
Webinar report on Product Development Process

Title : Product Development Process
Date : 29.04.2024
Duration : 1 Hour (02:00 PM to 03:00 PM)
Speakers : Mr. N. Jegan,
Project Coordinator,
Danfoss Industries Pvt. Ltd., Chennai.

On 29.04.2024, Department of Mechanical Engineering, Kings College of Engineering (Autonomous), Thanjavur hosted a comprehensive webinar on the "Product Development Process" tailored for mechanical engineering students. The webinar aimed to provide insights into the intricacies of product development within the mechanical engineering domain, focusing on modern methodologies and industry best practices. Dr. S. Sabanayagam, Associate Professor/Mechanical, welcomed and introduced the resource person. Mr. K. Rajesh Kumar, Assistant Professor/Mechanical, concluded the session with vote of thanks. This report encapsulates the key highlights and outcomes of the event.

Objectives:

1. To familiarize mechanical engineering students with the stages and methodologies involved in product development.
2. To highlight the importance of interdisciplinary collaboration in the product development process.
3. To provide real-world insights and case studies to illustrate key concepts.

Key insights from the invited talk:

The session commenced with an overview of the product development lifecycle, emphasizing the significance of understanding customer needs, market analysis, and feasibility studies. Speakers delved into the conceptualization phase, discussing ideation techniques, concept selection criteria, and the role of creativity in engineering design. This segment focused on the translation of concepts into detailed designs, encompassing

CAD modelling, simulation, and analysis for ensuring product performance and reliability. Attendees gained insights into prototyping methodologies, including rapid prototyping techniques such as 3D printing, and the iterative nature of prototyping for refining designs. The webinar emphasized the importance of rigorous testing and validation procedures to verify product functionality, safety, and compliance with regulatory standards. Speakers discussed various manufacturing processes and strategies for optimizing production efficiency while maintaining quality standards. Real-world case studies were presented to illustrate the application of product development methodologies in diverse industrial sectors, providing attendees with practical insights and lessons learned.

Invitation



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A National Level Webinar on Product Development Process

Organized by
Department of Mechanical Engineering

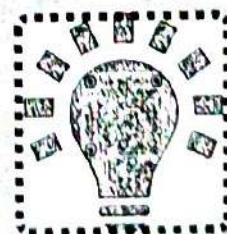


Mr. N. Jegan,
Project Coordinator,
Danfoss Industries Pvt. Ltd.,
Kanchipuram,
Tamil Nadu 602105

Date & Time: 29.04.2024 @ 02:00 PM

Registration Link:

<https://forms.gle/GssaS3apZTtu743k9>



Dr.S.Sabanayagam
Mr.K.RajeshKumar

Organizers

Dr.T.Pushparaj

HoD/Mech

Dr.J.Arputha Vijaya Selvi

Principal

<https://www.kingsengg.edu.in>



Sample Certificate



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Certificate of Participation

This Certificate is presented to
Dr. Nalini Subramanian

Rajalakshmi Engineering College

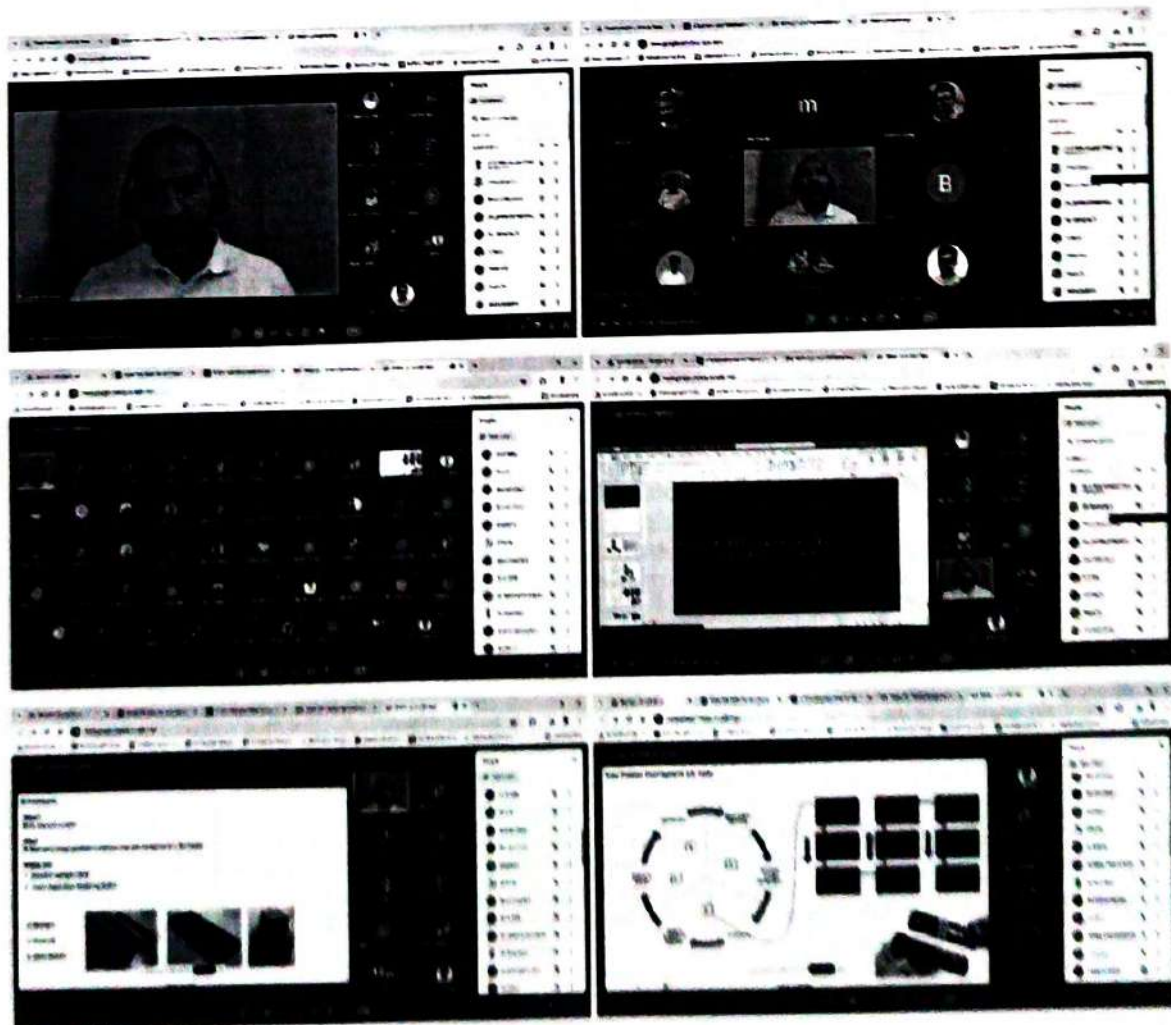
of _____
for active participation in the National Level webinar on "Product Development Process" on 29th April 2024, organized by the Department of Mechanical Engineering, Kings College of Engineering (Autonomous), Punalkulam, Pudukkottai (Dt).

Organizers
Dr.S.Sabanayagam
Mr.K.Rajesh Kumar

HoD/Mech
Dr.T.Pushparaj

Principal
Dr.J.Arputha Vijaya Selvi

Glimpses of the event



Despite being conducted through online mode, the webinar fostered active participation and engagement among the attendees. A total of 127 mechanical engineering students actively participated in the event, posing insightful questions and actively contributing to the discussions.

Key Takeaways:

The importance of interdisciplinary collaboration between mechanical engineers, designers, marketers, and other stakeholders throughout the product development process. Understanding the iterative nature of the design process and the value of prototyping and testing in refining product designs. Insights into real-world applications of product development methodologies across diverse industrial sectors, providing students with a holistic understanding of the field.

The "Product Development Process" webinar served as a valuable platform for mechanical engineering students to gain a comprehensive understanding of the intricacies involved in bringing a product from concept to market. By providing theoretical knowledge supplemented with practical insights and case studies, the webinar equipped attendees with the necessary tools and knowledge to excel in their future endeavours within the field of mechanical engineering.

List of Participants

| S. No | Name of the Institution | No of Beneficiaries |
|--------------|--|----------------------------|
| 1 | THANTHAI ROEVER INSTITUTE OF POLYTECHNIC COLLEGE. | 1 |
| 2 | Anjali Ammal Mahalingam Engineering College Kovilvenni. | 1 |
| 3 | Anna University Chennai | 1 |
| 4 | Arifa institute of technology | 1 |
| 5 | Arya College of engineering Jaipur | 1 |
| 6 | As salam collage engineering and technology | 2 |
| 7 | Assam University, Silchar | 1 |
| 8 | Bapatla Engineering College | 1 |
| 9 | Bapuji Institute of Engineering and Technology Davangere | 1 |
| 10 | Central University of Jammu | 2 |
| 11 | College of Engg & Technology, Akola | 1 |
| 12 | CSAU A&T KANPUR | 1 |
| 13 | CSI polytechnic college | 1 |

| | | |
|----|---|----|
| 14 | Department of Earth and Environmental Sciences, Parul University. | 1 |
| 15 | Dhanalakshmi College of Engineering | 1 |
| 16 | DLHH COP ULHASNAGAR | 1 |
| 17 | Dr. C. V. Raman University, Kota , Bilaspur (C.G.) | 1 |
| 18 | Durham Learning Centre, England | 1 |
| 19 | E.G.S. Pillay Engineering College (Autonomous) Nagapattinam | 25 |
| 20 | GDC kastigarh | 1 |
| 21 | Government College, Una | 2 |
| 22 | Government Polytechnic Anantapur | 1 |
| 23 | Govt Degree College Budhal | 1 |
| 24 | HKBK College of Engineering | 1 |
| 25 | IFET College of engineering | 1 |
| 26 | JAYA ENGINEERING COLLEGE | 1 |
| 27 | JLD Engineering & Management College | 1 |
| 28 | JSSSTU, MYSURU | 1 |
| 29 | KET polytechnic college, krishnagiri | 1 |
| 30 | KINGS COLLEGE OF ENGINEERING, PUNALKULAM | 45 |
| 31 | Kristu Jayanti College, Autonomous | 1 |
| 32 | KUMARAGURU COLLEGE OF TECHNOLOGY | 1 |
| 33 | M S Ramaiah College of Arts Science and Commerce | 1 |
| 34 | MIMIT, Punjab | 2 |
| 35 | Meenakshi Sundararajan Engineering College, Chennai. | 2 |
| 36 | MOOKAMBIGAI COLLEGE OF ENGINEERING | 1 |
| 37 | NALLAMUTHU GOUNDER MAHALINGAM COLLEGE | 1 |
| 38 | P.S.R.R College of Engineering , Sivakasi | 2 |
| 39 | Pandian Saraswathi Yadav Engineering College Arasanoor | 1 |
| 40 | PARISUTHAM INSTITUTE OF TECHNOLOGY AND SCIENCE THANJAVUR | 6 |
| 41 | Parul University, Vadodara | 1 |
| 42 | PESCE, MANDYA | 1 |
| 43 | PRIST SCHOOL OF ENGINEERING AND TECHNOLOGY | 1 |
| 44 | Rajalakshmi Engineering College | 1 |
| 45 | Sandip Institute of Technology and Research Centre | 1 |
| 46 | Sengunthar Engineering College | 1 |
| 47 | Shraddha Children's Academy | 1 |

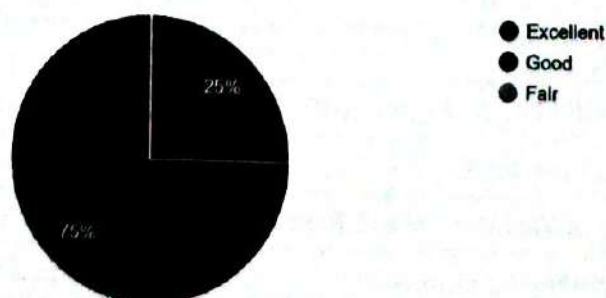
| | | |
|--------------|---|------------|
| 48 | SHREE VENKATESHWARA HI-TECH ENGINEERING COLLEGE | 1 |
| 49 | SjES College of Education | 1 |
| 50 | Sri Manakula Vinayagar Engineering College | 2 |
| 51 | Sri Ranganathar Institute of Engineering and Technology | 1 |
| 52 | SRM TRP ENGINEERING COLLEGE, TRICHY | 1 |
| 53 | St.Joseph's College of Engineering and Technology-Thanjavur | 1 |
| 54 | STAR LION COLLEGE OF ENGINEERING AND TECHNOLOGY, THANJAVUR | 19 |
| 55 | Swarnim Institute of Technology, Gandhinagar, Gujarat | 1 |
| 56 | Tecnia Institute of Advanced Studies | 1 |
| 57 | Teegala Krishna Reddy Engineering College | 1 |
| 58 | Thanthai Roever Institute of polytechnic college | 4 |
| 59 | The Oxford College of Science | 1 |
| 60 | Tikrit university | 1 |
| 61 | VANDAYAR ENGINEERING COLLEGE | 1 |
| 62 | Vel Tech Multi Tech Dr.Rangarajan Dr.Sakunthala Engineering College | 1 |
| 63 | Verghese Kurien Institute of Dairy and Food Technology, Thrissur Kerala | 1 |
| 64 | Vidyavardha College of Engineering | 3 |
| 65 | Vignan's Lara institute of technology and science (Autonomous), Guntur. | 2 |
| 66 | VMKEC | 1 |
| Total | | 170 |

Acknowledgments: On behalf of Kings College of Engineering (Autonomous), Thanjavur, we extend our sincere gratitude to the speakers, participants, and organizers for their valuable contributions in making the webinar a resounding success.

Feedback: Obtained from Google form.

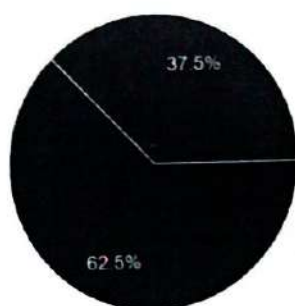
Content of the Program?

56 responses



Quality of Audio/Video Streaming?

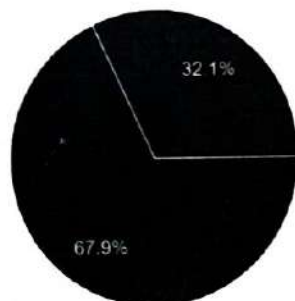
56 responses



- Excellent
- Good
- Fair

Way of Presentation?

56 responses



- Excellent
- Good
- Fair

[Signature]
4/5/24
Organizers

Dr.S.Sabanayagam
Mr.K.Rajesh Kumar

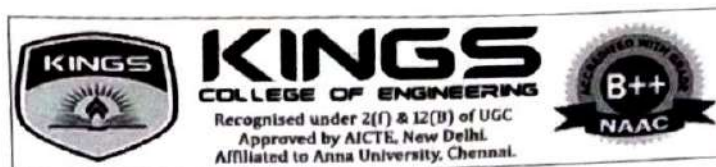
[Signature]
4/5/24
HoD/Mech

Dr.T.Pushparaj

[Signature]
4/5/24

Principal

Dr.J.Arputha Vijaya Selvi



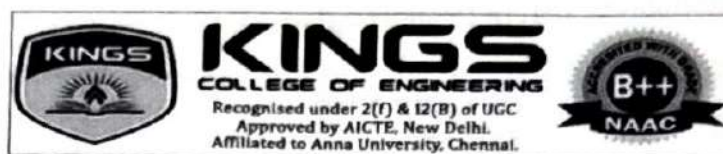
**Department of Mechanical Engineering
Academic year 2023-24 (EVEN)**

Circular

Date : 25.03.2024

This is to inform you that there will be an internal seminar going to be conducted by our department on 27.03.2024 at 12.30 P.M on the topic "The Technology ahead in Mechanical Engineering" by Dr. S. Sabanayagam, Associate Professor/Mechanical at Department Smart Classroom. Staff members are instructed to utilize the session and communicate your queries.

T. R. Manjula
HoD/Mech 25/3/24



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)
INTERNAL STAFF SEMINAR REPORT

Date & time : 27.03.2024 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "The Technology ahead in Mechanical Engineering"
Resource person : **Dr. S. Sabanayagam**,
Associate Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "The Technology ahead in Mechanical Engineering" for faculty members of the Mechanical Department on 27.03.2024 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on recent technologies evolving in Mechanical Engineering.

The Following Points were Discussed During the Session:

Mechanical engineering has always been at the forefront of technological innovation, driving progress in various industries. With the rapid pace of technological advancement, new developments in mechanical engineering are continually emerging. This report aims to highlight some of the upcoming technologies in the field of mechanical engineering, along with their objectives and anticipated outcomes.

1. Additive Manufacturing (3D Printing):

Objective: The objective of additive manufacturing is to revolutionize traditional manufacturing processes by enabling the production of complex geometries with reduced material waste and lead times.

Outcomes: With advancements in 3D printing technology, engineers can expect increased design freedom, improved part performance, and enhanced customization capabilities. Additionally, additive manufacturing has the potential to decentralize production and reduce supply chain dependencies.

2. Artificial Intelligence (AI) in Design Optimization:

Objective: Integrating artificial intelligence into the design process aims to automate and optimize the creation of mechanical components and systems.

Outcomes: AI-driven design optimization tools can significantly reduce the time and resources required for product development. By leveraging machine learning algorithms, engineers can explore a broader design space, identify optimal solutions, and improve performance metrics such as efficiency, reliability, and durability.

3. Robotics and Automation:

Objective: The objective of robotics and automation is to enhance productivity, efficiency, and safety across various industrial sectors.

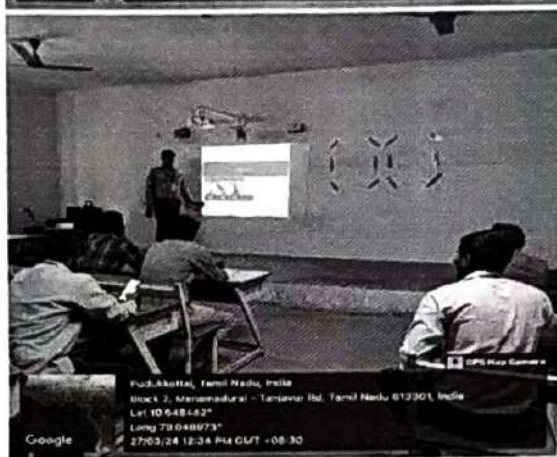
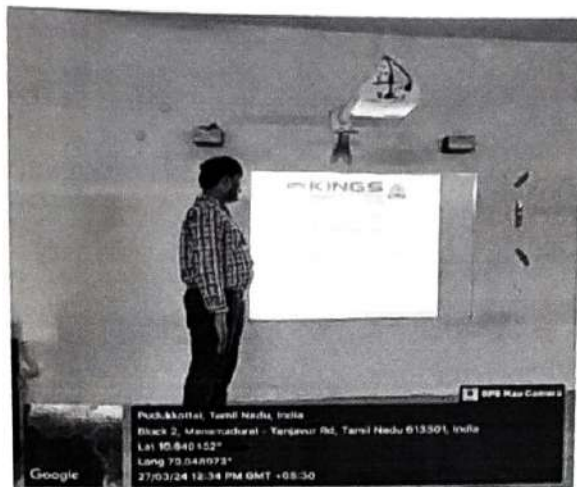
Outcomes: Advancements in robotics technology enable the deployment of autonomous systems for tasks ranging from manufacturing and assembly to inspection and maintenance. With increased reliability and flexibility, robotic solutions can streamline operations, minimize errors, and mitigate workplace hazards.

4. Sustainable Energy Technologies:

Objective: Sustainable energy technologies aim to address environmental concerns by reducing reliance on fossil fuels and minimizing carbon emissions.

Outcomes: Innovations in renewable energy systems, such as wind turbines, solar panels, and hydroelectric generators, contribute to the transition towards a more sustainable energy infrastructure. Additionally, advancements in energy storage technologies, such as battery systems and hydrogen fuel cells, facilitate the integration of renewable energy sources into existing grids.

The future of mechanical engineering is characterized by a convergence of advanced technologies aimed at addressing global challenges and driving innovation across industries. From additive manufacturing and artificial intelligence to robotics and sustainable energy, these advancements hold the promise of revolutionizing traditional practices, enhancing efficiency, and promoting sustainability. By leveraging these emerging technologies, mechanical engineers can continue to push the boundaries of what is possible, shaping a more prosperous and sustainable future.



Snapshots of the Session

Chapters Discussed:

- Additive Manufacturing.
- AI in design optimization.
- Robotics & Automation.
- Sustainable energy technologies.

Outcomes:

Upon listing of this seminar the participants can able to

- Understand the case studies and real-world applications of AM across different industries.
- Have valuable insights on how AI to revolutionize mechanical design processes by exploring advanced techniques, real-world case studies.
- Know how the robotics and automation integration in mechanical sectors that transforms traditional manufacturing paradigms into leading heightened productivity, efficiency, and safety, while also fostering innovation and skill development within the workforce.

References:

1. Journal Title: Robotics and Computer-Integrated Manufacturing

Citation: Fathi, Hamidreza, et al. "Integration of robotics and automation in manufacturing: Review and prospect." Robotics and Computer-Integrated Manufacturing, vol. 67, 2020, 101992.

2. Journal Title: IEEE Transactions on Automation Science and Engineering

Citation: Wang, Fei-Yue, et al. "Trends in robotics and automation in manufacturing." IEEE Transactions on Automation Science and Engineering, vol. 14, no. 2, 2017, pp. 948-956.

3. Journal Title: International Journal of Advanced Manufacturing Technology

Citation: Kusiak, Andrew, and Xiaoxia Huang. "Manufacturing intelligence: Trends in research and practice." International Journal of Advanced Manufacturing Technology, vol. 56, no. 9-12, 2011, pp. 1297-1310.

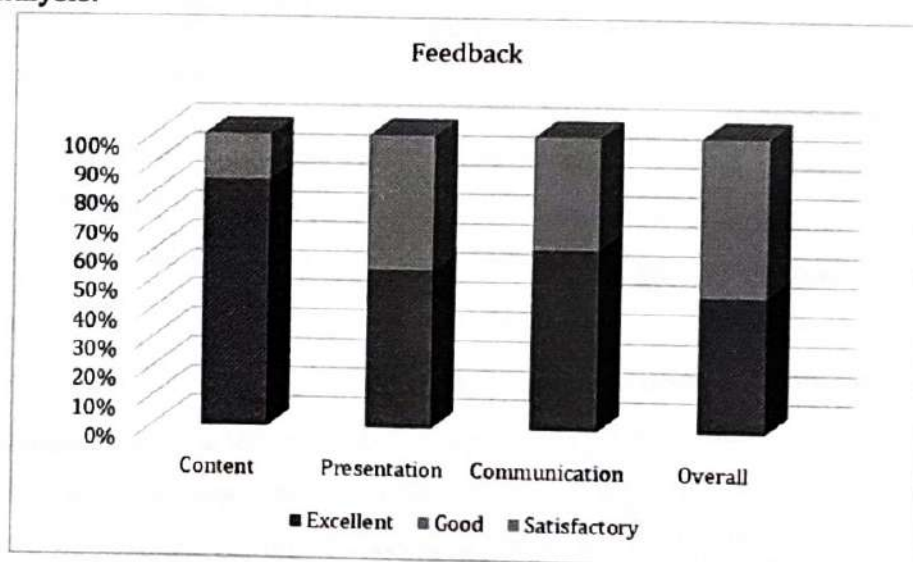
4. Journal Title: Robotics and Autonomous Systems

Citation: Sahin, Ferat. "A survey on industrial applications of robotic assembly." Robotics and Autonomous Systems, vol. 60, no. 4, 2012, pp. 541-552.

5. Journal Title: Journal of Manufacturing Systems

Citation: Xu, Xun, et al. "Robotics and automation in the food industry: Current status and future perspectives." Journal of Manufacturing Systems, vol. 53, 2019, pp. 95-106.

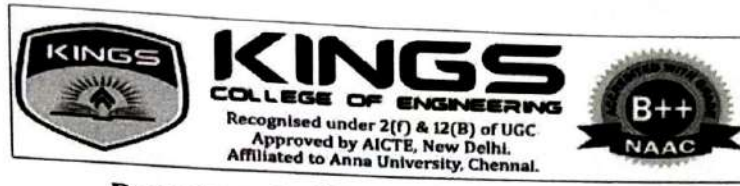
Feedback Analysis:



[Signature]
28/3/24
Staff In charge

[Signature]
T. Puthy
HOD/MECH
28/3/24

[Signature]
28/3/2024
Principal



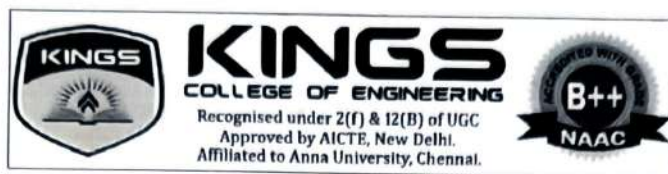
Department of Mechanical Engineering
Academic year 2023-24 (EVEN)
INTERNAL STAFF SEMINAR ATTENDANCE SHEET

Date & time : 27.03.2024 & 12.30 P.M
 Venue : Department Smart Classroom
 Topic : Seminar on "The Technology ahead in Mechanical Engineering"
 Resource person : Dr. S. Sabanayagam /Mechanical

| S. No | Staff Name | Signature |
|-------|----------------------------------|-------------------------------------|
| 1 | Dr. T.Pushparaj | <i>T. Pushparaj</i> |
| 2 | Dr. P.P.Shantharaman | <i>P.P. Shantharaman</i> |
| 3 | Dr. R.Shankar | <i>R. Shankar</i> |
| 4 | Mr. H. Agilan | <i>H. Agilan</i> |
| 5 | Mr. N.Magesh | <i>N. Magesh</i> |
| 6 | Dr. M. Melwin Jagadheesh Sridhar | <i>M. Melwin Jagadheesh Sridhar</i> |
| 7 | Mr. M. Sakthivel | <i>M. Sakthivel</i> |
| 8 | Mr. S. Nelson Raja | <i>S. Nelson Raja</i> |
| 9 | Mr. R. Rajadurai | <i>R. Rajadurai</i> |
| 10 | Mr. V. Aravind | <i>V. Aravind</i> |
| 11 | Mr. S. Balaganesh | <i>S. Balaganesh</i> |
| 12 | Mr. M. Vivekananthan | <i>M. Vivekananthan</i> |
| 13 | Mr. K. Rajesh Kumar | |

[Signature]
 Staff In charge

T. Pushparaj
 HOD/MECH
 27/3/24



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24(EVEN)

Date :12.03.2024

CIRCULAR

As a part of skill enhancement of student community, the Department of Mechanical Engineering is planned to conduct the "Orientation Program" for second year students on 13.03.2024 at Mechanical ICT Class Room (207). Second year students are instructed to attend the program without fail.

Session Details

| S. No | Session Time | Staff Name | Topic |
|-------|--------------------------|--|---|
| 1. | 09.15 A.M. to 09.25 A.M. | Mr. N. Magesh Mechanical | Welcome Address |
| 2. | 09.25 A.M. to 10.00 A.M. | Dr. T. Pushparaj Head /Mechanical | Department Familiarization |
| 3. | 10.00 A.M. to 10.45 A.M. | Mr. M. Vivekananthan Mechanical | Basics of Manufacturing |
| 4. | 11.00 A.M. to 11.45 A.M. | Dr. V. Suresh Kumar HoD/ S & H | Basics of Environmental Sciences and Sustainability |
| 5. | 11.45 A.M. to 12.30 P.M. | Dr. B. Barankumar T & P | Aptitude |
| 6. | 01.10 P.M. to 04.10 P.M. | Dr. M. Melwin Jagadeesh Sridhar Mr. S. Balaganesh Mechanical | Importance of Fluid Mechanics and Thermal Engineering (Practical) |
| 7. | 04.10 P.M. to 04.20 P.M. | Mr. M. Sakthivel Mechanical | Vote of Thanks |

[Signature]
Staff Incharge

[Signature]
HOD/Mechanical

[Signature]
Principal

DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023 - 2024 (EVEN)
STUDENT ORIENTATION PROGRAMME REPORT

As a part of academic activity of the department, Orientation Programme was organized was 13th March 2024 for Second year students of Mechanical Engineering. The programme was starts from 9.15 AM. Mr. S. Nelson Raja, Assistant Professor, Department of Mechanical Engineering was delivered the welcome address to the Second year students for Orientation Programme.

Objectives:

- The objective of the Orientation Program was to familiarize Second year students with the key concepts, tools and practices essential for success in mechanical engineering roles within our organization.
- To prepare the students about their career goal and how to work on it.
- To involve and learn about the career development process and develop their skills.
- To create the awareness about the various co-curricular and extracurricular activities and helps the student for their overall development.
- To create awareness among students about the professional etiquettes.
- To promote the students for enhancing their skills and learn about the various innovative ways to enhance their career.

Session I:

Mr. N. Magesh, Assistant Professor, Department of Mechanical Engineering handled a session for second year students on "Department Familiarization" between 9:25 A.M to 10:00 A.M. He discussed the facilities and amenities of the department and lined out the importance and engagement for their carrier development.

Points Discussed in Session I:

- ✓ Courses of Curriculum and pointed out relativity of subjects.
- ✓ To develop the knowledge, based on core activity.
- ✓ Importance of professional development.

Session II:

Mr. M. Vivekananthan, Assistant Professor, Department of Mechanical Engineering handled a session for second year students on "Basics of Manufacturing" between 10:00 A.M to 10:45 A.M. He discussed about the advanced manufacturing techniques and their industrial applications.

Points Discussed in Session II:

- ✓ Choosing the appropriate materials based on factors like strength, durability, cost, and availability.
- ✓ Planning the manufacturing process, including scheduling, resource allocation, and quality control measures.
- ✓ Transforming raw materials into finished products through processes such as machining, casting, molding, and forming.

Session III:

Dr. V. Suresh Kumar, Head/ Department of Science and Humanities handled a session for second year students on "Basics of Environmental Sciences and Sustainability" between 11:00 A.M to 11:45 A.M. He discussed the environmental policy and waste management in India.

Points Discussed in Session III:

- ✓ Laws, regulations, and initiatives aimed at addressing environmental issues and promoting sustainable practices.
- ✓ Strategies for reducing, reusing, and recycling waste to minimize environmental impact.
- ✓ Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Session IV:

Dr. B. Barankumar, Assistant Professor, Department of Training and Placement handled a session for second year students on "Aptitude" between 11:45 A.M to 12:30 P.M. He shared the various aptitude skill development of other than core.

Points Discussed in Session IV:

- ✓ Grasp the fundamental concepts of mathematics, reasoning, and analytical skills.
- ✓ Regular practice is crucial to enhance problem-solving abilities and speed.
- ✓ Learn time-saving techniques to solve problems efficiently during exams.

Session V:

Dr. M. Melwin Jagadeesh Sridhar, Associate Professor, Department of Mechanical Engineering and Mr. S. Balaganesh, Assistant Professor, Department of Mechanical Engineering were handled a practical session on "Importance of Fluid Mechanics and Thermal Engineering" between 01.10 P.M. to 04.10 P.M.

Points Discussed in Session V:

- ✓ Dealing with fluids at rest, including pressure distribution in static fluids and buoyancy principles.
- ✓ Study of fluid motion, including Bernoulli's equation, Euler's equation, and Navier-Stokes equations.
- ✓ Analyzing flow through pipes, including pressure drop and flow rate calculations.
- ✓ Devices that convert thermal energy into mechanical work, like steam turbines and internal combustion engines.
- ✓ Study of factors affecting human comfort in relation to thermal environment.

Outcomes:

- Understanding of fundamental Mechanical Engineering principles and concepts.
- Familiarity with mechanical engineering tools and software.
- Knowledge of basic manufacturing processes and materials.
- Ability to apply mathematics and physics concepts to solve engineering problems.
- Development of critical thinking and problem-solving skills.
- Awareness of ethical and professional responsibilities in engineering practice.
- Exposure to interdisciplinary aspects of mechanical engineering.
- Teamwork and communication skills for collaboration on engineering projects.
- Exploration of career paths and opportunities in mechanical engineering.

Conclusion:

Mr. M. Sakthivel, Assistant Professor, Department of Mechanical Engineering was delivered the vote of thanks for Orientation Programme. This programme was successful in providing participants with essential knowledge and skills for their roles within the mechanical department. Participants expressed appreciation for the hands-on demonstrations and found them valuable for practical understanding. Feedback was collected from the participants at end of the session.

Session Glimpses:



Snapshots for the Orientation Programme Held on 13.03.2024

S. Nelson Raja
25/3/24
R. Rajadurai
25/3/24
Coordinators

(Mr. S. Nelson Raja
Mr. R. Rajadurai)

T. P. M. H. H. H.
25/3/24
HoD/Mech

J. M. M. M. M.
25/3/2024
Principal

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24 / EVEN SEMESTER

SEMINAR REPORT

The Department of Mechanical Engineering and A.P.J. Abdul Kalam memorial club jointly organized a seminar on “**Recent trends in 3D modeling**” on **19.02.2024** at **11.00 a.m.** in the smart class room. Welcome address was given by **Mr. M.Vivekananthan**, Assistant Professor / Mechanical, Kings College of Engineering. Facilitation and Special address was given by **Dr.T.Pushparaj** Professor & HOD / Mechanical, Kings College of Engineering. **Mr.H.Agilan** Assistant Professor / Mechanical, Kings College of Engineering introduced the resource person **Er.I.Ravichandran** and **Er.K.Baskar.**, Placement Coordinators, Learnnet Skills Limited, Karaikudi. The resource person had given the seminar on “**Recent trends in 3D modeling**”.

In this lecture, **Er.I.Ravichandran** explained about the various what are 3D modeling software’s are really needed in industrial need also explained concepts of 3D modeling and scope of design field in industrial application. **Er.K.Baskar** explained the drafting of 3D model step by step by using animation and video.

Totally **75** students from III year and IV year mechanical were participated in this seminar. Vote of thanks was given by **Mr. M.Sakthivel**, Assistant Professor /Mechanical. Kings College of Engineering.

All the attended participants gave their feedback after the session.

Seminar Brochure



KINGS
COLLEGE OF ENGINEERING
An Autonomous Institution
Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi



A Seminar on

“Recent Trends in 3D Modeling”

*Jointly Organized by
Department of Mechanical Engineering
&
A.P.J. Abdul kalam Memorial Club*

Resource Persons

***Er.J.Ravichandran.,
Er.K.Baskar.,
Placement Coordinators,
learnnet skills limited, Karaikudi***

On 19.02.2024 @ 11.00 am

Coordinators

***Mr.H.Agilan AP/MECH
Mr.M.Vivekananthan, AP/Mech
Mr.M.Sakthivel Ap/MECH***

HOD

Dr.T.Pushparaj

Principal

Dr.J.Arputha Vijaya Selvi



<https://www.facebook.com/KingsCollegeofEngineering/>



https://www.youtube.com/channel/UCv_wHZyT-Nxxc4rbXBiciaw/featured

Objective

The main objectives for this seminar are,

- ❖ To gain the knowledge about the basic concepts and understanding of tools related to 3D production.
- ❖ To analyze the with basics of modeling, lighting, texturing and rendering.
- ❖ To understand the fundamentals of strong 3D design.

Outcomes

Students are able to;

- ❖ Understand the various 3D modeling tools and application of tools usage in design.
- ❖ Apply the knowledge of modeling tools in industrial readiness ,
- ❖ Understand the application of design courses for industrial needs.

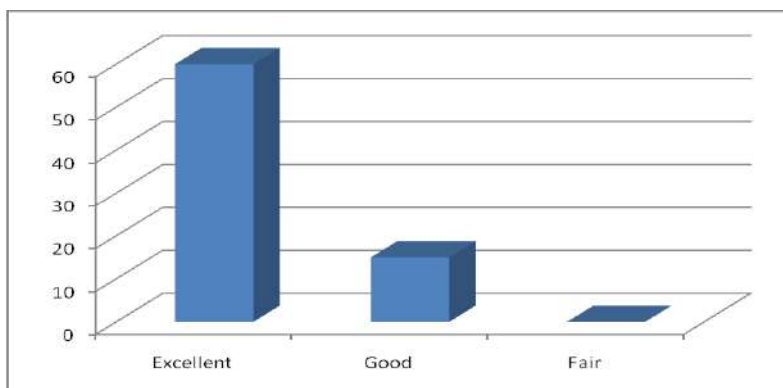
List of Attended Participants

| S.No | Name of Year/Department | Number of participants |
|-------|-------------------------|------------------------|
| 1 | IV Year Mechanical | 40 |
| 2 | III Year Mechanical | 35 |
| Total | | 75 |

Feedback questions and responses

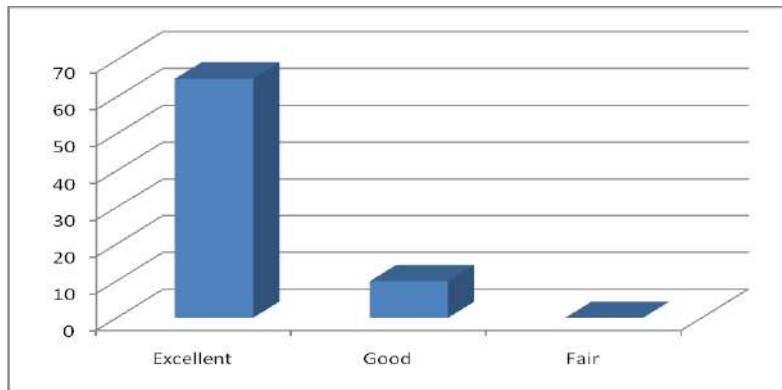
1. Content of the Program?

| Excellent | Good | Fair |
|-----------|------|------|
| 60 | 15 | 0 |



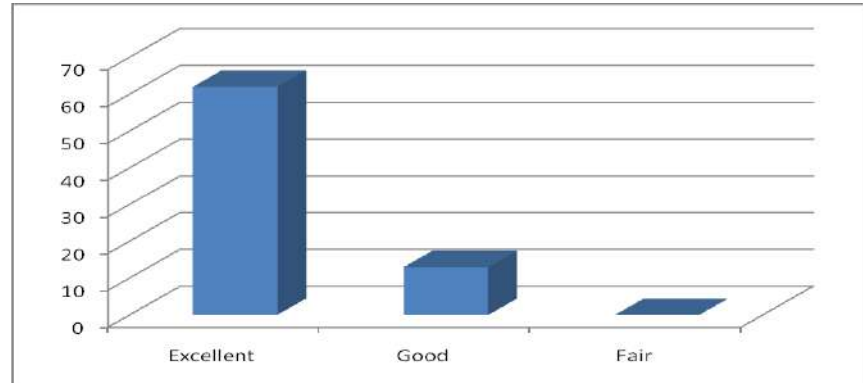
2. Quality of Content delivered?

| Excellent | Good | Fair |
|-----------|------|------|
| 65 | 10 | 0 |



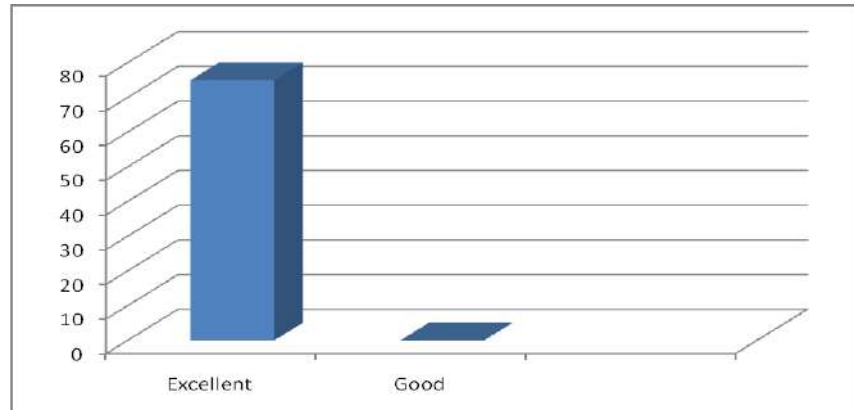
3. Way of Presentation?

| Excellent | Good | Fair |
|-----------|------|------|
| 62 | 13 | 0 |



4. Are you interested in future like this seminar?

| Yes | No |
|-----|----|
| 75 | 0 |



Sample Snapshots





1. *H.A. Agilan*
28/2/24
2. *M. Vivekananthan*
28/2/24
3. *M. Sakthivel*
28/2/24

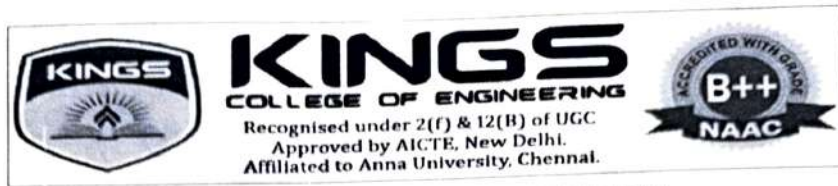
Coordinator
(Mr.H.Agilan)
(Mr.M.Vivekananthan)
(Mr.M.Sakthivel)

T. Pushparaj
28/2/24

HOD/Mechanical
(Dr.T.Pushparaj)

J. Arputha Vijaya Selvi
28/2/2024.

Principal
(Dr.J.Arputha Vijaya Selvi)



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24 (EVEN)

Date : 11.03.2024

CIRCULAR

As a part of skill enhancement of student community, the Department of Mechanical Engineering has planned to conduct the "Certificate Course" (**Advanced Welding Technologies**) For second year students from 13.03.2024 at Mechanical ICT Class Room (207). Interested second year students are requested to register their name to Mr.R.Rajadurai, AP/MECH and Mr.S.Nelsonraja AP/MECH on or before 12.03.2024.

S.R.
11/3/24
Thiruphuran
11/3/24
Coordinators

(Mr.R.Rajadurai, AP/MECH &
Mr. S.Nelsonraja , AP/MECH)

T. R. R. R.
11/3/24
HOD/MECH
H.O.D.

DEPARTMENT OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
PILAIKULAM

Department of Mechanical Engineering

~~Academic year 2023-24 EVEN /Batch:2022-26~~

CERTIFICATE COURSE SYLLABUS (ADVANCED WELDING TECHNOLOGIES)

Course Objectives:

- To learn various concepts related to welding, its application.
- To have practical purview of various welding process, welding standards, advanced welding process.
- Graduates will understand the importance of professional behavior and life-long learning, and will meet the challenges of continued technological growth within the field.

UNIT I

INTRODUCTION TO WELDING AND JOINING PROCESSES:

Introduction to consolidation processes, Classification of welding processes, some common concerns, types of fusion welds and types of joints, Design considerations, Heat effects, Weld ability and join ability. Welding terms and definitions, welding positions, elements of and construction of welding symbols.

UNIT II

WELDING METALLURGY:

Fundamentals of physical metallurgy: Need, phase diagrams: Fe-C, Al-Cu, Cu-Zn system, phase transformations in Fe-C system, TTT diagram, CCT diagram, carbon equivalent, Schaffer diagram, relevance of above in welding

UNIT III

WELD JOINT PREPARATION AND TEMPERATURE CONTROL:

Checks prior to weld joint preparation, joint preparation checks, preheating and interpass heating, post weld heating, heating processes, post heat treatments, insulation of heated joints.

UNIT IV

RESISTANCE AND SOLID STATE WELDING PROCESSES:

Theory of resistance welding: Heating, pressure, current and current control, power supply. Resistance welding processes: Resistance spot welding, resistance seam welding, Projection welding.

UNIT V

WELDMENT INSPECTION AND TESTING:

Codes governing welding inspection: Structural welding code; ASME boiler and pressure vessel code, spot examination of welded joints, duties of the inspector, ASTM standards, API standards b. Chemical, Metallurgical, and Mechanical testing of weldments: Comparison of destructive and non-destructive tests, chemical tests, forms of corrosion, testing for corrosion resistance, metallographic tests.

Kings College of Engineering, Punaikulam

REFERENCES:

1. DeGarmo's Materials and processes in Manufacturing
2. Lancaster J F, "Metallurgy of welding", Allen and Unwin Co.
3. K Esterling, "Introduction to Physical Metallurgy"
4. "Welding Handbook", Volumes 1, 2 and 3, 9th edition, American Welding Society

Course Outcomes:

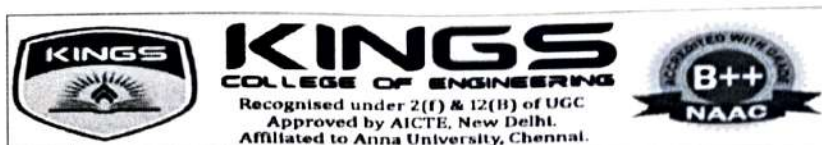
After learning the course the students should be able to:

- Students will understand the theoretical aspects of welding technology in depth.
- Students will be able to intelligently select the appropriate welding process for a particular application.
- Students will be able to describe the basic metallurgy of the melted and heat-affected zone of a metal or alloy.
- Students will be able to identify the cause of welding defects and avoid them.
- Students will be able to choose or adjust welding parameters and techniques to optimize the weldment properties.
- Students will demonstrate their ability to check the weldment quality using various inspection and testing methods.

[Signature] 13/3/24
Course in charge

[Signature]
HoD/Mechanical 13/3/24

H O D
HEAD OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNAIKULAM



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023 - 24 (EVEN SEMESTER)

CERTIFICATE COURSE REPORT

Year / Sem : II-MECH / 04

Course Name: "Advanced Welding Technologies"

Venue : Mechanical Smart Class room.

Duration : March 2024 - May 2024

Objective of the certificate Course:

- The objectives of a Basic Mechanical Engineering course are designed to provide students with a foundational understanding of fundamental principles and concepts in the field of welding technology.
- To Familiarize the students in significance of broader field of mechanical engineering.
- To know the properties and behaviour of the materials used in different temperature and different types welding.

Methodology:

- Action plan of the certificate course is prepared well in advance by the senior faculty and get it approved by Head of the Department.
- Handle the lecture class with multimedia presentations, visual aids, and demonstrations.
- Provide the opportunities to students to work with equipment, instruments, and tools commonly used in mechanical engineering.
- Use different evaluation methods such as quizzes, exams, assignments, and projects.

Session Details:

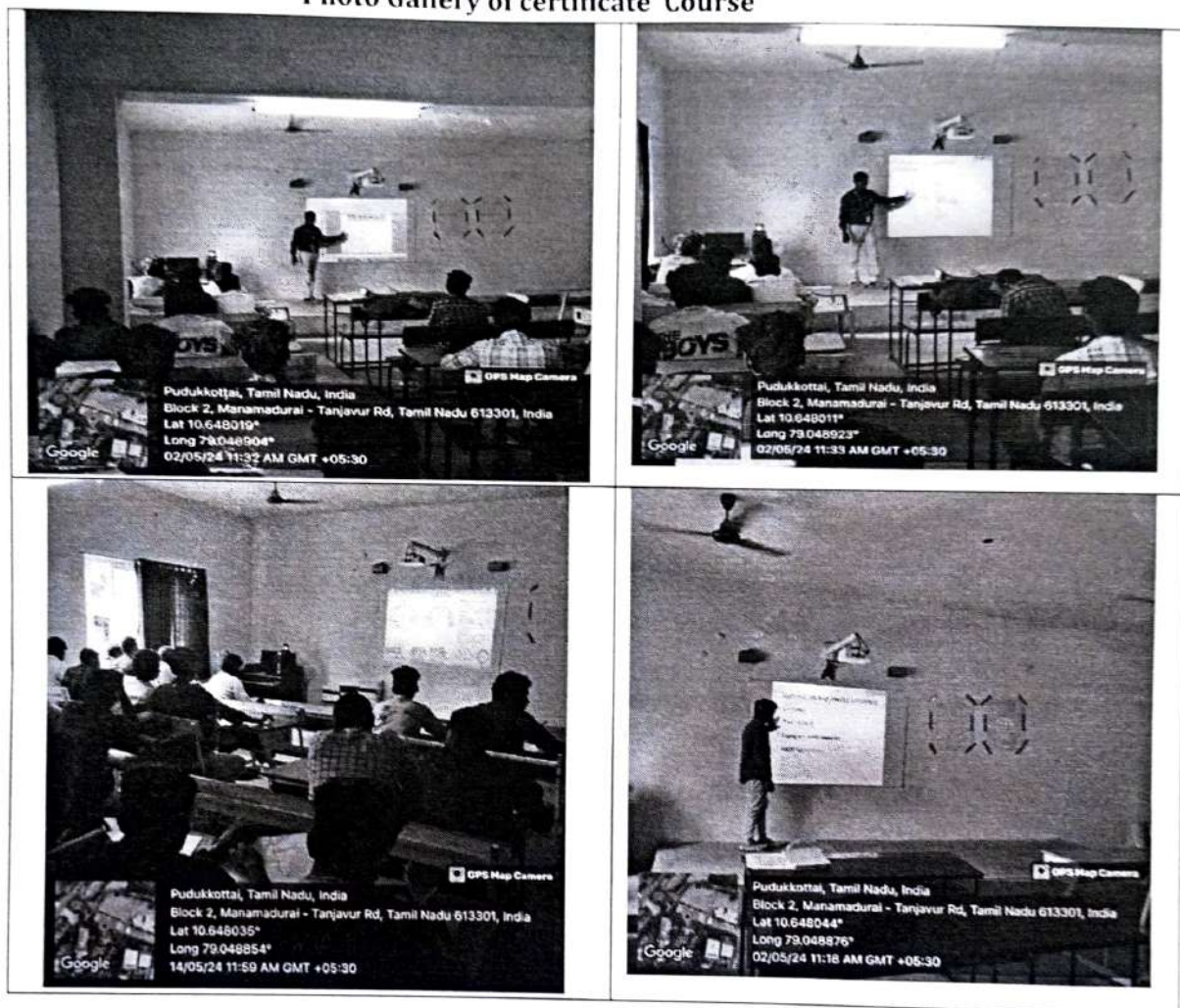
Dr.T.Pushparaj, HOD, Department of Mechanical Engineering delivered the welcome address for the "Certificate Course on **Advanced Welding Technologies**" for second year students. He highlighted the importance of Advanced Welding Technologies; outcome based education and shared his experience with the students.

Mr.R.Rajadurai, Assistant Professor, Department of Mechanical Engineering enlightened second year students about the basics of welding technology compare with advanced technologies. He also explained the practical subjects to effectively handle sessions for a basic mechanical engineering course.

Mr.S.Nelsonraja, Assistant Professor, Department of Mechanical Engineering handled an activity based session for second year students on basics of mechanical

engineering and also comprehend foundational concepts. Share additional resources, recommended online materials for students and discuss the practical applications and relevance of the basics being covered.

Photo Gallery of certificate Course



Outcome of the certificate Course:

- Students understand the fundamentals of welding and their applications.
- Students are able to find the welding defects and its remedies.
- Gained the knowledge about ethical and professional responsibilities associated with mechanical engineering.

S. Rajadurai 17/6/24

Coordinators

(Mr.R.Rajadurai, AP/MECH & Mr.S.Nelsonraja, AP/MECH)

T. P. R. R. R.
HOD/Mech 17/6/24

DEPARTMENT OF MECHANICAL ENGINEERING
SINGO'S COLLEGE OF ENGINEERING
PUDUKKOTAI

J. R. R.
Principal 17/6/2024

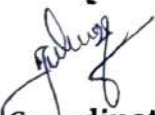
DEPARTMENT OF MECHANICAL ENGINEERING

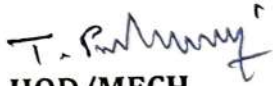
ACADEMIC YEAR 2023-24 (EVEN)

Date: 05.02.2024

CIRCULAR

As a part of skill enhancement of student community, the Department of Mechanical Engineering has planned to conduct the "My Credit Course" for final year students from 12.02.2024. Interested final year students are requested to register their name in Swayam wed portal or app on or before 09.02.2024.


Coordinator
(Mr.K.Rajesh Kumar)
(AP/MECH)


HOD/MECH
H.O.D.
DEPARTMENT OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNALKULAM

DEPARTMENT OF MECHANICAL ENGINEERING
Academic year 2023-24 Even / Batch:2020-24

MY CREDIT COURSE CONTENT

Course Code: BME-025

Course Name: Condition Monitoring and Maintenance Management

Course Outline:

Week 1: Functions and Objectives of Maintenance

Week 2: Maintenance Strategies

Week 3: Maintenance Schedules

Week 4: Spare Parts Management


Week 5: Diagnostic Maintenance

Week 6: Condition Monitoring and Trend Analysis

Week 7: Maintenance Models

Week 8: Total Productive Maintenance and Japanese Concept of Kaizen


Course Coordinator


HoD/Mechanical
H.O.D
DEPARTMENT OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
RIINALKULAM

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023 - 24 (EVEN SEMESTER)

MY CREDIT COURSE REPORT

Year / Sem : IV / 08

Course Name: Condition Monitoring and Maintenance Management

Source : Swayam app

Venue : Mechanical Smart Class room.

Duration : 12-02-2024 to 24-04-2024

Objective of the My Credit Course:

- The objectives of a condition monitoring and maintenance management course are designed to provide students with a foundational understanding of fundamental principles and concepts of maintenance management in the field of mechanical engineering.
- Familiarize students with the role and significance of mechanical engineering in the broader field of engineering.
- To know the monitoring and maintenance system of industrial management.
- To understand the students to the ethical and professional responsibilities associated with mechanical engineering.

Session Details:

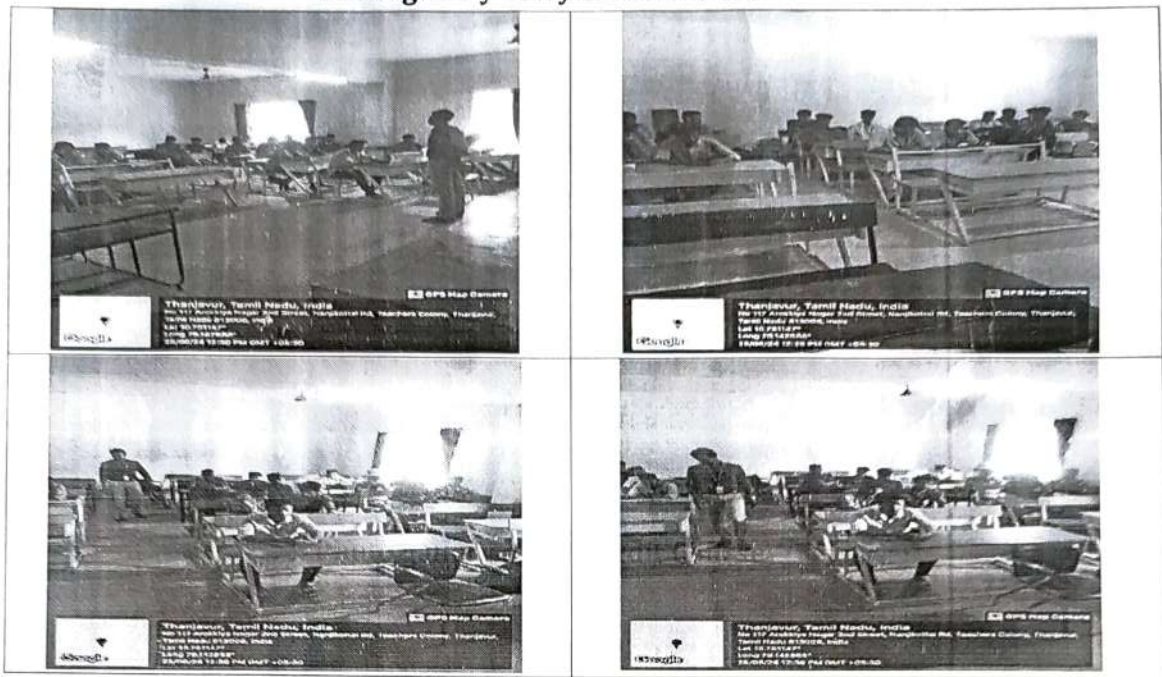
Dr.T.Pushparaj, HOD, Department of Mechanical Engineering delivered the welcome address for the “My Credit Course on Condition Monitoring and Maintenance Management” for final year students. He highlighted the importance of mechanical knowledge; outcome based education and shared his experience with the students.

Mr.K.Rajesh Kumar, Assistant Professor, Department of Mechanical Engineering enlightened final year students about the condition monitoring and maintenance management course. He also explained the rules and regulations of practical subjects to effectively handle sessions for a condition monitoring and maintenance management course.

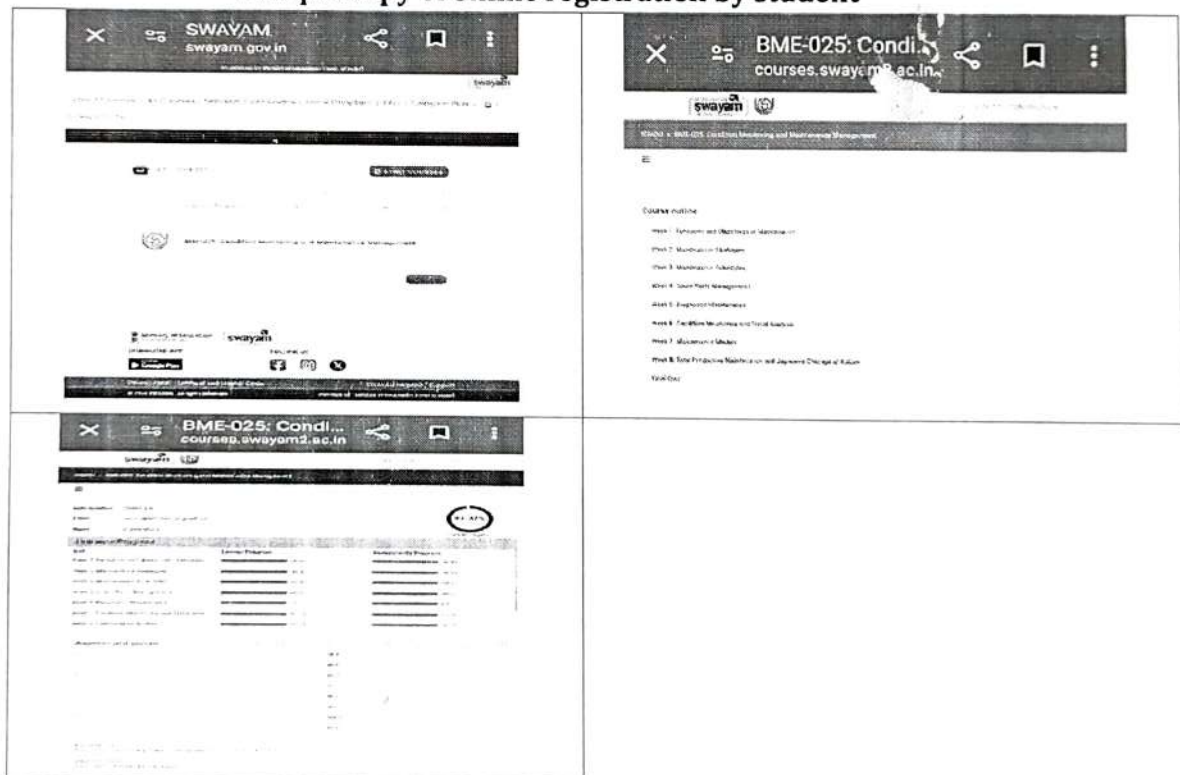
Outcome of the My Credit Course:

- Students understand the fundamental engineering principles and their applications of maintenance management.
- Gained the knowledge about ethical and professional responsibilities associated with mechanical engineering.

Photo gallery of My Credit Course



Sample copy of online registration by student



K. Rajesh Kumar
Coordinator
(Mr.K.Rajesh Kumar)
(AP/MECH)

T. P. S. S. S.
HOD/Mech
17/7/24

J. M. M.
Principal
01/7/2024

H.O.D
DEPARTMENT OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNAKULAM



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023 - 24 (ODD SEMESTER)

BRIDGE COURSE REPORT

Year / Sem : II-MECH / 03

Course Name: "Basics of Mechanical Engineering"

Venue : Mechanical Smart Class room.

Objective of the Bridge Course:

- The objectives of a Basic Mechanical Engineering course are designed to provide students with a foundational understanding of fundamental principles and concepts in the field of Mechanical engineering.
- Familiarize students with the role and significance of mechanical engineering in the broader field of engineering.
- To know the properties and behaviour of materials used in different temperature and load condition.
- To understand the students to the ethical and professional responsibilities associated with mechanical engineering.

Methodology:

- Action plan of the bridge course is prepared well in advance by the senior faculty and get it approved by Head of the Department.
- Handle the lecture class with multimedia presentations, visual aids, and demonstrations.
- Provide opportunities for students to work with tools, instruments, and equipment commonly used in mechanical engineering.
- Use different evaluation methods such as quizzes, exams, assignments, and projects.

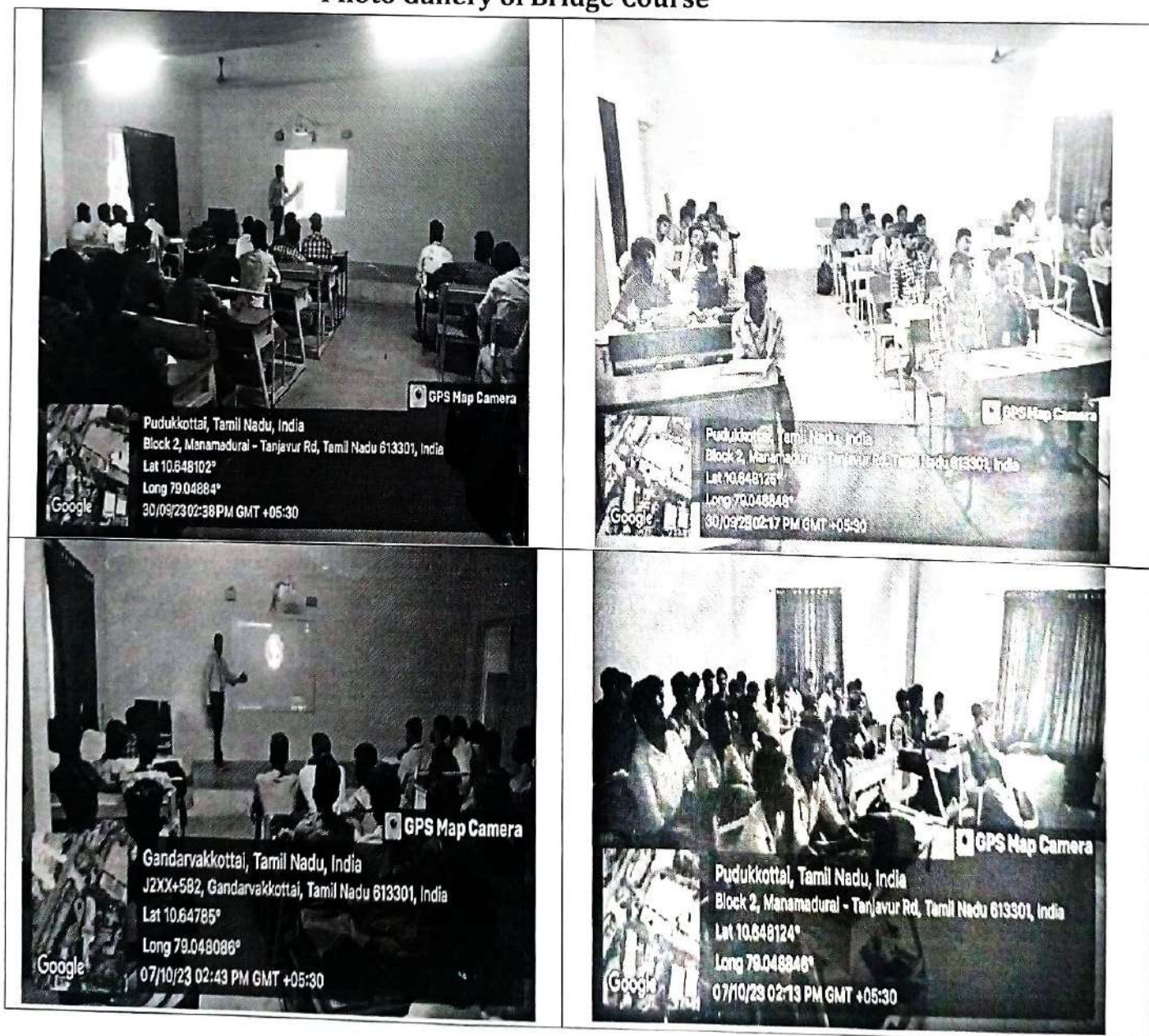
Session Details:

Dr.T.Pushparaj, HOD, Department of Mechanical Engineering delivered the welcome address for the "Bridge Course on Basics of Mechanical Engineering" for second year students. He highlighted the importance of mechanical knowledge; outcome based education and shared his experience with the students.

Mr.R.Rajadurai, Assistant Professor, Department of Mechanical Engineering enlightened second year students about the basics of a mechanical engineering course.He also explained the rules and regulations of practical subjects to effectively handle sessions for a basic mechanical engineering course.

Mr.S.Balaganesh, Assistant Professor, Department of Mechanical Engineering handled an activity based session for second year students on basics of mechanical engineering and also comprehend foundational concepts. Share additional resources, recommended online materials for students and discuss the practical applications and relevance of the basics being covered.

Photo Gallery of Bridge Course



Outcome of the Bridge Course:

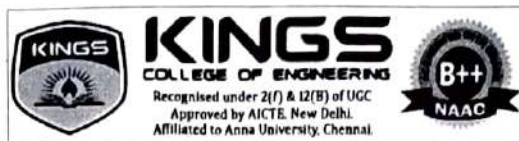
- Students understand the fundamental engineering principles and their applications.
- Gained the knowledge about ethical and professional responsibilities associated with mechanical engineering.

Handwritten signature of S. Balaganesh
30.1.24
Coordinators

(Mr.R.Rajadurai, AP/MECH &
Mr.S.Balaganesh, AP/MECH)

Handwritten signature of T. R. Ramesh
21/2/24
HOD/Mech

Handwritten signature of J. Ramesh
7/2/2024
Principal



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24 / ODD SEMESTER

Report on Refresher Course – Automation in Manufacturing

The Department of Mechanical Engineering at Kings College of Engineering organized a refresher course on “Automation in Manufacturing” for IV-year students. The course aimed to equip students with the latest knowledge and skills in the field of automation, preparing them for the challenges of modern manufacturing industries. The refresher course spanned a period of nearly four months, commencing on July 27, 2023, and concluding on November 11, 2023. The course consisted of a total of 30 hours of instruction, with an added focus on assessment through two internal exams, each of which was 3 hours in duration and carried a maximum of 100 marks. For all passed students, the E- certificate has been issued through the mail.

COURSE DETAILS

| | |
|-------------------------------------|---|
| Course code &Name | : Automation in Manufacturing |
| Year / Semester | : IV Year/Mechanical – A & B |
| Course duration | : 27.07.2023 to 11.11.2023 (30 Periods) |
| No of students enrolled | : IV MECH A – 39; IV MECH B – 40 (Total-79) |
| No of students completed the course | : 79 |
| Course Instructor | : Mr. H. Agilan & Mr. S. Sabanayagam |

Course Content

The course provided a comprehensive understanding of automation in manufacturing, covering topics such as:

- Introduction to Automation
- Types of Automation
- Sensors and Actuators

- PLC Programming
- Industrial Robots
- CNC Machines
- Process Control
- Industry 4.0 and Smart Manufacturing

Course Objectives

- To provide students with a fundamental understanding of the principles and concepts of automation in manufacturing, including the use of technology and machinery to perform tasks with minimal human intervention.
- To teach students how automation can be applied to optimize manufacturing processes, reduce production time, enhance product quality, and minimize resource wastage.
- To train students in programming and controlling automated systems, including writing code for PLCs, robotics, and other automation components.
- To enhance students' ability to communicate effectively with colleagues and superiors in a manufacturing setting, especially in cross-functional teams where automation plays a crucial role.
- To help students prepare for careers in automation engineering, robotics, control systems, and related fields within the manufacturing industry by providing them with the knowledge and skills required for success.

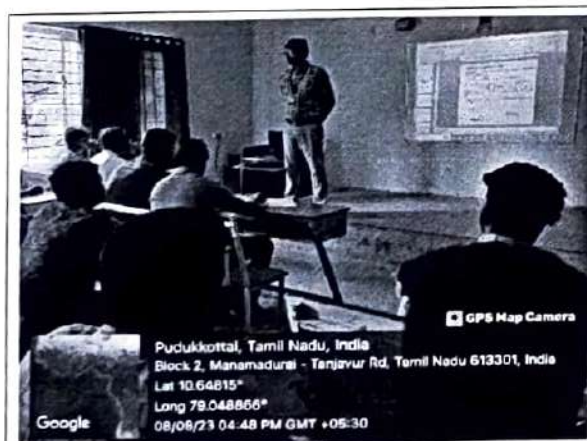
Course Outcomes

The outcomes of an automation in manufacturing course are designed to reflect the knowledge and skills that students are expected to gain upon completing the program. These outcomes demonstrate the course's effectiveness in preparing individuals for careers in the manufacturing industry with a focus on automation. Here are the expected outcomes of such a course:

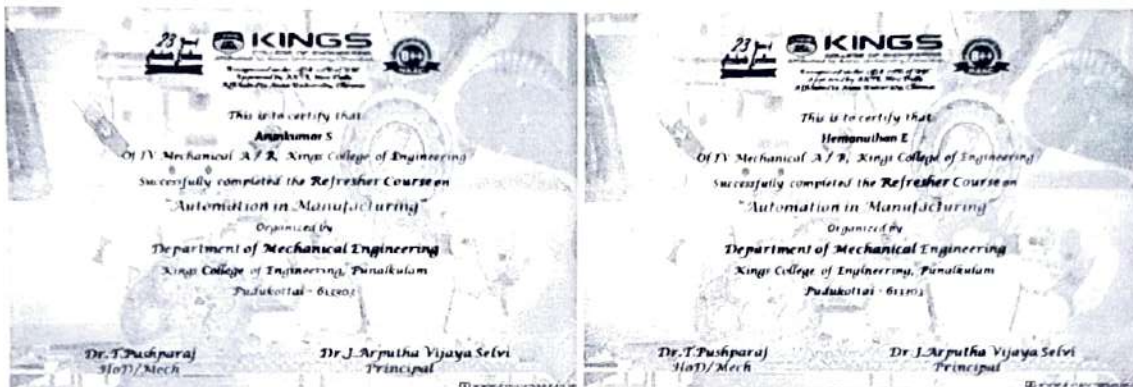
- **Comprehensive Understanding:** Graduates will possess a comprehensive understanding of the principles, concepts, and technologies related to automation in manufacturing.

- **Process Optimization:** Graduates will have the ability to apply automation principles to optimize manufacturing processes, leading to increased efficiency, reduced production time, and enhanced product quality.
- **Problem-Solving Skills:** Graduates will have developed problem-solving and critical thinking skills to diagnose and address issues in automated systems effectively.
- **Communication Skills:** Graduates will have enhanced communication skills to collaborate effectively within cross-functional teams in a manufacturing environment.
- **Career Preparedness:** Graduates will be well-prepared for careers in automation engineering, robotics, control systems, and related roles within the manufacturing industry, with the skills needed for success.

Course Screenshots



Sample Certificates



Feedback

Feedback has been collected from the students at the end of the course and the summary is given below:

| Feedback | Excellent | Very Good | Satisfactory | Need to be Improved |
|--------------------------|-----------|-----------|--------------|---------------------|
| Course content | 47 | 21 | 08 | 03 |
| Skill development | 49 | 24 | 04 | 02 |
| Motivation | 54 | 21 | 03 | 01 |
| Regularity & punctuality | 48 | 23 | 08 | - |
| Coverage of syllabus | 43 | 24 | 09 | 03 |
| Interaction | 46 | 26 | 05 | 02 |
| Individual attention | 41 | 27 | 07 | 04 |
| Outcome | 49 | 18 | 10 | 02 |

Mr. H. Agilan
15/11/23

Mr.H.Agilan
Mr.S.Sabanayagam
Staff in-charge

Dr. T. Pushpara
15/11/23

Dr.T.Pushpara

HoD/Mech

Dr. J. Arputha Vijaya Selvi
15/11/2023

Dr.J.Arputha Vijaya Selvi

Principal



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24 / ODD SEMESTER

VALUE ADDED COURSE REPORT

As per Students Enrichment, a value addition initiative course on “smart materials and structures” has been conducted for third year students on Saturdays. which enhanced the students’ knowledge about different normal and abnormal behavior of certain materials (smart materials) and their engineering applications. Two assessments have been conducted for evaluation of the course. For all passed students, the E- certificate has been issued through the mail.

COURSE DETAILS

Course Code & Name: MVA005 & Smart Materials and Structures

Year / Semester: III / V

Course duration: 27.08.2023 to 22.10.2023 (30 Periods)

No of students enrolled: 49

No of students completed the course: 48

Course Incharge: Mr. V.Aravind

Course Credit Points: 2

COURSE OBJECTIVES

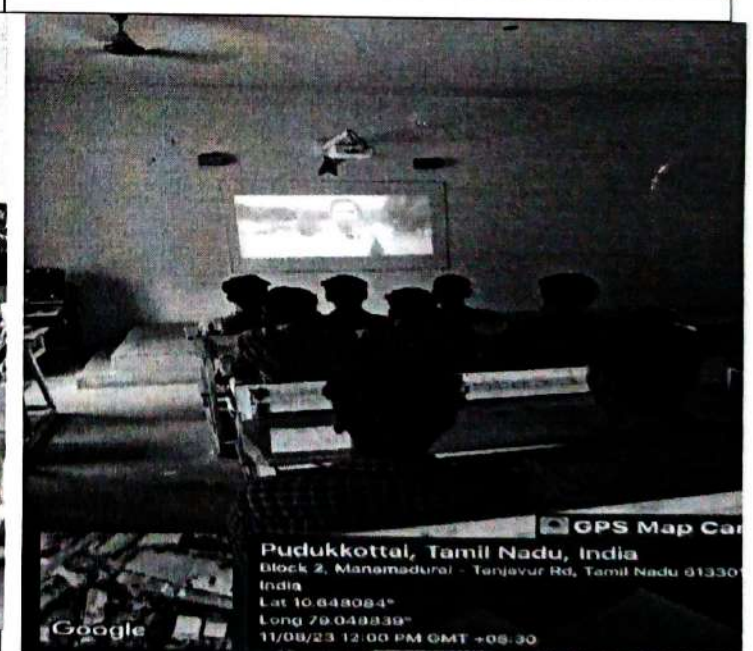
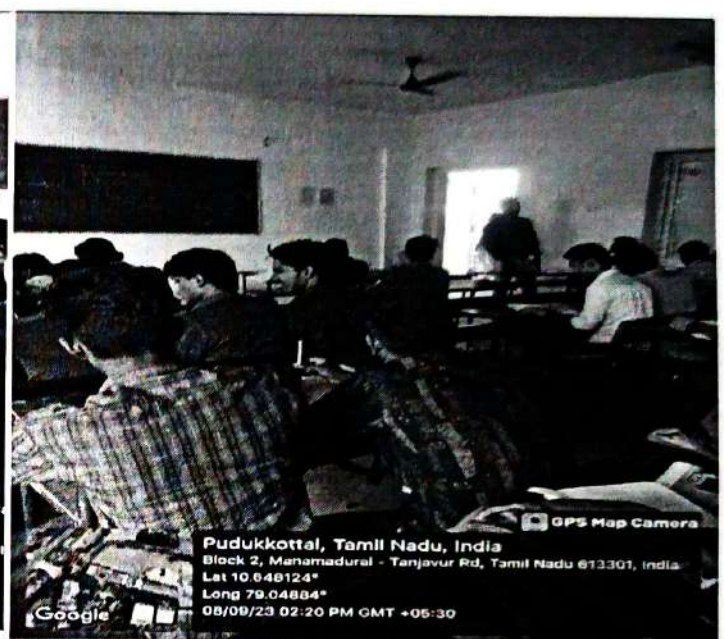
- To describe the basic principles and mechanisms of smart materials and devices.
- To enhance the knowledge of the physical principles underlying the behavior of smart materials.
- To understand the basic principles in smart sensors, actuators and transducer technology and mechanisms of measuring techniques with applications.

COURSE OUTCOMES:

Upon the completion of this course the students will be able to

1. Classify various smart materials and devices.
2. Formulate an analytical approach on vibration absorbers.
3. Demonstrate strain measurement using smart materials.
4. Develop control strategies for smart structures, dampers for health monitoring of structures.

COURSE SCREENSHOTS



Mr. V.Aravind handled the sessions of "Smart materials and structures "in different days

FEEDBACK

Feedback has been collected from the students at the end of sessions



Student Feedback Form for Value Added Course Mechanical Department Student Feed Back

Course : Smart Materials And Structures
Academic year : 2023-2024 Batch- 2021-2025
Semester : V

Name : Kincily Reg No: 821121114304

| S.No | Criteria | Rating | | | | |
|------|--------------------------|-----------|-----------|------|------|--------------|
| | | Excellent | Very Good | Good | Fair | Satisfactory |
| 1 | Course content | ✓ | | | | |
| 2 | Skill development | ✓ | | | | |
| 3 | Motivation | ✓ | | | | |
| 4 | Regularity & punctuality | | ✓ | | | |
| 5 | Coverage of syllabus | ✓ | | | | |
| 6 | Interaction | ✓ | ✓ | | | |
| 7 | Individual attention | | ✓ | | | |
| 8 | Outcome | | ✓ | | | |
| 9 | Other suggestion | | ✓ | | | |



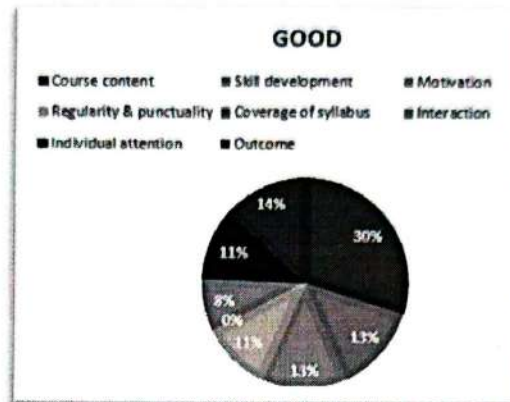
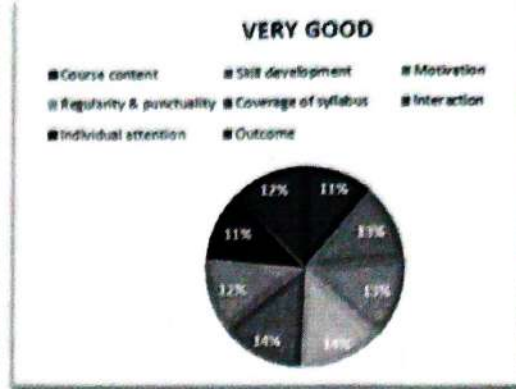
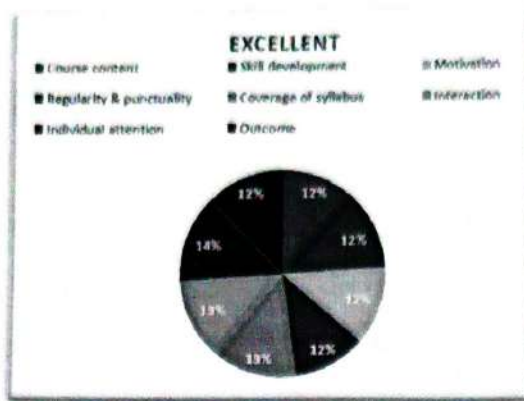
Student Feedback Form for Value Added Course Mechanical Department Student Feed Back

Course : Smart Materials And Structures
Academic year : 2023-2024 Batch- 2021-2025
Semester : V

Name : Dhinakaran Reg No: 821121114007

| S.No | Criteria | Rating | | | | |
|------|--------------------------|-----------|-----------|------|------|--------------|
| | | Excellent | Very Good | Good | Fair | Satisfactory |
| 1 | Course content | ✓ | | | | |
| 2 | Skill development | | ✓ | | | |
| 3 | Motivation | | ✓ | | | |
| 4 | Regularity & punctuality | ✓ | | | | |
| 5 | Coverage of syllabus | ✓ | | | | |
| 6 | Interaction | | ✓ | | | |
| 7 | Individual attention | | ✓ | | | |
| 8 | Outcome | ✓ | | | | |
| 9 | Other suggestion | | ✓ | | | |

| FEEDBACK | Excellent | Very Good | Good | Fair | Satisfactory |
|--------------------------|-----------|-----------|------|------|--------------|
| Course content | 30 | 10 | 08 | - | - |
| Skill development | 28 | 11 | 09 | - | - |
| Motivation | 30 | 09 | 09 | - | - |
| Regularity & punctuality | 32 | 07 | 09 | - | - |
| Coverage of syllabus | 30 | 11 | 07 | - | - |
| Interaction | 33 | 10 | 05 | - | - |
| Individual attention | 32 | 11 | 05 | - | - |
| Outcome | 31 | 13 | 04 | - | - |



SAMPLE CERTIFICATES





[E - CERTIFICATE]

This is to certify that


Mr. SIVA A

has successfully completed the Value Added Course (2 Credits) **MVA005 - Smart Materials and Structures** required course of study approved by the Anna University for the fifth semester on Third year Mechanical Engineering.



System generated certificate signature is not required


Staff Incharge


HOD/Mech 23/2/2024


Principal 23/2/2024



Department of Mechanical Engineering
Academic year 2023-24 (ODD)

REPORT ON “CAREER GUIDANCE PROGRAM”, 17th NOVEMBER, 2023

Time : 3.00 P.M. to 4.00 P.M.

Venue: Mechanical Smart Class Room

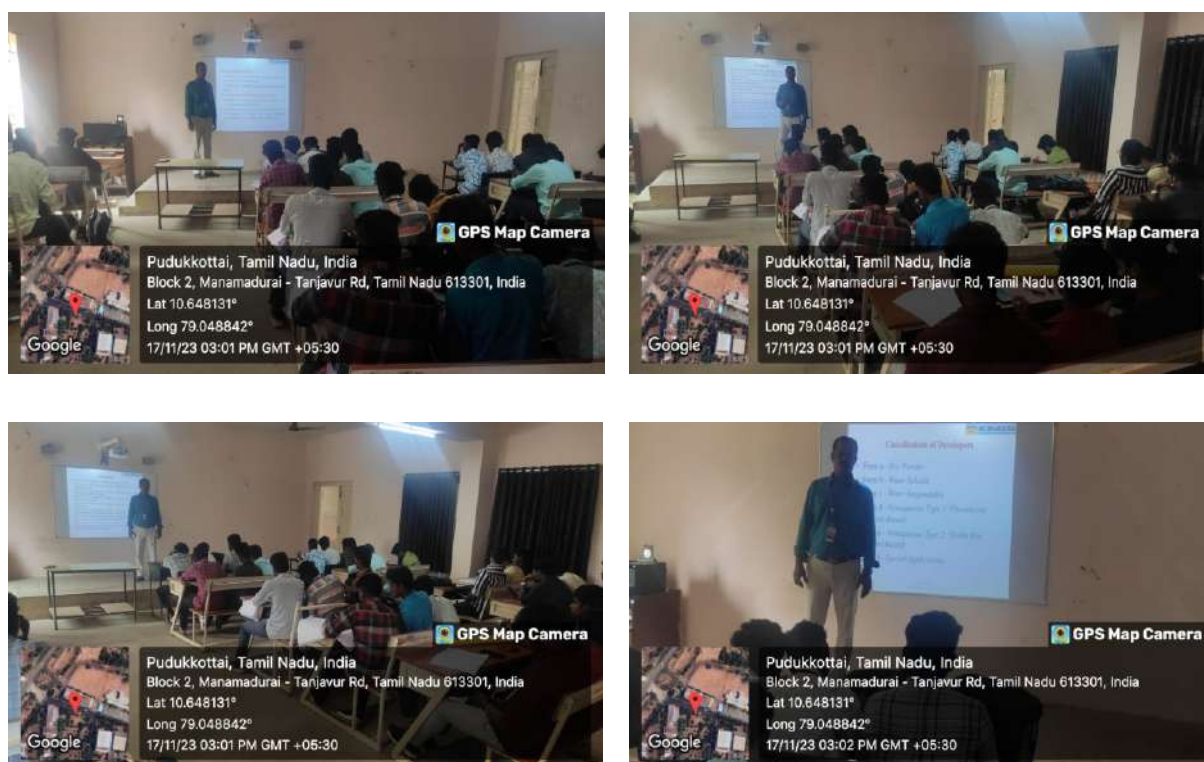
Kings College of Engineering, Department of Mechanical Engineering conducted a Career guidance Program titled as “**CAREER COUNSELING ON JOB OPPORTUNITIES IN INDIA AND ABROAD**” on 17th November. The effort was made for the 3rd year students to make them aware about various opportunities and trends in the field of Mechanical Engineering, after the course completion in India and Abroad.

The program was carried out for effective 1 hour duration. The Resource person for the session was Dr. R. Shankar, Assistant Professor, Department of Mechanical Engineering. He gave an elaborative introduction about the various opportunities and scope in the field of Engineering. He suggested varied ways and ideas on how to opt the career in abroad.

He further highlighted that Career guidance plays a very important role in the lives of all individuals, as it helps in setting future goals and chooses careers. Career guidance is much needed service to those who did not plan for their future at an early stage, more should be done to assist the younger generations in personal career development.

At the end of the session the students cleared their doubts by asking various questions regarding the confusions, they usually face while deciding their career. The program ended with a powerful vote of thanks by Mr. N. Magesh, Assistant Professor, Department of Mechanical Engineering, Kings College of Engineering.

Screenshot of the program



Dr. R. Shankar, delivering his speech on “Career Counseling on Job Opportunities In India and Abroad”

Outcomes of the Event:

- All the students were highly motivated and enlightened about various opportunities after completing their course. It was a very informative for the students and faculty members who attended the session.
- Overall the program helped the students to have a better understanding of the opportunities that could be offered by Apprenticeship, Entrepreneurship and Higher education.

List of attended students (III Mechanical) and Feedback

| SN | Name of the participant | Content of the session | Resource person delivery towards the prescribed content within the given time | Overall feedback about the session. |
|----|-------------------------|------------------------|---|-------------------------------------|
| 1 | Aakash P | Excellent | Yes | Excellent |
| 2 | Akilan P | Good | Yes | Good |
| 3 | Alex A | Excellent | Yes | Excellent |
| 4 | Anbarasan C | Good | Yes | Good |
| 5 | Aswinkumar R | Excellent | Yes | Good |
| 6 | Dhinakaran P | Excellent | Yes | Excellent |
| 7 | Dinesh K | Good | Yes | Excellent |
| 8 | Elanthendral R | Good | Yes | Excellent |
| 9 | Joseph Christoher M | Excellent | Yes | Excellent |

| | | | | |
|----|--------------------|--------------|-----|-----------|
| 10 | Kalaimaran S | Excellent | Yes | Good |
| 11 | Karthi G | Good | Yes | Excellent |
| 12 | Kaviyarasan K | Excellent | Yes | Excellent |
| 13 | Kiveshwaran V | Excellent | Yes | Good |
| 14 | Madhan R | Good | Yes | Excellent |
| 15 | Manikandan R | Good | Yes | Excellent |
| 16 | Manikandan S | Good | Yes | Excellent |
| 17 | Manikandan S | Excellent | Yes | Good |
| 18 | Manikandan U | Good | Yes | Good |
| 19 | Maniraj D | Excellent | Yes | Excellent |
| 20 | Mukesh Kumar R | Good | Yes | Excellent |
| 21 | Niraivan M | Good | Yes | Excellent |
| 22 | Nirmal D | Excellent | Yes | Good |
| 23 | Nithishkumar R | Excellent | Yes | Good |
| 24 | Nivaskhan R | Good | Yes | Excellent |
| 25 | Perarivalan R | Excellent | Yes | Good |
| 26 | Ponnarasan S | Good | Yes | Excellent |
| 27 | Ragul S | Excellent | Yes | Excellent |
| 28 | Rajeshkumar R | Excellent | Yes | Excellent |
| 29 | Ribaydeen R | Good | Yes | Good |
| 30 | Rishivaran C | Excellent | Yes | Excellent |
| 31 | Santhosh. R | Excellent | Yes | Excellent |
| 32 | Sathish K | Satisfactory | No | Excellent |
| 33 | Selva S | Good | Yes | Excellent |
| 34 | Selvendran S | Excellent | Yes | Good |
| 35 | Siva A | Excellent | Yes | Excellent |
| 36 | Sridhar S | Excellent | Yes | Good |
| 37 | Suresh K | Excellent | Yes | Excellent |
| 38 | Veerakumar R | Good | Yes | Excellent |
| 39 | Aravindan M | Good | Yes | Good |
| 40 | Bharani abisheik V | Excellent | Yes | Excellent |
| 41 | Bharanidharan G | Excellent | Yes | Good |
| 42 | Hariharan R | Excellent | Yes | Excellent |
| 43 | Kincily S | Excellent | Yes | Excellent |
| 44 | Prakash M | Excellent | Yes | Good |
| 45 | Sethuram .A | Good | Yes | Excellent |

Sample Feedback form

Career Guidance Program / Feedback Form

Student Name: M.Aravindan

Class : III Mechanical

1. Content of the session

| | | |
|-----------|--------------|------|
| Excellent | Satisfactory | Good |
| | | ✓ |

2. Resource person delivery towards the prescribed content within the given time

| | |
|-----|----|
| Yes | NO |
| ✓ | |

3. Overall feedback about the session

| | | |
|-----------|--------------|------|
| Excellent | Satisfactory | Good |
| | | ✓ |

Sample Feedback form

Career Guidance Program / Sample Feedback Form

Student Name: *K. Suresh*

Class : III Mechanical

1. Content of the session

| Excellent | Satisfactory | Good |
|-------------------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. Resource person delivery towards the prescribed content within the given time

| Yes | NO |
|-------------------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> |

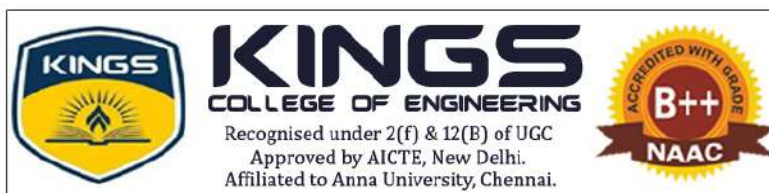
3. Overall feedback about the session

| Excellent | Satisfactory | Good |
|-------------------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

R. Shankar
20/11/23
Event Organizer
Dr. R. Shankar, AP/MECH.

T. P. S. Srinivas
21/11/23
HoD/Mech

J. M. Srinivas
21/11/2023
Principal



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24 / ODD SEMESTER

WEBINAR REPORT

| | |
|--|--|
| Session Details: | |
| Title of the Session : Webinar on “ ADVANCED HEAT TREATMENT TECHNIQUES ” | |
| Date : 09.11.2023 | Duration : 1 Hour (10.00 A.M to 11.00 A.M) |
| Activity Category : External | Nature of the Session : Online Mode |
| Facebook link for the event organized | Facebook/Kings College of Engineering |
| Speaker Details: | |
| Name: Mr. B. Sivaraman | Designation: Service Engineer, GKG group of business, Thanjavur - 613501 |
| Programme Report: | |
| <ul style="list-style-type: none"> ➤ The Department of Mechanical Engineering had organized a National level webinar on “ADVANCED HEAT TREATMENT TECHNIQUES” through online mode on 09.11.2023 at 10.00 a.m. ➤ Welcome address was given by Dr.T.Pushparaj, Professor/Head of the Department, Department of Mechanical Engineering, Kings College of Engineering. ➤ Chief Guest introduction was given by Dr.R.Shankar, Assistant Professor, Department of Mechanical Engineering, Kings College of Engineering. ➤ The resource person Mr. B. Sivaraman, Service Engineer, GKG group of business, Thanjavur, had given the technical talk on “Advanced Heat Treatment Techniques”. In his lecture, he gave a detailed explanation about Heat treatment techniques include annealing, case hardening, precipitation strengthening, tempering, carburizing, normalizing and quenching. ➤ 62 participants registered and attended the webinar. ➤ Vote of thanks was given by Dr.M.Melwin Jagadeesh Sridhar , Assistant Professor, Department of Mechanical Engineering, Kings College of Engineering. ➤ At the end of the session, all attended participants gave their feedback and E-certificate has been sent to them through email. | |

Outcome of the activity:

- The introduction of advanced heat treatment techniques significantly improved the hardness, tensile strength, ductility, and fatigue resistance of the cast components, to new learning opportunities for them.

Photographs:



Dr. R. Shankar
13/11/23

Co-ordinators

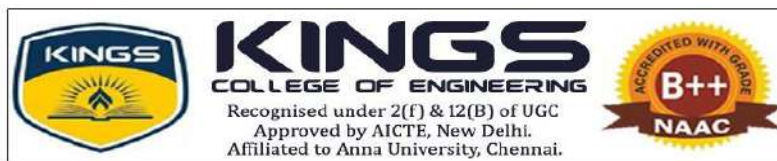
Dr. R. Shankar, AP/MECH.
Dr.M.Melwin J Sridhar, AP/MECH.

T. R. Ramesh
13/11/23

HOD/Mech.

J. Ramesh
13/11/23

Principal



**DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)
INTERNAL STAFF SEMINAR REPORT**

Date& time : 04.11.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on “Recent Trends in Welding Technology”
Resource person : Mr. M. Sakthivel
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on “Recent Trends in Welding Technology” for faculty members of the Mechanical Department on 04.11.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in welding and metallurgy.

The Following Points were Discussed During the Session:

- One of the newest advancements in welding involves the use of laser technology to instantly melt metal and fuse two pieces together.
- The laser beam is extremely accurate and enables fine welding even when dealing with extremely intricate parts.
- Laser welding is said to be as much as 10 times faster than typical MIG welding. At the same time, it doesn't require high heat or multiple passes.
- This makes it efficient for high-precision manufacturing processes such as those demanded by the medical and automotive industries.
- Industries are finding that robots are a highly cost-effective solution, especially in mass production since they are capable of working efficiently without human error.
- Robotic welding is best suited for short welds with repeatable and predictable tasks so that they don't have to be reprogrammed constantly.



Snapshots of the Session



Snapshots of the Session

Chapters Discussed:

- Metallurgical Properties Changing During Welding.
- Benefits and Limitations.
- ResearchScopes in Welding Techniques.

Outcomes:

Upon listing of this seminar the participants can able to

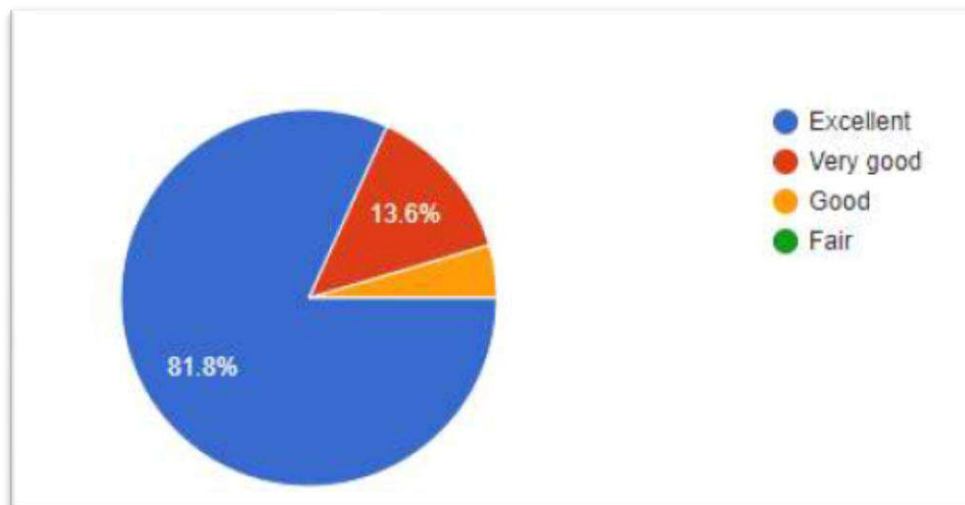
- Understand the various typesof welding techniques.
- Understand the parameters of a specified welding procedure.
- Able to understand the concept of welding metallurgy.

References:

1. Shixiong Wu et all." Microstructure and Mechanical Properties of Superficial Surface and Subsurface Layers in the Cutting of Hardened Steel Under Cryogenic Cooling" - Journal of Materials Processing Technology, Volume 422, September 2022, 118165.
2. Gang HeeGu, et all. "Current Trends in Welding process and material improvement in effectiveness" - Materials & Design, Volume 133, September 2022, 112289.
3. W.H. Peng, et all."Effects of WC Grain Size on Surface Hardening of WC-10Co Cemented Carbides by Pulsed Electron Beam Irradiation" - Vacuum, Volume 217, January 2021, 112614.

4. Ziwei Qin et al. "Strain-Hardening, Impact Protective and Self-Healing Supramolecular Polyurethane Nanocomposites Enabled by Quadruple H-Bonding, Disulfide Bonds and Nanoparticles" - Chemical Engineering Journal, Volume 337, 10 July 2022, 143434.
5. Jun Li et al. "Current Trend in Welding Process and Material" - Advances in Industrial and Manufacturing Engineering - 3, May 2022, 100006.

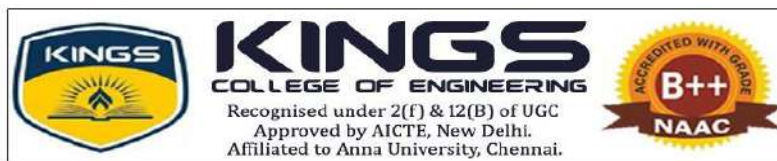
Feedback Analysis:



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Staff Incharge 09/11/23

T. P. Ramesh
HOD/MECH 06/12/23

S. Ramesh
Principal 06/12/2023



**DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)
INTERNAL STAFF SEMINAR REPORT**

Date& time : 01.11.2023&12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on “FRP Composite Materials”
Resource person : Mr.K. Rajesh Kumar
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on “FRP Composite Materials” for faculty members of the Mechanical Department on 01.11.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in materials and metallurgy.

The Following Points were Discussed During the Session:

- Fibre-reinforced polymer (FRP) , also Fibre-reinforced plastic , is a composite material made of a polymer matrix reinforced with fibres. The fibres are usually glass, carbon, or aramid, although other fibres such as paper or wood or asbestos have been sometimes used.
- FRP can be used in a wide range of applications but is commonly used in construction as panels. Used as a panel it can create strong walls and surfaces that are scratch-resistant and able to withstand high impacts. FRP is commonly used in schools, hospitals, recreational facilities and other industrial settings.
- High quality (FRP) products are created using high-quality polymer and fibers that enhance the surface's strength and durability.
- The fibre component of a FRP composite typically contributes the majority of the material's strength. The matrix's job is to contain the fibres and distribute forces among them. For instance, glass fibre, which often comes in the form of woven cloth or fibre mats, is stronger than steel for its weight. When mixed with epoxy resin, the resulting glass fibre composite is light, stiff, and robust.



Snapshots of the Session

Chapters Discussed:

- Fiber types, properties and applications.
- Advanced manufacturing techniques.
- Benefits and Limitations.
- CurrentResearchScopes in FRP composite materials.

Outcomes:

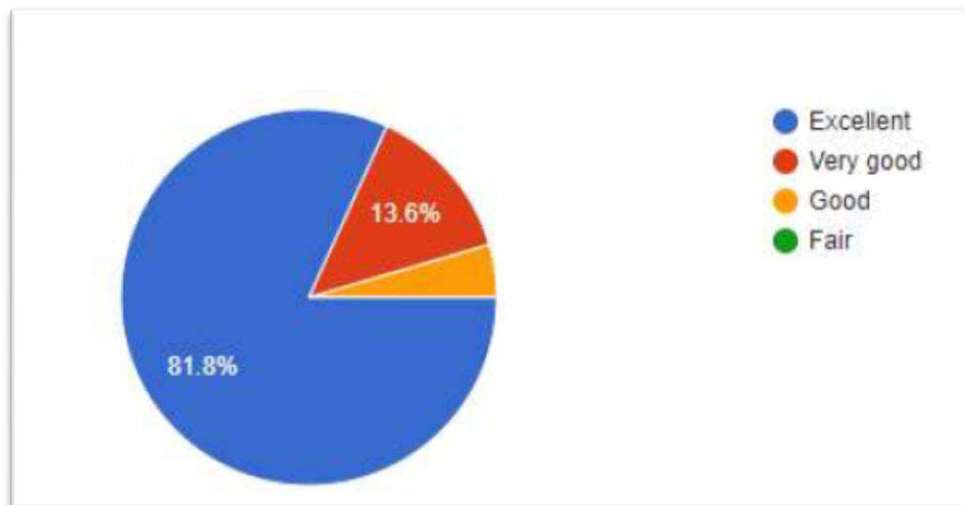
Upon listing of this seminar, the participants can able to

- Understand the various typesFRP fabrication techniques.
- Understand the special fiber materials in special applications.
- Get awareness about current research scopes in FRP composites.

References:

1. Hollaway, L. C. (2010). A review of the present and future utilization of FRP composites in the civil infrastructure with reference to their important in-service properties. *Construction and building materials*, 24(12), 2419-2445.
2. Li, Y. F., Tsai, M. J., Wei, T. F., & Wang, W. C. (2014). A study on wood beams strengthened by FRP composite materials. *Construction and Building Materials*, 62, 118-125.
3. Günaslan, S. E., Karaşin, A., & Öncü, M. E. (2014). Properties of FRP materials for strengthening. *International Journal of Innovative Science, Engineering & Technology*, 1(9), 656-660.
4. Gaurav, A., & Singh, K. K. (2018). Fatigue behavior of FRP composites and CNT-Embedded FRP composites: A review. *Polymer Composites*, 39(6), 1785-1808.
5. Cenna, A. A., & Mathew, P. (2002). Analysis and prediction of laser cutting parameters of fibre reinforced plastics (FRP) composite materials. *International Journal of Machine Tools and Manufacture*, 42(1), 105-113.

Feedback Analysis:



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6/12/23
Staff Incharge

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HOD/MECH 6/12/23

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06/12/2023
Principal



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24 (ODD)

INTERNAL STAFF SEMINAR REPORT

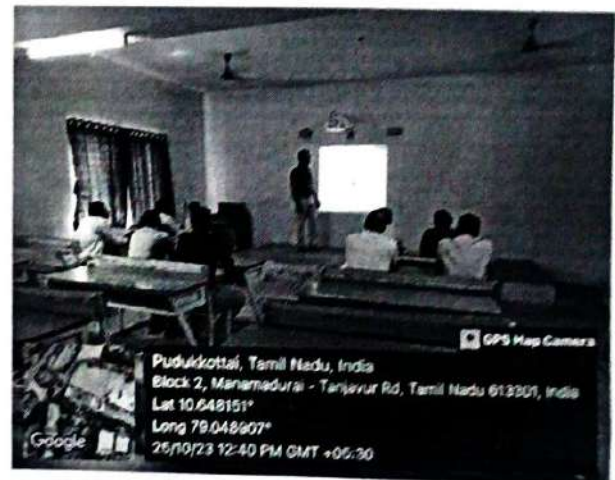
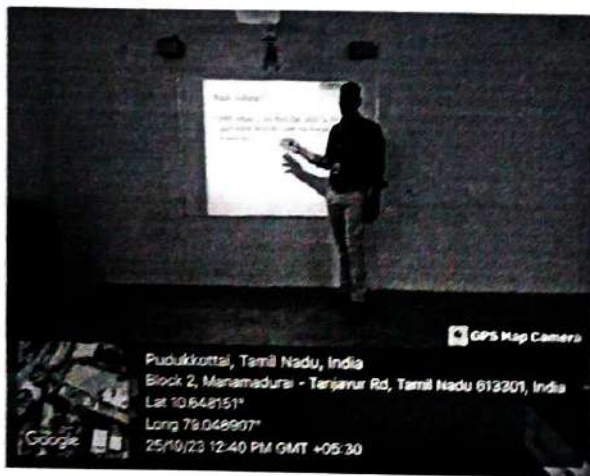
Date& time : 25.10.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "Plasma Arc Sintering and Process Parameters"
Resource person : Dr.M.Melwin Jagadeesh Sridhar
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Plasma Arc Sintering and Process Parameters" for faculty members of the Mechanical Department on 25.10.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in plasma arc sintering.

The Following Points were Discussed During the Session:

- The optimal SPS sintering parameters were a sintering temperature of 500 °C, a pressing pressure of 30 MPa, a sintering time of 12 min and a heating rate of 160 °C/min, which translated into a density of 2.71 g/cm³ and a microhardness of 38.61 HV [57,58,59,60,61].
- Spark Plasma Sintering (SPS) is a sintering technique used to fabricate dense and homogeneous bulk materials from powders. It involves the application of pulsed direct current (DC) and uniaxial pressure to the powder within a die.
- The process variables are involved in sintering are mostly thermodynamic variables, such as temperature, time, atmosphere, pressure, heating and cooling rate. Many previous sintering studies have examined the effects of sintering temperature and time on sinterability of powder compacts.
- There are three different heating techniques for pressureless sintering - constant-rate of heating (CRH), rate-controlled sintering (RCS), and two-step sintering (TSS). The ceramic microstructure and grain size will vary depending on the material and technique used.

- **Solid-State Sintering:** Powdered material is heated to a temperature just below the melting point. This bonds the particles together by atomic diffusion at the grain boundaries. **Liquid Phase Sintering:** Uses the addition of a small amount of a solvent liquid to the powder to induce low porosity and bonding.
- Spark plasma sintering, also known as plasma pressure compaction (P2C) sintering, equipment are commercially available now and are no longer limited to laboratory research work.
- Common process variables are flow, level, pressure, temperature, turbidity, chlorine, and oxygen levels.



Snapshots of the Session

Chapters Discussed:

- Copper and copper alloys are used to produce sintered metals.
- Sintered steel is produced using steel and steel alloys.
- Powder iron can be used to produce sintered iron.

Kings College of Engineering, Punalkulam

- Powders used in ~~metal sintering~~ includes: ~~Iron and Carbon Steels, Iron-Copper and Copper Steels, Iron-Nickel and Nickel Steels.~~
- FAST Sintering (or Field Assisted Sintering Technology), is a process that allows the production of more resistant and high-density materials from powders.

Outcomes:

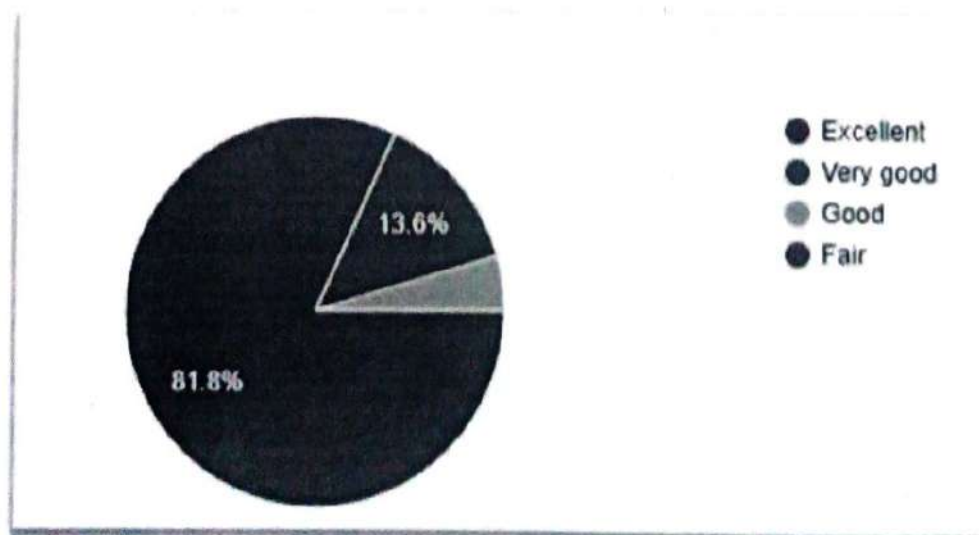
Upon listing of this seminar the participants can able to

- Understand sintering provides mechanical strength, eliminates pores, and increases the ceramic density.
- Understand the concepts and functioning of sintering.
- Able to understand the sintering temperature in recent advancements.

References:

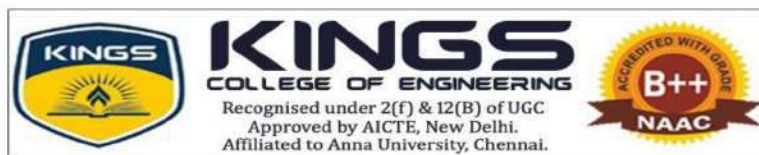
1. Tiwari D., Basu B. and Biswas K. 2009 Ceram. Inter. 35 699.
2. Grasso S., Sakka Y. and Maizza G. 2009 Sci. Technol. Adv. Mater. 10 053001.
3. Olevsky E. a. 1998 Mater. Sci. Eng. R Reports 23 41-100.
4. Hu C., Sakka Y., Tanaka H., Nishimura T. and Guo S. 2010 J. Euro. Ceram. Soc. 30 2625.
5. Kraft T. and Riedel H. 2004 J. Eur. Ceram. Soc. 24 345-361.

Feedback Analysis:



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Staff Incharge

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HOD/MECH 25/10/23



**DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)
INTERNAL STAFF SEMINAR REPORT**

Date& time : 20.10.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on “Vacuum and Surface Hardening”
Resource person : Mr. S. Nelson Raja
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on “Vacuum and Surface Hardening” for faculty members of the Mechanical Department on 20.10.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in materials and metallurgy.

The Following Points were Discussed During the Session:

- Thermally assisted surface hardening techniques have led to a surge in research efforts and industrial applications, with emphasis on strengthening of metallic materials with high work hardening, high strength and poor deformability.
- The common surface hardening techniques such as warm shot peening, warm laser shock peening and thermally assisted ultrasonic surface hardening are discussed. Also the development and working principle for each of the techniques are discussed.
- As compared with conventional surface hardening techniques, thermally assisted surface hardening techniques with optimum processing temperatures can further increase the surface and subsurface hardness, thickness of the hardening layer, fatigue life and wear resistance of mechanical components.
- Thermal energy can soften the materials, allowing plastic deformation to produce higher magnitude and deeper region of work hardening, allowing plastic deformation to produce higher magnitude and deeper region of work hardening.
- The coupled thermal-dynamic effect enables a broader design space for alloy hardening,

- The thermo mechanical treatment can also induce dynamic strain aging and dynamic precipitation in some metallic alloys, which leads to precipitation strengthening and enhanced stability of dislocations and compressive residual stress.



Snapshots of the Session

Chapters Discussed:

- Surface Hardening Techniques
- Metallurgical Properties Changing During the Vacuum and Surface Hardening.
- Benefits and Limitations.
- Research Scopes in Heat Treatment Techniques.

Outcomes:

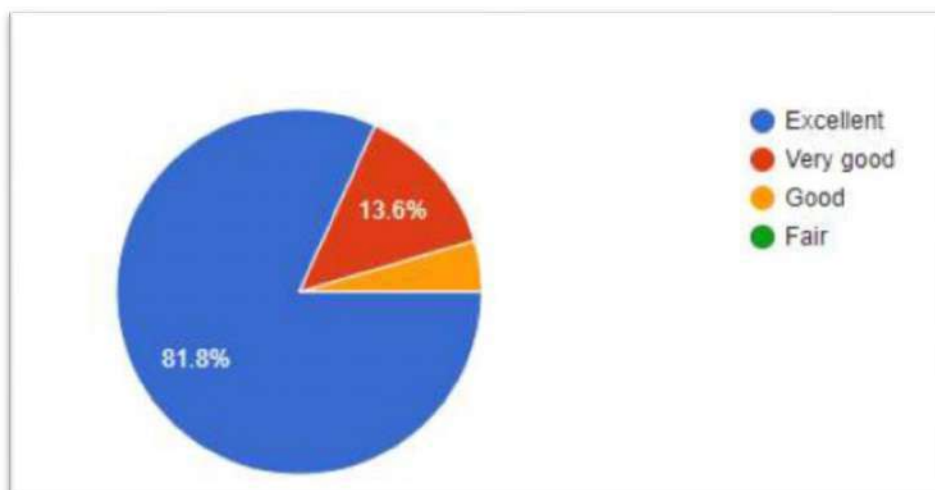
Upon listing of this seminar the participants can able to

- Understand the various types heat treatment techniques.
- Understand the concepts work hardening and surface hardening.
- Able to understand the concept of metallurgy in recent advancements.

References:

1. W.H. Peng, et al. "Effects of WC Grain Size on Surface Hardening of WC-10 Co Cemented Carbides by Pulsed Electron Beam Irradiation" - Vacuum, Volume 207, January 2023, 111613.
2. Gang Hee Gu, et al. "Unprecedented Bake Hardening Responses of Interstitial High-Entropy Alloy by Synergistic Effect with Lattice Distortion" - Materials & Design, Volume 233, September 2023, 112289.
3. Ziwei Qin et al. "Strain-Hardening, Impact Protective and Self-Healing Supramolecular Polyurethane Nanocomposites Enabled by Quadruple H-Bonding, Disulfide Bonds and Nanoparticles" - Chemical Engineering Journal, Volume 467, 1 July 2023, 143434.
4. Shixiong Wu et al. "Microstructure and Mechanical Properties of Superficial Surface and Subsurface Layers in the Cutting of Hardened Steel Under Cryogenic Cooling" - Journal of Materials Processing Technology, Volume 322, September 2023, 118165.
5. Jun Liu et al. "Recent Development of Thermally Assisted Surface Hardening Techniques" - Advances in Industrial and Manufacturing Engineering - Volume 2, May 2021, 100006.

Feedback Analysis:



SLP
25/10/2023

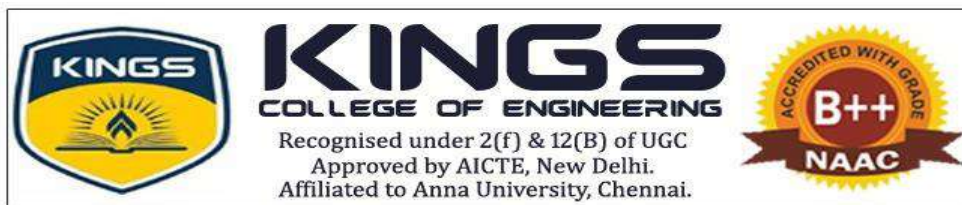
Staff Incharge

T. Puthumy
25/10/23

HOD/MECH

J. Murali
25/10/2023

Principal



DEPARTMENT OF MECHANICAL ENGINEERING

National Level Technical Symposium

MECH STORM 2K23

On 11th October 2023

Symposium Report

Organized by

Department of Mechanical Engineering,

Kings College of Engineering,

Punalkulam-613303, Pudukkottai Dt.

Website: www.kingsengg.edu.in

AGENDA

| TIME | EVENTS | INCHARGE |
|-----------------|----------------------------------|--|
| 10.00am-10.05am | Prayer Song | |
| 10.06am-10.11am | Welcome Address | Mr. K. Dinesh, Student, III Mechanical |
| 10.12am-10.15am | Lightning the Lamp | Dignitaries |
| 10.16am-10.25am | Inaugural Address | Dr. J. Arputha Vijaya Selvi, Principal, KCE |
| 10.26am-10.35am | Presidential Address | Dr. R. Rajendran, Secretary, KCE. |
| 10.36am-10.45am | Felicitation Address | Dr. S. Sivakumar, Vice Principal, KCE. |
| 10.46am-10.50am | Introduction to Chief Guest | Mr. S. Ponnarasan, Student, III Mechanical |
| 10.51am-11.10am | Special Address (Chief Guest) | Dr. S. Jayabal, Principal, GCE, Sengipatti. |
| 11.11am-11.15am | Release of Souvenir | Dignitaries |
| 11.16am-11.30am | Tea Break | |
| 11.31-am-1.15am | Session I | Technical & Non-technical Events |
| 1.16pm-2.00pm | Lunch | |
| 2.01pm-3.00pm | Session II | Technical & Non-technical Events |
| 3.01pm-3.15pm | Tea Break | |
| 3.16pm-3.45pm | Valedictory Function | |
| 3.45pm-4.00pm | Vote of Thanks | Mr. S. Sabanayagam, AP/Mechanical, KCE |

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REPORT ON MECHSTORM 2K23

The Department of Mechanical Engineering at Kings College of Engineering proudly organized the national-level technical symposium "MECHSTORM 2K23" on 11th October 2023. The event served as a platform for students, academicians, and professionals to share knowledge and innovations in the field of mechanical engineering.

The symposium commenced with the “Tamil Thai Vaazthu” prayer song. Welcome address was given by Mr.K.Dinesh, III Mechanical Engineering student, Kings College of Engineering. The dignitaries began the symposium by lighting the lamp, which marked the beginning of the event. Dr. R. Rajendran, Secretary of the KCE, presented a shawl and a memento to the distinguished guest as a token of his appreciation.

The Inaugural Address was given by Dr. J. Arputha Vijaya Selvi, the Principal of Kings College of Engineering. Dr. Selvi emphasized the importance of research, innovation, and collaboration among academic institutions and industries. She set the tone for the symposium, underscoring the need for continuous learning and development in the field of mechanical engineering.

The Presidential Address was delivered by Dr. R. Rajendran, the Secretary of Kings College of Engineering. Dr. R. Rajendran shared his insights on the significance of such events in promoting academic and technical excellence. He also encouraged the participants to engage actively and make the most of the opportunities presented at MECHSTORM 2K23.

Dr. S. Sivakumar, the Vice-Principal of Kings College of Engineering, presented the Felicitations Address. He acknowledged the efforts of the organizing committee, faculty, and students in putting together an event of this scale. Dr. S. Sivakumar encouraged the participants to take advantage of the technical and non-technical sessions, and paper presentations to expand their knowledge and skills.

The Chief Guest for the event was Dr. S. Jayabal, Principal of Government College of Engineering, Sengipatti. Mr. S. Ponnarasan, a student of III Mechanical Engineering, introduced Dr. S. Jayabal, highlighting his numerous contributions to the field of engineering.

Dr. S. Jayabal expressed his gratitude for the warm welcome and spoke about the role of technology in shaping the future of the mechanical engineering field.

The highlight of the event was the Special Address by Chief Guest Dr. S. Jayabal. He delved into the challenges and opportunities in the mechanical engineering domain and stressed the importance of nurturing talent and fostering research and development. Dr. S. Jayabal's insights were invaluable to the aspiring mechanical engineers in attendance.

Glimpses of the Symposium “MECHSTORM 2K23”



Opening Ceremony-Tamizh Thai Vazhthu



**Welcome Address by Mr.K.Dinesh,
Student, III Mechanical Engineering**



**Dr.R.Rajendran, Secretary, KCE
lighting the kuthuvilakku**



**Dr.S.Jayabal,Principal,GCE,Sengipatti,
lighting the kuthuvilakku**



**Dr.J.Arputha Vijaya Selvi, Principal, KCE
lighting the kuthuvilakku**



**Dr.S.Sivakumar, Vice Principal, KCE
lighting the kuthuvilakku**



Honoring the Chief Gueset



**Inaugural address by Dr.J.Arputha Vijaya Selvi,
Principal, KCE**



**Presidential Address by Dr.R.Rajendran,
Secretary, KCE**



**Felicitation Address by Dr.S.Sivakumar,
Vice Principal, KCE**



**Chief Guest introduction by Mr.S.Ponnarasan,
Student, III Mech**



Special Address by Chief Guest



Releasing of souvenir by dignitaries



Audience for paper presentation at Chera Hall

The "MECHSTORM 2K23" event included technical events, non-technical activities, and fun events. Paper presentation, Technical Quiz, CAD Modelling, Technical Connection, and Project Expo were the technical activities planned. Short Film, Free hand sketching, photography memory, and Pictionary were the non-technical activities of the technical conference, while the fun events were Free Fire (BR Squad), Karaoke with singing, and Magic Bowl. The symposium also featured a competition for student teams to showcase their engineering skills through various practical challenges.

Regarding the main technical event, out of 33 technical papers 15 papers were selected and presented in the paper presentation session. The session was chaired by Dr. T. Pushparaj, HOD/Mech, Dr. P. P. Shantharaman Asso. Prof/Mech and Dr. R. Shankar Asst. Prof/Mech. They reviewed and selected the two best papers.

Other technical, non-technical and fun events was given in the summary table.

| | |
|--|--|
|  <p>GPS Map Camera</p> <p>Gandarvakkottai, Tamil Nadu, India J2XX+582, Gandarvakkottai, Tamil Nadu 613301, India Lat 10.647598° Long 79.048173° 11/10/23 12:34 PM GMT +05:30</p> |  <p>GPS Map Camera</p> <p>Pudukkottai, Tamil Nadu, India Block 2, Manamadurai - Tanjavur Rd, Tamil Nadu 613301, India Lat 10.648147° Long 79.048847° 11/10/23 02:33 PM GMT +05:30</p> |
| Paper Presentation | Technical Quiz |
|  <p>GPS Map Camera</p> <p>Pudukkottai, Tamil Nadu, India Block 2, Manamadurai - Tanjavur Rd, Tamil Nadu 613301, India Lat 10.64813° Long 79.048878° 11/10/23 12:53 PM GMT +05:30</p> |  <p>GPS Map Camera</p> <p>Pudukkottai, Tamil Nadu, India Block 2, Manamadurai - Tanjavur Rd, Tamil Nadu 613301, India Lat 10.648147° Long 79.048847° 11/10/23 02:32 PM GMT +05:30</p> |
| CAD Modeling | Technical Connection |
|  <p>GPS Map Camera</p> <p>Pudukkottai, Tamil Nadu, India Block 2, Manamadurai - Tanjavur Rd, Tamil Nadu 613301, India Lat 10.648147° Long 79.048848° 11/10/23 12:43 PM GMT +05:30</p> |  <p>GPS Map Camera</p> <p>Pudukkottai, Tamil Nadu, India Kings College of Engineering Bus Stop, National Highway 226, Tamil Nadu 613301, India Lat 10.649571° Long 79.047732° 11/10/23 03:06 PM GMT +05:30</p> |
| Pictionary | FreeFire |

The event was a resounding success, with enthusiastic participation from students, faculty, and professionals from various institutions. It offered a rich learning experience and served as a testament to the commitment of Kings College of Engineering to promote excellence in mechanical engineering.

In conclusion, MECHSTORM 2K23 was a remarkable gathering of individuals passionate about the field of mechanical engineering. The event left participants inspired, motivated, and better equipped to face the challenges and opportunities that lie ahead in this dynamic field. The organizers and participants are grateful to the distinguished guests and speakers for their valuable contributions to the event's success.

Finally, the valedictory function was started with a video presentation by final Mechanical students that showed the latest innovations (Projects done by Mechanical students of KCE) in Mechanical Engineering. Mr.S.Sabanayagam, an AP/Mechanical, provided a symposium summary. Dr.T.Pushparaj, Head of Department of Mechanical Engineering, handed out awards to the winners and gave out certificates of achievement to everyone who took part. Mr.H.Agilan,AP/Mech, Mr.S.Sabanayagam AP/Mech, Mr.R.Rajadurai AP/Mech and Mr.S.Balaganesh AP/Mech organized and coordinate the entire symposium. Mr. S.Sabanayagam, AP/Mech delivered vote of thanks. The symposium was successfully finished with national anthem.


LIST OF RESEARCH ARTICLES
National Level Technical Symposium
“MECH STORM 2K23”

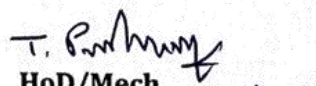
| TECHNICAL SESSION | |
|--------------------------|---|
| MECH STORM 01 | Optimization of Electric Discharge Machining Process Parameters using Grey Relational Analysis for Incoloy 800HT |
| | Christo Charles.S ¹ , Abiyuth. A ¹ ¹ St. Joseph College of Engineering & Technology, Thanjavur |
| MECH STORM 02 | The role of computer aided design/computer assisted manufacturing (CAD/CAM) and 3 – Dimensional printing. |
| | Pagalavan.M ¹ , Gowtham.D ¹ ¹ St. Joseph College of Engineering & Technology, Thanjavur |
| MECH STORM 03 | Thermal and structural analysis on an exhaust manifold by using NX NASTRAN |
| | Alwis Nirmal.P ¹ , Vignesh.M ¹ ¹ St. Joseph College of Engineering & Technology, Thanjavur |
| MECH STORM 04 | Experimental Investigation of Emission and Performance Characteristics using of Polymer oil and Jojoba Oil with 1 Pentanol in Single Cylinder Diesel Engine |
| | Agilan.H ¹ , Balaji.S ¹ ¹ Kings College of Engineering, Punalkulam |
| MECH STORM 05 | Experimental Techniques for Mechanical Properties of Geopolymer Coatings, Corrosion Protection of Steel |
| | Srikanth S K ¹ , Divakar.S ¹ ¹ St. Joseph College of Engineering & Technology, Thanjavur |
| MECH STORM 06 | Enhancement of Efficiency of Solar Panel by Modelling of Photovoltaic Module with Boost Convertors |
| | Yogaraj.R ¹ , , Divakar.S ¹ ¹ St. Joseph College of Engineering & Technology, Thanjavur |
| MECH STORM 07 | Parametric Modeling and optimization of Polymer Nano composite |
| | Subash.R ¹ ¹ PRIST University, Vallam |
| MECH STORM 08 | Parametric optimization of process parameter on wear behaviour in Epoxy/HNT nanocomposite |
| | Mohammed Faizal . M ¹ , Dhivakar.V ¹ PRIST University, Vallam |

| | |
|------------------|--|
| MECH STORM 09 | Performance of a CI Engine with Cardnol Bio Fuel Blends |
| | Pradeep.P ¹ , Ragul.S ¹ P R Engineering college, Vallam |
| MECH STORM 10 | Workability and Corrosion Behavior Studies on Sintered Iron based Hybrid Powder Metallurgy Alloys |
| | Nelson Raja. S ¹ , Alex. A ¹ , Siva. S ¹ ¹ Kings College of Engineering, Punalkulam |
| MECH STORM 11 | Processing and Mechanical Property Evaluation of Banana Fiber Reinforced Polymer Composites |
| | Vinoth Raj.D ¹ , Deepak.D ¹ , Karthikeyan.I.M ¹ ¹ Mount Zion College of Engineering and Technology, Pudukkottai |
| MECH STORM 12 | Influence of TiO ₂ on Mechanical and Wear Characteristics of Aluminum Matrix Composites Synthesized by Stir Casting Route |
| | V. Navaneetha krishnan ¹ , S. Vishvanath perumal ¹ , A. Arunkumar ¹ , G. Gurumoorthi ¹ ¹ E.G.S. Pillay Engineering College, Nagapattinam |
| MECH STORM 13 | Influence of Friction Stir Welding Parameters on Microstructural and Mechanical Properties of Similar AA6063 Alloy Joints |
| | A. Arunkumar ¹ , V. Navaneetha krishnan ¹ , J. Jeevamalar ¹ , M. Vikneswaran ¹ ¹ E.G.S. Pillay Engineering College, Nagapattinam |
| MECH STORM 14 | Processing Technology and Mechanical Properties of Die-Cast Magnesium Alloy AZ92A-T6 |
| | Chandra Mouli E ¹ Methun Sagar D ¹ S Rathna Raj ¹ S Sakthi Arunachalam S ¹ ¹ Government College of Engineering, Thanjavur |
| MECH STORM 15 | Influence of Aluminium Oxide Additive on The Performance of a Diesel Engine Fueled With Jatropa Oil and Diesel Fuel |
| | G. Arunkumar ¹ , A. Arsath Sathick ¹ ¹ P.R Engineering College, Thanjavur |

LIST OF COLLEGES PARTICIPATED

| S. No | Name of the College | Number of Participants |
|--------------|---|------------------------|
| 1 | Arasu Engineering College Kumbakonam, Tamil Nadu. | 16 |
| 2 | A.R.J College of Engineering & Technology | 04 |
| 3 | Government College of Engineering, Sengipatti | 03 |
| 4 | MAM College of Engineering | 01 |
| 5 | Mount Zion College of Engineering & Technology | 03 |
| 6 | Parisutham Institute of Science & Technology | 22 |
| 7 | Pattukottai Polytechnic College | 11 |
| 8 | Periyar Maniammai Institute of Science & Technology | 03 |
| 9 | PREC, Thanjavur | 05 |
| 10 | PRIST, Thanjavur | 20 |
| 11 | St.Joseph College of Engineering & Technology | 14 |
| Total | | 102 |


16/10/23
Coordinator


HoD/Mech
16/10/23


16/10/2023
Principal



Department of Mechanical Engineering
Academic Year 2023-2024 Odd Semester
Career Guidance Program

Career guidance is an essential aspect for engineering graduates to help them discover their strengths and weaknesses and choose a profession that is lucrative and fulfilling. To provide adequate knowledge about post measures after the graduation, a career guidance along with higher study initiative event was organized by Department of Mechanical Engineering, Kings College of Engineering, Punalkulam. The main focus of the event was IV Year (A & B) students of Mechanical Engineering. There are 59 Students in IV Year (A & B) Mechanical Engineering. The event was intimated to the beneficiaries through WhatsApp circular and was conducted on 30/09/2023. Mr. S. Sabanayagam, AP/Mechanical presented the career guidance and the opportunities available in the society along with possible ways that a Mechanical Engineering graduate will have in their hand.

After the session, Feedback was obtained from the beneficiaries by Google form and the responses along with event screenshots were provided below for the reference.

Chapters Discussed:

- **Higher Studies:** Pursuing higher studies is a popular option for engineering graduates. Students can prepare for the Graduate Aptitude Test in Engineering (GATE) exam and pursue a Master's degree in their field of interest.
- **Public Service Undertakings:** Public Service Undertakings (PSUs) are government-owned companies that offer employment opportunities to engineering graduates. PSUs conduct recruitment exams, and candidates who qualify can secure jobs in various departments.
- **Management:** Engineering graduates can also pursue a career in management by pursuing an MBA or PGDM degree.
- **Entrepreneurship:** Starting a business is another option for engineering graduates. They can use their technical knowledge to develop innovative products and services.
- **Campus Placements:** Campus placements are a popular way for engineering graduates to secure employment opportunities. Companies visit college campuses to recruit students for various positions.
- **Civil Services:** Engineering graduates can also appear for the Civil Services Examination conducted by the Union Public Service Commission (UPSC) and secure jobs in various government departments.
- **Internships:** Internships provide students with practical experience and exposure to the industry. Students can intern with companies during their course of study or after graduation.
- **Certifications:** Engineering graduates can also pursue certifications in their field of interest to enhance their skills and knowledge.

Screenshots of the Event:



Outcomes:

Upon listing of this event, the participants can able to

- Know the various opportunities regarding mechanical engineering.
- Become an entrepreneur by engaging themselves in innovative ideas.
- Participate in competitive exams and go for higher education.

Feedback Obtained from Google Form:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-------------------------|---|-----------------------|-------------------------|-----------------------------|------------------------------------|-----------|---|---|----|----|----|----|----|----|----|----|----|----|----|
| Email Address | NAME (AADHIKARUNET REG NO (B21120114001 CLASS | content of the Sessio | Resource person deliver | Is the Time sufficient to c | Overall feedback about the session | | | | | | | | | | | | | | |
| anishkumar205@gmail.com | AKASH M | 821120114003 IV A | Excellent | Good | Yes to be improved | Excellent | | | | | | | | | | | | | |
| anishkumar205@gmail.com | ANBARASAN V | 821120114004 IV A | Satisfied | Good | Excellent | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | RAKESH A | 821120114320 IV A | Excellent | Satisfied | Excellent | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | ARUNKUMAR M | 821120114006 IV A | Excellent | Satisfied | Excellent | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | ARUN E | 821120114005 IV A | Satisfied | Excellent | Excellent | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | ARUNKUMAR S | 821120114008 IV A | Good | Excellent | Excellent | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | BELEJ S | 821120114305 IV B | Good | Excellent | Good | Excellent | | | | | | | | | | | | | |
| anishkumar205@gmail.com | BALAKRISHNAN S | 821120114009 IV A | Good | Excellent | Good | Excellent | | | | | | | | | | | | | |
| anishkumar205@gmail.com | K. DIVAKAR | 821120114012 IV A | Satisfied | Good | Satisfied | Excellent | | | | | | | | | | | | | |
| anishkumar205@gmail.com | DURAI RAJ V | 821120114013 IV A | Excellent | Good | Satisfied | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | ERANJAN K | 821120114014 IV A | Excellent | Satisfied | Satisfied | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | PRANAV K | 821120114318 IV A | Excellent | Satisfied | Satisfied | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | GHANASEKHARAN S | 821120114015 IV A | Good | Excellent | Excellent | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | R. HARU PRASATH | 821120114017 IV A | Good | Excellent | Excellent | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | HARISH RAGHAVENDR | 821120114306 IV B | Good | Excellent | Satisfied | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | HEMANATHAN E | 821120114018 IV A | Satisfied | Good | Satisfied | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | JAYANARAJ J | 821120114307 IV A | Satisfied | Good | Excellent | Satisfied | | | | | | | | | | | | | |
| anishkumar205@gmail.com | JAYANARAJ J | 821120114307 IV A | Satisfied | Good | Excellent | Satisfied | | | | | | | | | | | | | |

| Parameter | Excellent | Satisfactory | Good | Yet to be improved |
|---|-----------|--------------|------|--------------------|
| Content of the Session | 26 | 28 | 05 | - |
| Resource person delivery towards the prescribed content within the given time | 24 | 31 | 04 | - |
| Is the Time sufficient to cover the theme? | 30 | 24 | 05 | - |
| Overall feedback about the session | 34 | 23 | 02 | - |

References:

1. <https://gate2024.iisc.ac.in/>
2. https://www.tnpsc.gov.in/english/annual_planner.html
3. <https://www.hindustantimes.com/education/competitive-exams>
4. <https://www.ediindia.org/>
5. <https://files.eric.ed.gov/fulltext/EJ1086214.pdf>.
6. Increasing students' career readiness through career guidance: measuring the impact with a validated measure by Vanessa Dodd, Jill Hanson & Tristram Hooley
7. Career Guidance and Student Counselling by Radhika Kapur


Event in-charge


HoD/Mechanical


Principal



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)

Date : 19.09.2023

CIRCULAR

As a part of skill enhancement of student community, the Department of Mechanical Engineering has planned to conduct the "Orientation Program" for second year students on 20.09.2023 at Mechanical ICT Class Room (207). Second year students are instructed to attend the program without fail.

Session Details

| S. No | Session Time | Staff Name | Topic |
|-------|--------------------------|--|---|
| 1. | 09.15 A.M. to 09.25 A.M. | Mr. M. Vivekananthan Assistant Professor / Mechanical | Welcome Address |
| 2. | 09.25 A.M. to 10.00 A.M. | Dr. T. Pushparaj Professor & Head / Mechanical | Department Familiarization |
| 3. | 10.00 A.M. to 10.45 A.M. | Mrs. T. Gnanajeya Co-ordinator / Maths | Basics of Transform and Partial Differential Equation |
| 4. | 11.00 A.M. to 11.45 A.M. | Dr. M. Melwin Jegadeesh Sridhar Assistant Professor / Mechanical | Fluid Power and Basics Principles |
| 5. | 11.45 A.M. to 12.30 P.M. | Dr. B. Suresh Babu Assistant Professor / T&P | Soft Skills |
| 6. | 01.10 P.M. to 04.10 P.M. | Mr. N. Magesh Assistant Professor / Mechanical Dr. M. Melwin Jegadeesh Sridhar Assistant Professor / Mechanical | Importance of Manufacturing and CADM (Practical) |
| 7. | 04.10 P.M. to 04.20 P.M. | Mr. R. Rajadurai Assistant Professor / Mechanical | Vote of Thanks |

[Signature]
19/9/23
Staff Incharge

[Signature]
19/9/23
HOD/Mechanical

[Signature]
19/9/2023
Principal



**DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023 - 2024 (ODD)
STUDENT ORIENTATION PROGRAMME – REPORT**

Date : 20-09-2023

Time : 9:15 AM – 4:20 PM

Venue: ICT CR 207

As a part of academic activity of the department, Orientation Programme was organized on 20th September 2023 for second year students of Mechanical Engineering. The programme was held in five sessions from 9.15 A.M. to 4.20 P.M. Mr. M. Vivekananthan, Assistant Professor, delivered welcome address.

Event Objectives:

- To prepare the students about their career goal and how to work on it.
- To involve and learn about the career development process and develop their skills.
- To create the awareness about various co-curricular and extracurricular activities and help the student for their overall development.
- To create awareness among students about the professional etiquettes.
- To promote the students for enhancing their skills and learn about various innovative ways to enhance their career.

Session I:

Dr. T. Pushparaj, Professor/Head, Department of Mechanical Engineering handled a session on "Department Familiarization" between 9:25 A.M to 10:00 A.M. He discussed the facilities and amenities of the department and lined out the importance and engagement for their career development.

Points Discussed in Session I:

- Discussions on curriculum.
- Knowledge development based on core activity.
- Importance of professional development.

Session II:

Mrs. T. Gnanajeya, Asst. Professor/ Co-ordinator/Maths handled a session on "Basics of Transform and Partial Differential Equation" between 10:00 A.M to 10:45 A.M. She interacted with students about the importance of mathematics subject in the field of engineering, specifically in mechanical department and how it related with mechanical subjects.

Points Discussed in Session II:

- Applications of mathematics in mechanical engineering subjects.
- Importance of Partial differential equations.

Session III:

Dr. M. Melwin Jegadeesh Sridhar, Assistant Professor, Department of Mechanical Engineering, handled a session on "Fluid Power and Basics Principles" between 11:00 A.M to 11:45 A.M. He discussed the fluid systems resources in power plants.

Points Discussed in Session III:

- Utilization of fluid power in mechanical engineering field.
- Availability of fluid resources and how it is used.

Session IV:

Dr. B. Suresh Babu, Assistant Professor, Department of Training and Placement handled a session on "Soft Skills" between 11:45 A.M to 12:30 P.M. He shared about importance of soft skill development for engineering students.

Points Discussed in Session IV:

- Develop the knowledge in professional skills for career goal.
- Learning the aptitude skills in view of govt. exams.

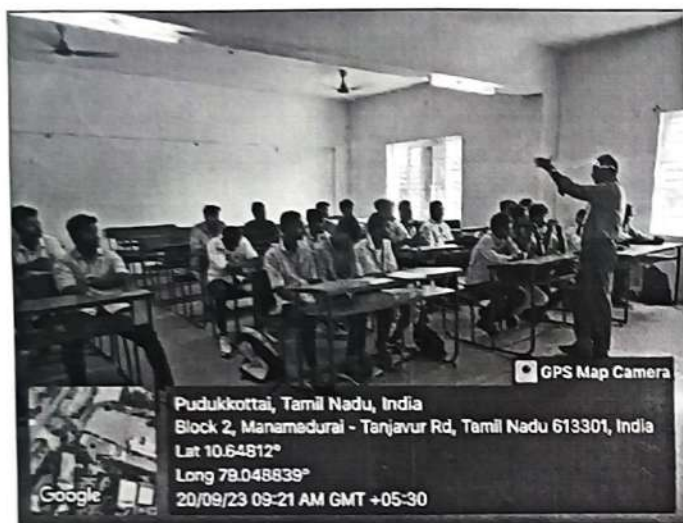
Session V:

Mr. N. Magesh, Assistant Professor, Department of Mechanical Engineering handled a session on "Importance of Manufacturing and CADM (Practical)" between 01:10 P.M. to 04:10 P.M.

Points Discussed in Session V:

- Discussion on practical applications in manufacturing of products.
- Importance of manufacturing laboratory.

Vote of thanks was given by Mr.R.Rajadurai, Assistant Professor, Department of Mechanical Engineering between 04:10 P.M. to 04:20 P.M.

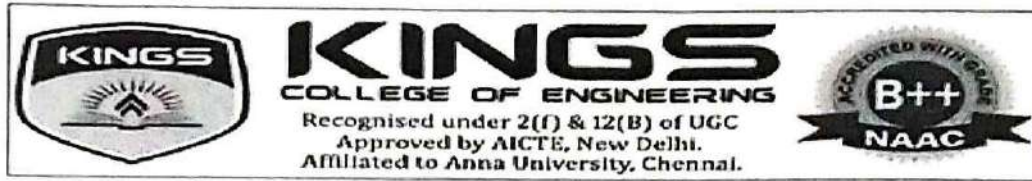


Snapshots for the Orientation Programme Held on 20.09.2023

[Signature]
Staff Incharge

[Signature]
HOD 31/09/23

[Signature]
4/10/2023
Principal




DEPARTMENT OF MECHANICAL ENGINEERING

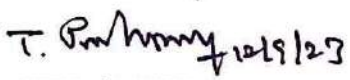
ACADEMIC YEAR 2023-24 (ODD)

Date :12.09.2023

CIRCULAR

As a part of Engineers Day celebration, the Department of Mechanical Engineering has planned to conduct an "Intra Department Paper Presentation" on 15.09.2023 at Mechanical Smart Class Room. Interested students are requested to register their name to Mr.M.Sakthivel AP/MECH and Mr.V.Aravind AP/MECH on or before 14.09.2023.


Coordinators
(Mr.M.Sakthivel, AP/MECH &
Mr. V.Aravind, AP/MECH)


HOD/MECH



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD SEMESTER)
INTRA DEPARTMENT PAPER PRESENTATION REPORT

Venue: 205 (MECH Smart Class Room)

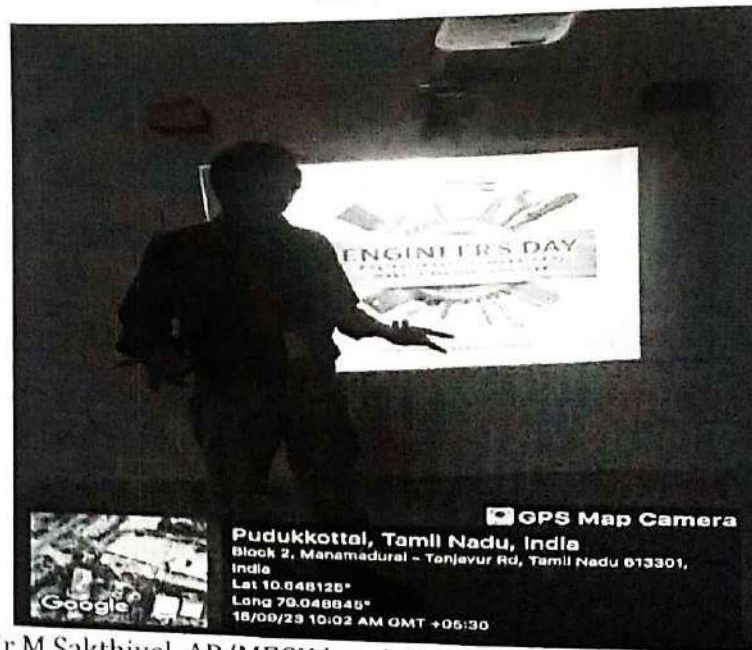
Date: 17-09-2023

- ✍ As a part of an Engineer's Day celebration, the department of Mechanical Engineering had conducted "Intra Department Paper Presentation" on various core topics through offline mode on 15.09.2023.
- ✍ Welcome address was given by Mr. M.Sakthivel Assistant Professor, Department of Mechanical Engineering, Kings College of Engineering. He highlighted the importance of paper presentation and outcome based education. Also he explained the importance of contributing in the paper presentation.
- ✍ 13 students (4 Batches) participated in this contest and students were actively explained their topics through power point presentation.
- ✍ Dr. T. Pushparaj, HoD, Department of Mechanical Engineering, acted as jury for the paper presentation.
- ✍ Vote of thanks was delivered by Mr. V. Aravind, Assistant Professor, Department of Mechanical Engineering, Kings College of Engineering.

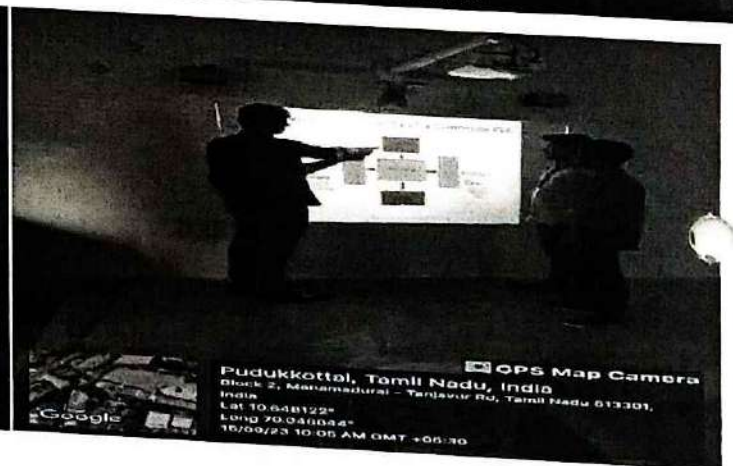
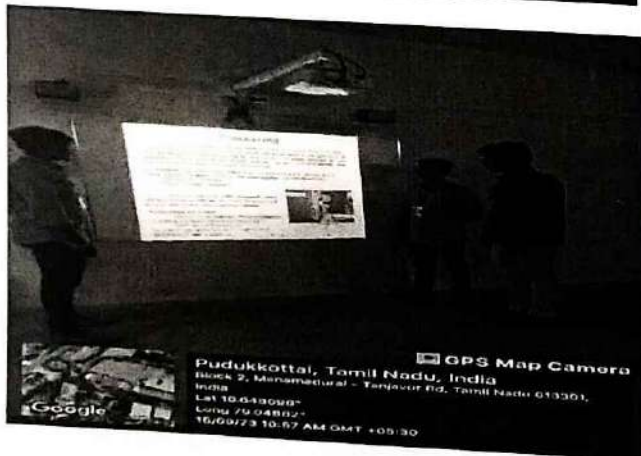
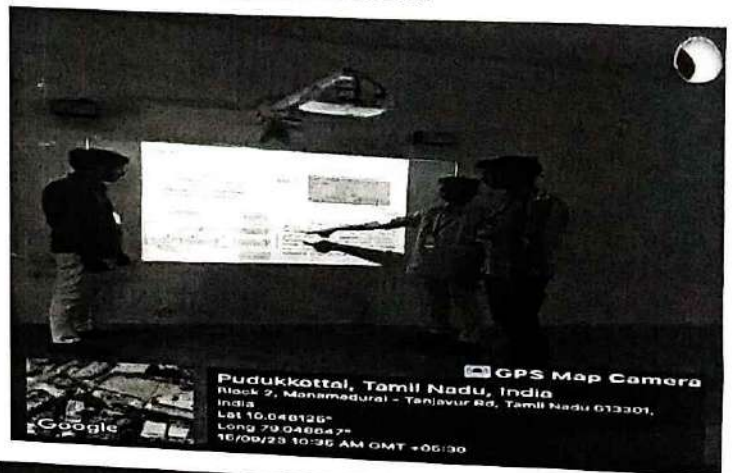
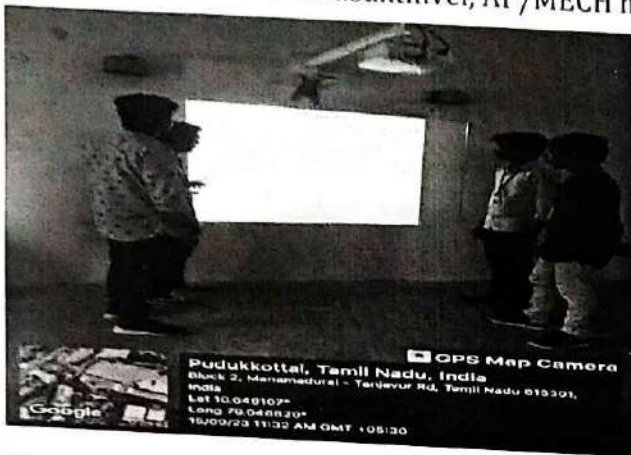
List of Participants

| S.No | Register Number | Name of the Students | Year / Department | Presentation Title |
|------|-----------------|----------------------|-------------------|-------------------------------------|
| 1. | 821121114010 | Elanthenral. R | III/Mechanical | Nano Fluids Thermal Applications. |
| | 821121114035 | Rajeshkumar. R | | |
| | 821121114045 | A.Siva | | |
| | 821121114047 | K.Suresh | | |
| 2. | 821120114036 | N.Rajesh | IV/ Mechanical | Frictionless Compressor Technology. |
| | 821120114040 | A.Vivek | | |
| | 821120114053 | R.Santhosh | | |
| 3. | 821120114318 | K.Prakash | IV/ Mechanical | Intelligent Car parking system. |
| | 821120114322 | G.S.Sakthiganesh | | |
| | 821120114702 | B.Sakthivel | | |
| 4. | 821120114305 | S.Balaji | IV/ Mechanical | Multi-Point Fuel Injection System. |
| | 821120114701 | N.Devaprasath | | |
| | 821120114042 | A.Saravanan | | |

Sample Images



Mr.M.Sakthivel, AP/MECH has delivered the welcome address.



Students actively participated in the paper presentation.



Mr.V.Aravind, AP/MECH has delivered the vote of thanks.


Mark Allocation Details

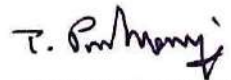
| S.No | Register Number | Name of the Students | Presentation Title | Marks out of 100 |
|------|-----------------|----------------------|-------------------------------------|------------------|
| 1. | 821121114010 | Elanthenral. R | Nano Fluids Thermal Applications. | 83 |
| | 821121114035 | Rajeshkumar. R | | |
| | 821121114045 | A.Siva | | |
| | 821121114047 | K.Suresh | | |
| 2. | 821120114036 | N.Rajesh | Frictionless Compressor Technology. | 79 |
| | 821120114040 | A.Vivek | | |
| | 821120114053 | R.Santhosh | | |
| | | | | |
| 3. | 821120114318 | K.Prakash | Intelligent Car parking system. | 85 |
| | 821120114322 | G.S.Sakthiganesh | | |
| | 821120114702 | B.Sakthivel | | |
| 4. | 821120114305 | S.Balaji | Multi-Point Fuel Injection System. | 63 |
| | 821120114701 | N.Devaprasath | | |
| | 821120114042 | A.Saravanan | | |

Winner Details

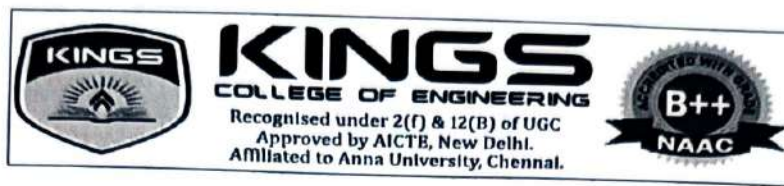
| Rank | Register Number | Name of the Students | Year / Department | Marks |
|------|-----------------|----------------------|-------------------|-------|
| I. | 821120114305 | S.Balaji | IV/ Mechanical | 85 |
| | 821120114701 | N.Devaprasath | | |
| | 821120114042 | A.Saravanan | | |
| II. | 821121114010 | Elanthenral. R | IV/ Mechanical | 83 |
| | 821121114035 | Rajeshkumar. R | | |
| | 821121114045 | A.Siva | | |
| | 821121114047 | K.Suresh | | |
| III. | 821120114036 | N.Rajesh | II/ Mechanical | 79 |
| | 821120114040 | A.Vivek | | |
| | 821120114053 | R.Santhosh | | |

"The winners will be appreciated in the upcoming SCC"


3/10/23
Coordinators
(M.Sakthivel, AP/MECH &
V.Aravind, AP/MECH)


HoD/MECH 3/10/23


4/10/2023.
Principal



**Department of Mechanical Engineering
Academic year 2023-24 (ODD)**

Circular

Date : 22.08.2023

This is to inform you that there will be an internal seminar going to be conducted by our Department on 26.08.2023 at 12.30P.M on the topic "Hydrogen Fuel Cell Vehicles" by Mr. H.Agilan, Assistant Professor/Mechanical at Department Smart Classroom. Staff members are instructed to utilize the session and communicate your queries.

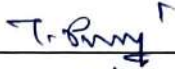




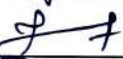
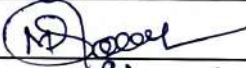

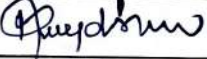
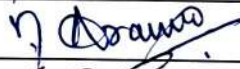


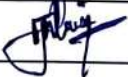
T. R. Arumugam
HoD/Mech

H.O.D


DEPARTMENT OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
PILAIKULAM

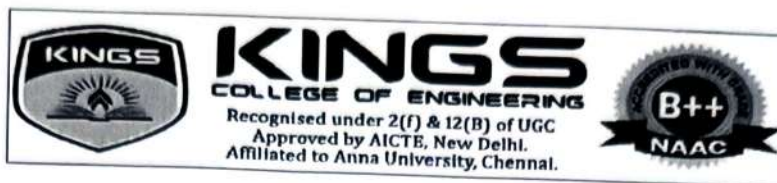
Department of Mechanical Engineering
Academic year 2023-24 (ODD)
INTERNAL STAFF SEMINAR ATTENDANCE SHEET

Date & time : 26.08.2023 & 12.30 P.M
Venue : Department Smart Classroom
Topic : Seminar on "Hydrogen Fuel Cell Vehicles"
Resource person : Mr.H. Agilan /Mechanical

| S. No | Staff Name | Signature |
|-------|---------------------------------|--|
| 1 | Dr.T.Pushparaj |  |
| 2 | Dr.P.P.Shantharaman |  |
| 3 | Dr. R.Shankar |  |
| 4 | Mr. N.Magesh |  |
| 5 | Dr. M.Melwin Jagatheesh Sridhar |  |
| 6 | Mr. S. Sabanayagam |  |
| 7 | Mr. M.Sakthivel |  |
| 8 | Mr. S.Nelson Raja |  |
| 9 | Mr. R.Rajadurai |  |
| 10 | Mr. V.Aravind |  |
| 11 | Mr. S.Balaganesh |  |
| 12 | Mr. M. Vivekananthan |  |
| 13 | Mr. K. Rajesh Kumar |  |


Staff Incharge 26/8/23


HOD/MECH 26/8/23
H.O.D
DEPARTMENT OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNALKULAM



**DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)
INTERNAL STAFF SEMINAR REPORT**

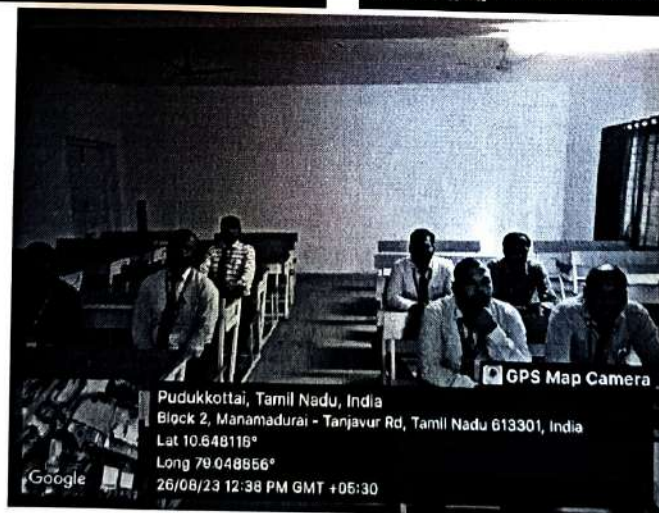
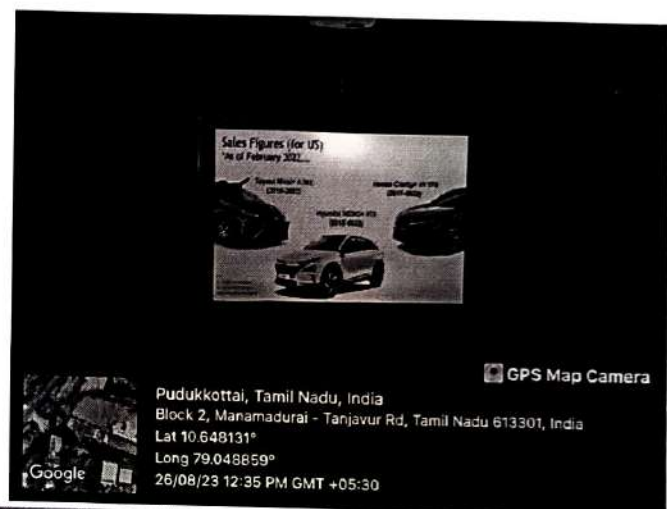
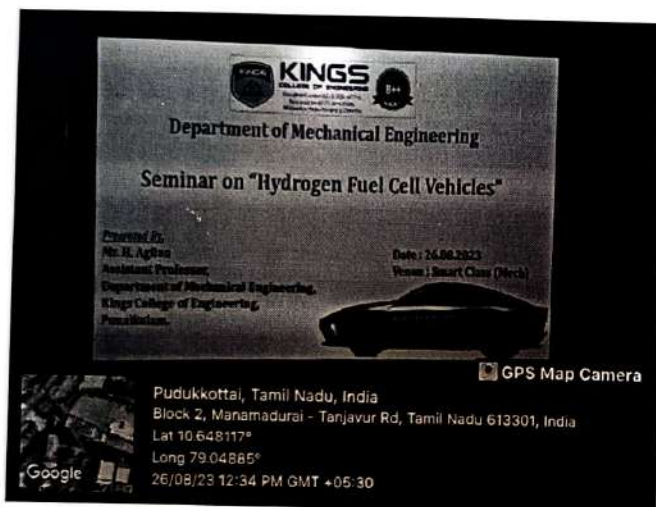
Date& time : 26.08.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "Hydrogen Fuel Cell Vehicles"
Resource person : Mr. H.Agilan
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Hydrogen Fuel Cell Vehicles" for faculty members of the Mechanical Department on 26.08.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in Electrical and Hydrogen vehicles.

The Following Points were Discussed During the Session:

- Fuel cell electric vehicles (FCEVs) are powered by hydrogen. They are more efficient than conventional internal combustion engine vehicles and produce no harmful tailpipe emissions.
- They only emit water vapor and warm air. FCEVs and the hydrogen infrastructure to fuel them are in the early stages of implementation.
- FCEVs use a propulsion system similar to that of electric vehicles, where energy stored as hydrogen is converted to electricity by the fuel cell.
- Unlike conventional internal combustion engine vehicles, these vehicles produce no harmful tailpipe emissions.
- FCEVs are fueled with pure hydrogen gas stored in a tank on the vehicle. Similar to conventional internal combustion engine vehicles, they can fuel in about 5 minutes and have a driving range of more than 300 miles.
- FCEVs are equipped with other advanced technologies to increase efficiency, such as regenerative braking systems that capture the energy lost during braking and store it in a battery.

- Major automobile manufacturers are offering a limited but growing number of production FCEVs to the public in certain markets, in sync with what the developing infrastructure can support.
- The most common type of fuel cell for vehicle applications is the polymer electrolyte membrane (PEM) fuel cell. In a PEM fuel cell, an electrolyte membrane is sandwiched between a positive electrode (cathode) and a negative electrode (anode). Hydrogen is introduced to the anode, and oxygen (from air) is introduced to the cathode.
- The hydrogen molecules break apart into protons and electrons due to an electrochemical reaction in the fuel cell catalyst. Protons then travel through the membrane to the cathode.



Snapshots of the session

Chapters Discussed:

- Hydrogen Basics
- Benefits & Considerations
- Stations
- Vehicles

Outcomes:

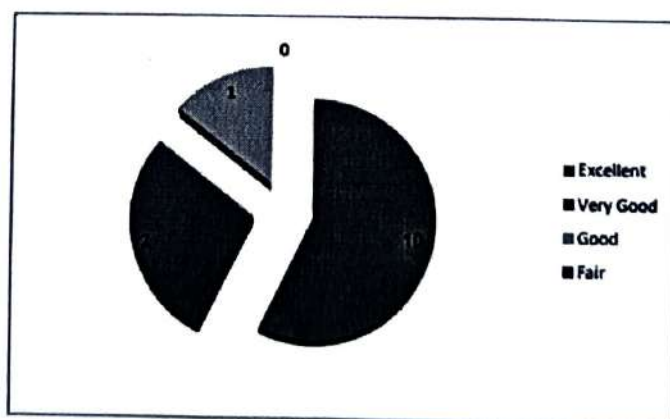
Upon listing of this seminar the participants can able to

- Understand the various types of fuels and their properties.
- Understand the concepts hydrogen vehicles and processing technology.
- Able to understand the concept of energy security and public health and environment.

References:

1. Yuanying Chi, et all. "Fuel-cycle based environmental and economic assessment of hydrogen fuel cell vehicles in China" - Energy, June 2023, Volume 282, 128773.
2. Wenyue Zhang, et all. "The alternative path for fossil oil: Electric vehicles or hydrogen fuel cell vehicles" - Journal of Environmental Management. Volume 341, May 2023, 118019.
3. Ting Shi, et all. "Experimental investigation on the start-stop performance of gas foil bearings-rotor system in the centrifugal air compressor for hydrogen fuel cell vehicles" - International Journal of Hydrogen Energy, June 2023.
4. Sidhartha Harichandan, Sanjay Kumar Kar. "An empirical study on motivation to adopt hydrogen fuel cell vehicles in India: Policy implications for stakeholders" - Journal of Cleaner Production, Volume 408, July 2023, 137198.
5. Pobitra Halder, et all. "Advancements in hydrogen production, storage, distribution and refuelling for a sustainable transport sector: Hydrogen fuel cell vehicles" - International Journal of Hydrogen Energy, June 2023.

Feedback Analysis:



[Signature]
Staff Incharge 31/8/23

[Signature]
HOD/MECH 31/8/23
H.O.D

[Signature]
Principal 05/9/23

DEPARTMENT OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
PIIANKULAM



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023 - 2024 (ODD)
STUDENT ORIENTATION PROGRAMME – REPORT

As a part of academic activity of the department, Orientation Programme was organized was 27th July 2023 for third year students of Mechanical Engineering. The programme was held in two sessions from 9.15 A.M. to 10.45 A.M. Dr. T. Pushparaj, Head, Department of Mechanical Engineering was delivered the welcome address to the third year students for Orientation Programme.

Event Objectives:

- To bridge the gap between students and faculties.
- To prepare the students about their career goal and how to work on it.
- To involve and learn about the career development process and develop their skills.
- To create the awareness about the various co-curricular and extracurricular activities and helps the student for their overall development.
- To create awareness among students about the professional etiquettes.
- To promote the students for enhancing their skills and learn about the various innovative ways to enhance their career.

Session I:

Mr. S. Balaganesh, Assistant Professor, Department of Mechanical Engineering handled an activity based session for third year students on "Curriculum, Job Opportunities, SWAYAM and Certification Courses" between 9.15 A.M. to 10.00 A.M. He highlighted the importance of mechanical knowledge, outcome based education and shared his experience with the students

Points Discussed in Session I:

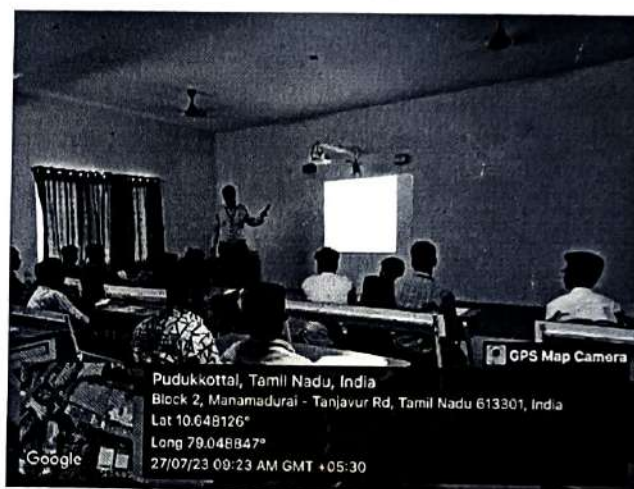
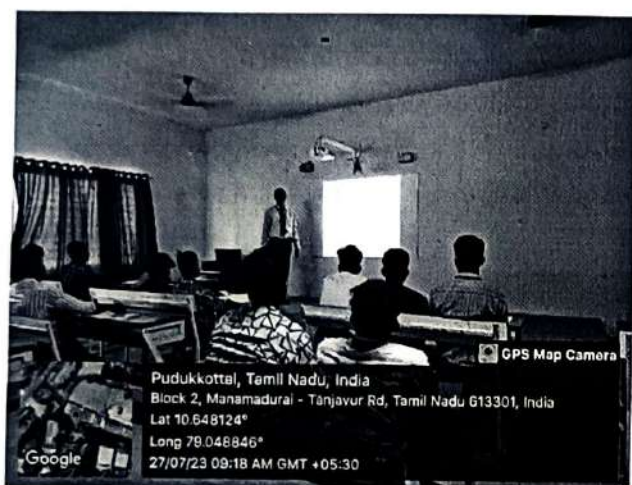
- Career guidance about avenues opens after graduation.
- Importance of professional development.
- Curriculum based courses from diverse disciplines.
- Advanced curriculum and professional certification.
- Knowledge development through SWAYAM platform.

Session II:

Mr. S. Nelson Raja, Assistant Professor, Department of Mechanical Engineering, imparted a knowledge on "GATE and Higher Study Initiatives" for third year students between 10.00 A.M to 10.45 A.M. He highlighted the importance and benefits of GATE exam.

Points Discussed in Session II:

- Future scope of GATE exam.
- Highlights and important dates of GATE 2024.
- Student's proficiency in the fields such as Engineering and Science.



Snapshots for the Orientation Programme Held on 27.07.2023

S. Nelson Raja
31/8/23
Staff In Charge

T. P. R. Srinivasan
31/8/23
HOD

S. M. M. M. M.
05/9/2023
Principal



3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year

| Sl. No. | Date | Details | Beneficiaries | Page Number |
|----------------|------------|---|---------------|-------------|
| S&H | | | | |
| 1 | 06-10-2023 | National conference on 'Recent trends in smart materials' | 52 | 1 |
| 2 | 25-05-2023 | Mini Project Expo | 51 | 6 |
| 3 | 26.05.2023 | Motivational Programme | 285 | 10 |
| 4 | 07-06-2023 | Poster presentation on "rain water harvesting | 40 | 13 |
| 5 | 22-12-2023 | Quiz competition on National Mathematics Day | 50 | 15 |

HoD / S&H

Principal

Department of Chemistry

Report of NCRTSM-2023

Date : 06.10.2023

Venue : Chera Hall

Department of Chemistry of Kings College of Engineering organised a National Conference on **“Recent Trends in Smart Materials (NCRTSM 2023)”** on 6th October 2023. The convener of the conference **Dr.V.Suresh Kumar**, HoD / S & H welcomes the gathering. **Dr.R.Rajendran**, Secretary, delivered the presidential address, **Dr. J. Arputha Vijaya Selvi**, Principal delivered the special address, **Dr.S.Sivakumar**, Vice Principal delivered felicitation address and **Dr.P.Saravanan**, organizing secretary introduced the chief guest. **Dr. T. Mohan Das**, Dean- School of Basic and Applied Sciences, Central University of Tamil Nadu (CUTN), Thiruvavur delivered the inaugural address.

The hard copy of conference proceedings was released by the chief guest Dr. T. Mohan Das and received by the Secretary and Principal.

Dr. T. Mohan Das has delivered **invited lecture on “Chemistry of sugar based smart materials”**. In this lecture, he explained briefly about structure, synthesis and applications sugar based smart materials.

Research papers from various areas were presented by the participants in the Technical session I and II (both off line and online mode). **Dr. S.Udayakumar**, Coordinator, NCRTSM was acted as a chair person for technical session I and II.

In the valedictory function the organising secretary **Dr.P.Saravanan** presented the conference report. Certificates were distributed to the participants by the **Dr.S.Sivakumar**, Vice Principal. Finally **Mrs.S.Thipura Salani**, AP/Chemistry delivered the vote of thanks. Near about 52 research papers were presented and 24 participants were participated in this conference.

Glimpse of NCRTSM-2023



Welcome Address by Dr.V.Sureshkumar



Lightening the Lamp by Dignitaries



Presidential address By Dr.R.Rajendran, Secretary



Honouring the Chief Guest by



Special address by Principal Dr.J.ArputhaVijaya Selvi, Principal



Felicitations address by Principal Dr.S.Sivakumar, Vice Principal



Releasing the Conference Proceedings



Chief guest introduction by Dr. P.Saravanan, Organizing Secretary



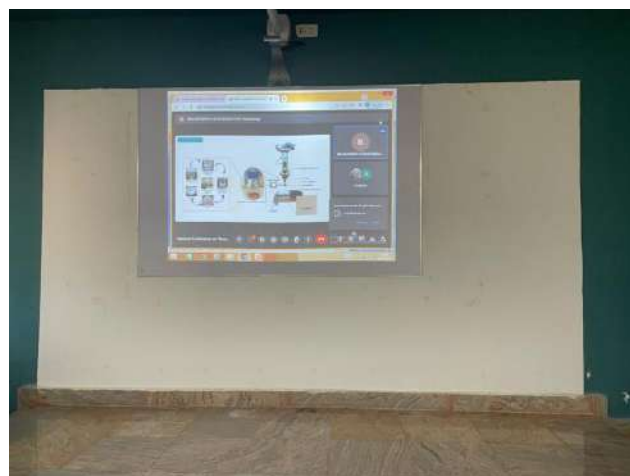
Inaugural address by Dr. T. Mohan Das



Invited Lecture by Dr. T. Mohan Das



Oral Presentations by Participants



Online Presentations by Participants

Valedictory Function



Welcome Address by Dr.S.Udayakumar



Conference Report by Dr.P.Saravanan



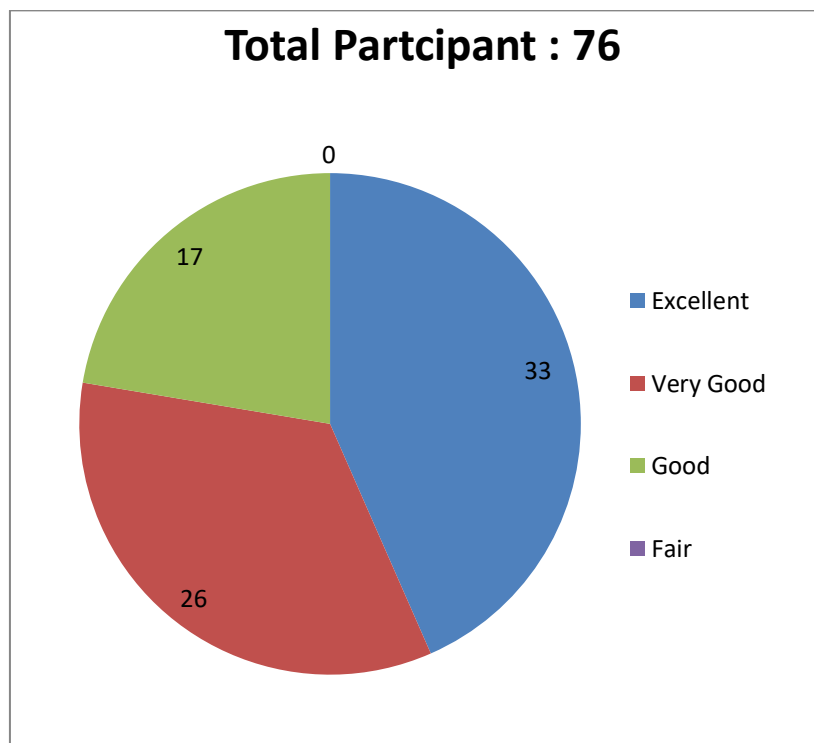
Certificate Distribution by Dignitary



Vote of Thanks by Mrs.S.Thipura Salani

Feedback Analysis

Total Participant : 76



List of Institutions

The participants came from following institutions

1. Agni College of Technology, OMR, Chennai.
2. St Joseph University, Dimapur, Nagaland.
3. AVVM Sri Pushpam College, Poondi, Thanjavur.
4. Seethalakshmi Achi College for Women, Pallathur.
5. Anjalai ammal mahalingam engineering college, Kovilvenni.
6. St. Joseph's College of Engineering, OMR, Chennai.
7. Urumu Dhanalakshmi College, Tiruchirappalli.
8. Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli.
9. PES University, Bangaluru.
10. Central University of Tamil Nadu, Thiruvarur.
11. AVC College of Engineering, Mananpandal, Mayiladuduari.
12. D.K.M College for Women (Autonomous), Sainathapuram.
13. Adhiyamaan College of Engineering (Autonomous), Hosur.
14. ARJ College of Engineering And Technology Mannargudi.
15. Arasu Engineering College, Kumbakonam.
16. SRM Institute of Science and Technology, Kattankulathur.
17. S.T.E.T.Women's College, Mannargudi.
18. Parisutham Institute of Technology and Science, Thanjavur.
19. Anna University-University College of Engineering Pattukottai.
20. Nehru Institute of Technology, Kaliyapuram, Coimbatore.
21. Chennai Institute of Technology, Kundrathur, Chennai.
22. PRIST Deemed to be University, Thanjavur.
23. University College of Engineering, Thirukkuvalai.


6/10/23
Conference Chair


06/10/2023
Principal



Department of Science and Humanities

Academic Year 2022-23/ Even Semester

25-05-2023

Mini Project Expo -Innovations in Science & Technology Report

Venue: Physics Lab

Department of Chemistry, Kings College of Engineering organized a Mini Project Expo for first year B.E students on 25th Thursday 2023 in the area of "Innovations in Science and Technology". Dr. J. Arputha Vijayaselvi, Principal, inaugurated the Mini Project Expo and delivered the importance of the Project Expo. About 16 Projects were displayed in this expo. Dr.S.Sivakumar, Vice Principal and Dr. P.P.Santharaman, Convener Research were acted as juries; based on the score given by the juries the winners are short listed and given below.

Winners

| S.No | Name of the student | Class | Title of the mini project | RANK |
|------|--|---------|---|------|
| 1 | SURIYANARAYANAN R SUTHERSAN A | I ECE B | Smart home automation by IoT | I |
| 2 | PRADHEESHA R BHUVANESHWARI B DHANYALAKSHIMI R ASHWINI S | I CSE | 3D Hologram Age Calculator Book Screening Alcohol Detector | II |

Congrats!

By this Mini Project Expo the students gained knowledge about innovations and advancements in science and technology. Finally the students expressed that, this type of Project expo was useful for improving their practical skills and also useful to do major projects in next level. The winners of this mini project expo were appreciated by certificates and memento.

The Mini Project Expo arrangement was made by the Convener Dr.S.Udayakumar, AP, Department of Chemistry under the guidance of Dr.V.Sureshkumar, HoD / S & H.

[Signature]
29/5/23
Convener

[Signature]
29/5/23
I Year Coordinator

[Signature]
29/5/23
HoD / S&H

[Signature]
2/6/2023
Principal



Students explain their projects to Dr.S.Sivakumar, Vice Principal



Students explain their projects to Dr.V.Sureshkumar, HoD S&H



Juries asking questions about the project



Students answering the questions raised by juries



Students explain their projects to convener Dr.S.Udayakumar AP/Chemistry



Department of Science and Humanities
 Academic Year 2022-23/ Even Semester 25-05-2023
Mini Project Expo -Innovations in Science & Technology
 Organized by Department of Chemistry

Participant List

| TEAM NO. | NAME OF THE STUDENTS | DEPT. | TITLE OF THE PROJECT |
|----------|---|---------|--|
| 1 | KARTHIKAYINI V ANITHA P LOKESHWARI S KEERTHIKA K | I ECE A | Gas leakage alert system |
| 2 | KIRUTHIKA D HARINI G HARIKEERTHANA S DHIVYADHARSHINI T | I ECE A | Cloud Computing |
| 3 | SURIYANARAYANAN R SUTHERSAN A | I ECE B | Smart Home Automation by IOT |
| 4 | SWATHI R VINOTHA M SUBHADHARSHINI A SRI RENGANAYAGI G | I ECE B | Earth quake detector Water level detector |
| 5 | UMAMAHESHWARI S SARANYA V | I ECE B | Wind mill - Electricity |
| 6 | SANIYA NIZHA R WEHAAVARSHA K | I ECE B | Air Cooler cum water chilling |
| 7 | ABINAYASRI K ANANTHI S GAYATHRI R | I CIVIL | Hydraulic Bridge |
| 8 | ARCHANA A SHRINIDHI M RUBIKA R | I CIVIL | Model for de fluoride in water |
| 9 | SELLAMUTHU R | I CIVIL | Fisherman sea - border protection |
| 10 | PRIYADHARSHINI L ABINAYA S ABINAYA M | I EEE | Solar Tracker |
| 11 | DHIVAKAR S PONNAGARASAN M G MANISHKUMAR S GURU PRASATH N | I EEE | Electrical vehicle Smart Bin Where is my bus |

| | | | |
|----|---|-------|--|
| 12 | ABIRAMI M NANDHINI S SHANMUGAPRIYA L | I EEE | Mobile Jammer |
| 13 | RASIKA G NESIKA S DHASLIMA SHAFREEN M POONGUZHALI J | I CSE | Water tank overflow alarm Production of free power using Magnets |
| 14 | LEXMADURAI S SABARINATHAN N NITHISHKUMAR V | I CSE | Personal QR code detail entry |
| 15 | MOHANRAJ T S MARIMUTHU P HEMANTHBALAJI M KARTHIKEYAN E | I CSE | Home security Text to Speech Search Bar |
| 16 | PRADHEESHA R BHUVANESHWARI B DHANYALAKSHIMI R | I CSE | CD HOLOGRAM Age calculator Alcohol detector |

 29/5/23
Convener

 29/5/23
I Year Coordinator

 29/5/23
HoD/S & H



Dr. J. Arputha Vijaya Selvi, B.E., M.E., Ph. D.,

PRINCIPAL

Ref: KCE/PRL/invite /22-23

20.05.2023

To

Dr. Mani Prahaspathy

Sr. Gr. A. P in Physics

Anna University

BIT Campus

Tiruchirapalli.

Dear Sir,

Greetings from Kings College of Engineering.

We organize seminars / workshops each semester to expose our staff members to various industrial and technical skills. In this context, Department of Science and Humanities has scheduled a lecture on "I'm Great! I can! I will!" on 26th May, 2023.

In this regard, we request your consent to be the resource person for the programme.

Expecting a favourable reply in this regard.

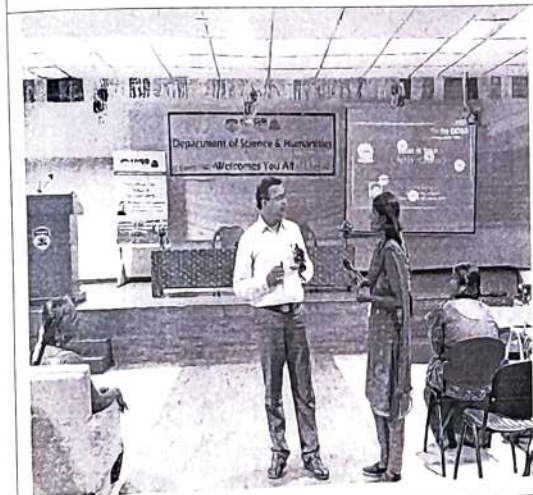
Regards,

J. Mani
20/5/2023.

PRINCIPAL

Kings College of Engineering.
PUNALKULAM - 613 303.

"I'M GREAT! I CAN! I WILL!" - MOTIVATIONAL PROGRAMME



secul
CONVENOR

P. J. S. M. 23
1 YEAR CO ORDINATOR

U. S. M. 23
HOD/S&H

J. M. S. M. 23
PRINCIPAL

DEPARTMENT OF SCIENCE AND HUMANITIES
Academic Year 2022-23 Even Semester

26.05.2023

"I'M GREAT! I CAN! I WILL!" - MOTIVATIONAL PROGRAMME

REPORT

Department of Science and Humanities has organized a Motivational programme, titled **"I'm Great! I can! I will!"** on **26.05.2023** exclusively for First year students, Dr.P.Mani Prahaspathy, Assistant Professor(Sr), Department of Physics, Anna University, Trichy act as a Resource person.

Welcome address was given by Mrs.S.Anuradha, AP/Physics. The Chief guest was honored with shawl and memento by Mrs.T.Gnanajeya, 1 Year Coordinator. The Chief guest was introduced by Mr.S.Ambalatharasu, AP/Physics.

The Chief guest ~~was~~ engaged himself with the students through interaction and motivated the students how to be successful in their life. Finally the Vote of Thanks was given by Ms.T.Abimalaiarasi, AP/ Physics.

By this Motivational program the students were encouraged and motivated how to become a successful human beings and also how to be a successful person in their profession.


Near about 270 students and 15 faculties participated in this program.



YOUTH RED CROSS Awareness Programme on Rain Water Harvesting – Report

On 07.06.2023, Youth Red Cross (YRC) of Kings College of Engineering has conducted a poster presentation in the title “RAIN WATER HARVESTING on physics lab at 2.00 pm., under “ Azadi Ka Amrit Mahotsav ” which was an initiative of the Government of India to celebrate and commemorate 75 years of independence.

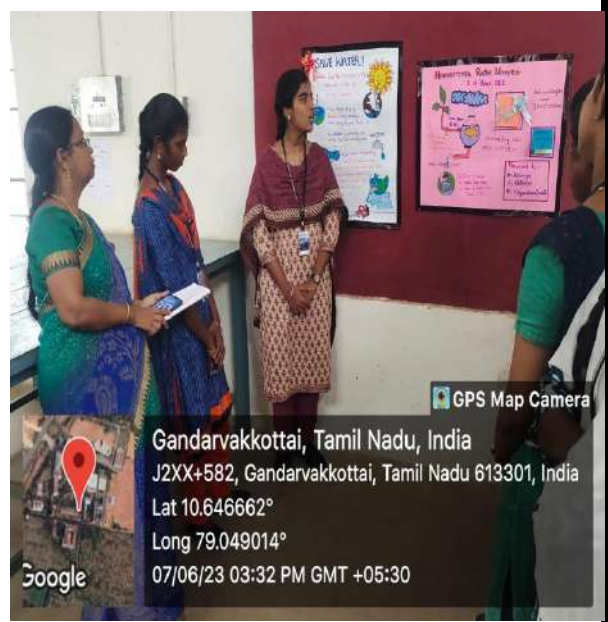
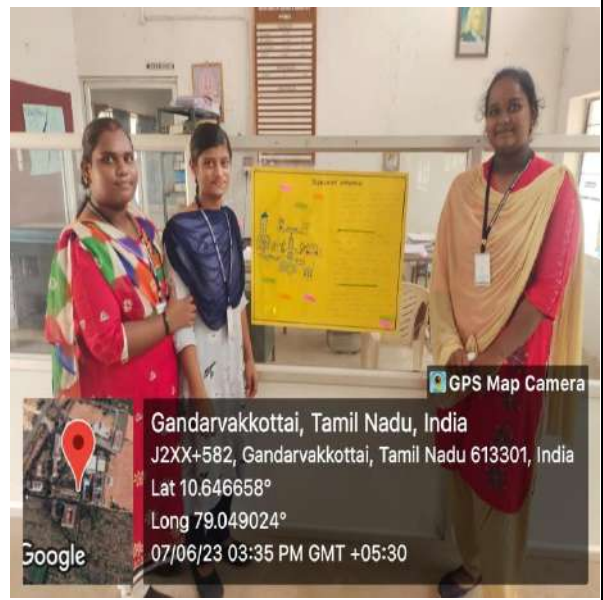
Water scarcity today has become a big issue which if not dealt with in time, will turn out to be a hazard. To make people aware to conserve water, our YRC organized a poster presentation in the title “RAIN WATER HARVESTING at physics lab. All I Year students attended the program which was explained by YRC Volunteers, they were asked to conserve every drop of water and not to waste it unnecessarily. Besides, importance of rain water harvesting and the methods were also explained through poster presentation. Without water there is no life. In case the water is not used wisely by anyone, then heavy fine should be imposed. The students were motivated by the programme, and they took oath to use water properly and promised to make awareness among the people.

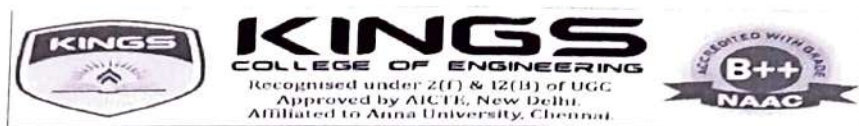

 Coordinator / YRC
 (S.Anuradha /Physics)


 07/6/2023
 Principal



YOUTH RED CROSS
Awareness Programme on Rain Water Harvesting – Report





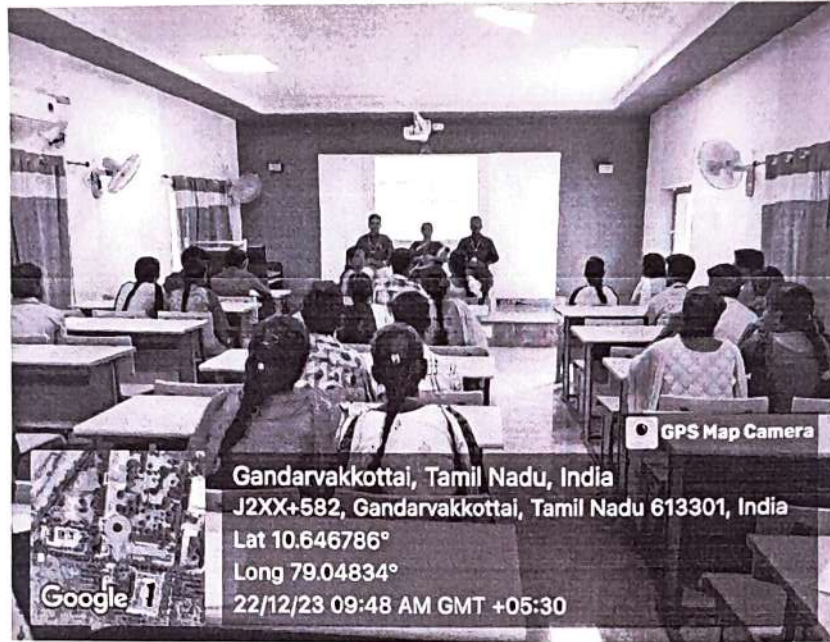
DEPARTMENT OF MATHEMATICS
ACADEMIC YEAR 2023-204 (ODD SEMESTER)
Quiz Competition Report

26.12.2023

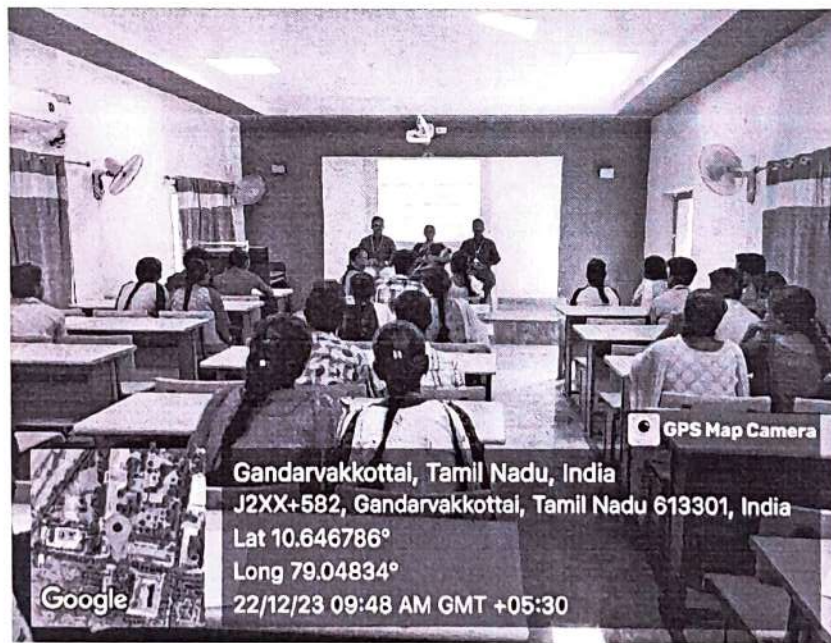
National Mathematics Day was celebrated by Department of Mathematics for the 136th birthday of Srinivasa Ramanujan on 22.12.2023. On this occasion Quiz competition was organized by Department of Mathematics between 09.30 am - 10.30 am. Welcome address was delivered by Dr.G.Shankarakalidoss, AP/Mathematics and this event was presided by Dr.S.GEETHA, AP/Mathematics. In this event, 40 students(20 Teams) actively participated. Three rounds are hosted by Dr.G.Shankarakalidoss, AP/Mathematics, and vote of thanks was given by Mr.G.Venkatesan, AP/Mathematics. The following students are the prize winners.

| POSITION | CLASS | NAME OF THE STUDENT |
|----------|----------------------|---------------------------------|
| FIRST | I AI & DS I ECE B | 1.K.R.GIRIVASAN |
| | | 2.R.DEENA |
| | | 1.M.VAANAMADEVI |
| | | 2.S.SWETHA |
| SECOND | I CSE A | 1.K.KARAN 2.M.HARIHARAN |
| THIRD | I EEE & CIVIL | 1.S.LAKSHMIPRIYA 2.S.JAYASRI |

The main objective of the programme is to get adequate knowledge of mathematics and remove phobia in mathematics.



Quiz competition inaugurated for 1 year Students on Aptitude, Reasoning, Basic Mathematics



Students are enthusiastically participated in the Quiz

G. Shankar Kalidoss
 26/12/23
G. Venkatesan
 26/12/23
EVENT COORDINATORS
 1. Dr.G.SHANKARAKALIDOSS
 2. Mr.G.VENKATESAN

P. J. [Signature]
 26/12/2023
COORDINATOR

[Signature]
 26/12/23
HoD / S&H

J. [Signature]
 26/12/2023
PRINCIPAL



INDEX

CRITERION: 3.2.2

Centre for Promotion of Research (2023-24)

| S.No | Date | Details | Page No. |
|------|--------------------------------|--|----------|
| 1. | 28.10.2023 | Webinar on "Paper Writing and Patents" | 2 |
| 2. | 28.02.2024 | National Science Day Celebrations, Poster Design Competition on the theme "Science for a Sustainable Future" | 6 |
| 3. | 02.05.2024 to 03.05.2024 | International Conference on Recent Trends in Engineering and Science | 9 |
| 4. | 03.05.2024 | Kings Project Expo'2024 | 16 |


DRC Convener


10/7/2024
Principal

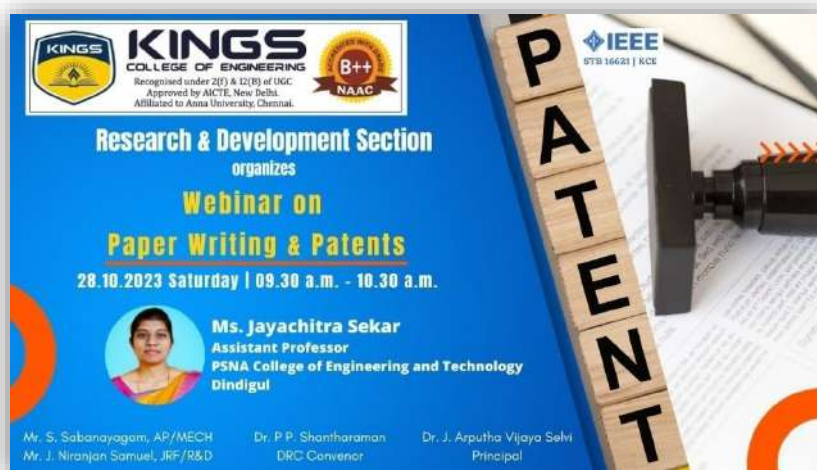
Report on Webinar: "Paper Writing and Patents"

Name of the Event : Webinar
 Title : Paper Writing and Patents
 Date & Time : 28.10.2023 & 09.30 a.m. to 10.30 a.m.
 Venue : Smart Classroom (Each Department) & Online
 Resource Person : Ms. Jayachitra Sekar,
 PSNA College of Engineering and Technology, Dindugal.

On 28.10.2023, a valuable webinar on **"Paper Writing and Patents"** was organized by Research and Development Section, Kings College of Engineering, Punalkulam. The event aimed to provide insights into the world of academic paper writing and the significance of patents. The webinar featured **Ms. Jayachitra Sekar**, a distinguished expert in the field, who is associated with **PSNA College of Engineering and Technology in Dindugal**. The welcome address was delivered by Mr. S. Sabanayagam, an Assistant Professor in the Department of Mechanical Engineering, and the vote of thanks was given by Ms.V.Harinilakshmi, a student in the third year of the Electronics and Communication Engineering department.

Mr. S. Sabanayagam commenced the event by extending a warm welcome to all participants. He emphasized the importance of paper writing and patents in the academic and professional world. He highlighted how these topics are crucial for students and researchers alike. Mr. S. Sabanayagam expressed his gratitude to Ms. Jayachitra Sekar for agreeing to share her knowledge and experience on this subject.

Webinar Content:



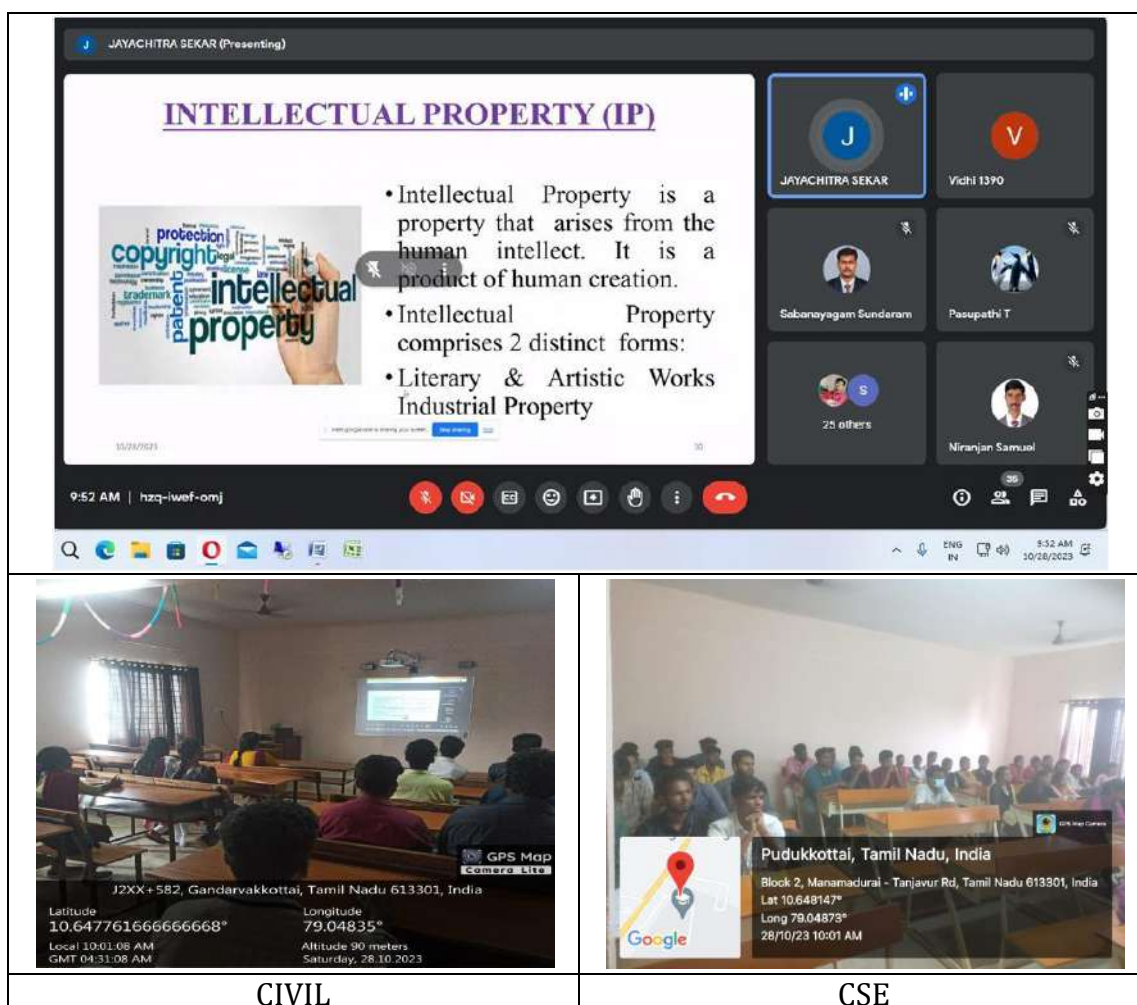
Webinar Invitation

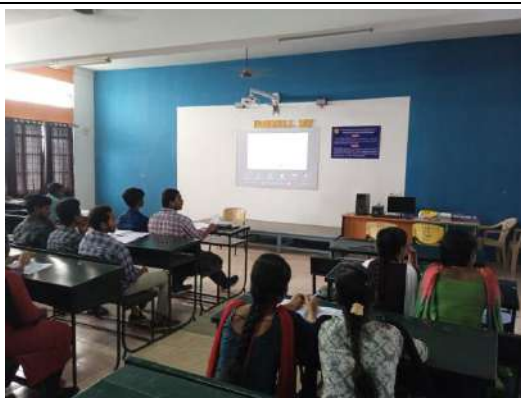
| Webinar Objective | Webinar Outcomes |
|--|--|
| To impart the art of writing technical paper by their project work and for publications. | The final year students can able to prepare the article using the publication ethics with their technical learning for publications. |

Ms. Jayachitra Sekar's presentation was insightful and informative. She began by discussing the **fundamentals of academic paper writing, covering the structure, content, and organization of research papers**. She provided practical tips on how to select suitable journals, write an abstract, and format references, among other key elements. Ms. Jayachitra Sekar's expertise in this area was evident, and her guidance was highly valuable to the audience.

Following the discussion on paper writing, Ms. Jayachitra Sekar shifted her focus to patents. She explained the **significance of patents in protecting intellectual property and the innovation process**. Ms. Jayachitra Sekar detailed the patent application process and highlighted its legal and commercial implications. Her comprehensive explanation shed light on the relevance of patents to researchers, inventors, and professionals in various fields.

Glimpses of the Event





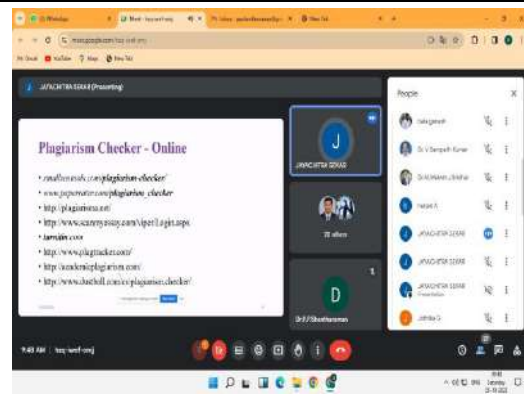
ECE



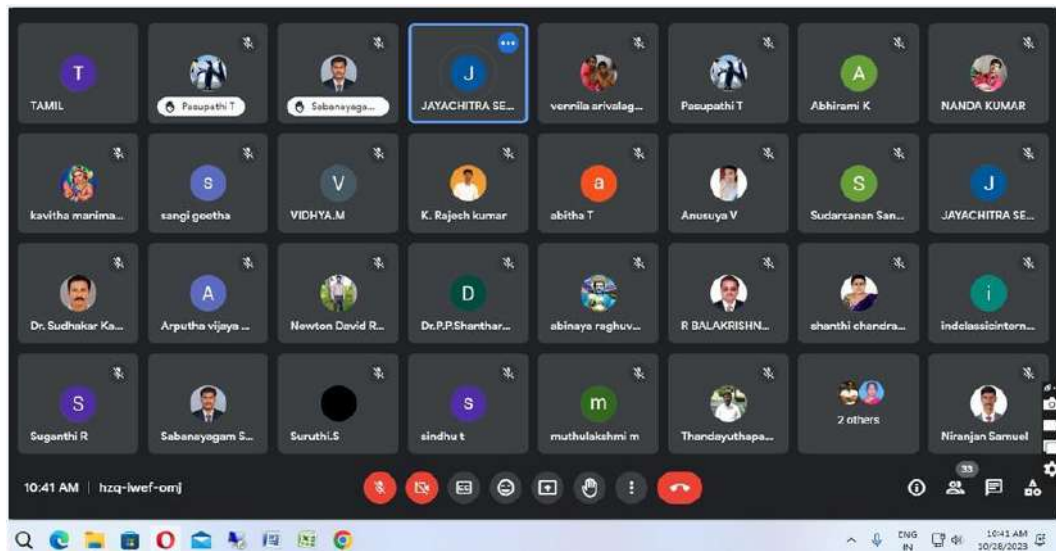
EEE



MECH



Content Delivery



Vote of Thanks:

Ms.V.Harinilakshmi, a student in the Electronics and Communication Engineering department, delivered a heartfelt vote of thanks. She expressed her gratitude to Ms. Jayachitra Sekar for her enlightening presentation, which benefited both students and professionals. Ms.V.Harinilakshmi also thanked Mr. S. Sabanayagam for his warm welcome and for facilitating the webinar.

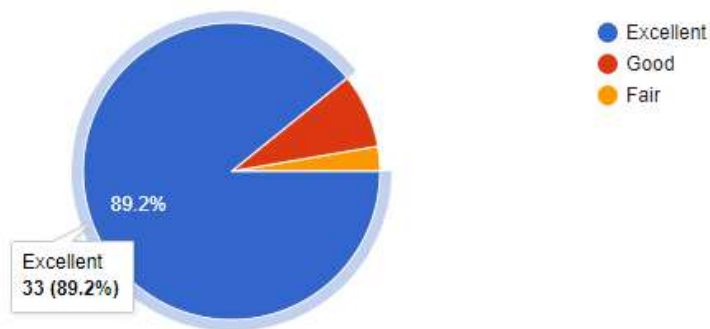
Number of Beneficiaries

| S. No | Department | Year / Sec | Beneficiaries Count |
|-------|------------|------------|---------------------|
| 1 | Civil | IV Year | 11 |
| 2 | CSE | | 52 |
| 3 | ECE | | 38 |
| 4 | EEE | | 40 |
| 5 | MECH | | 37 |

Feedback obtained from Google form: <https://forms.gle/obsJaA7gHWbvWXx19>

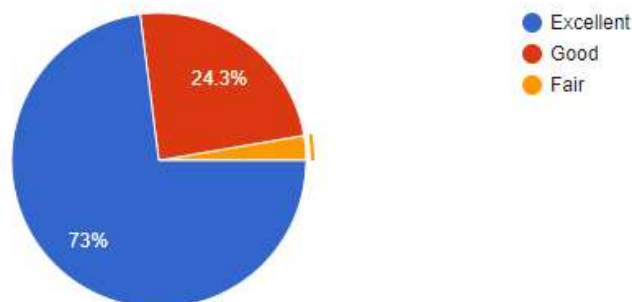
Content of the Program?

37 responses



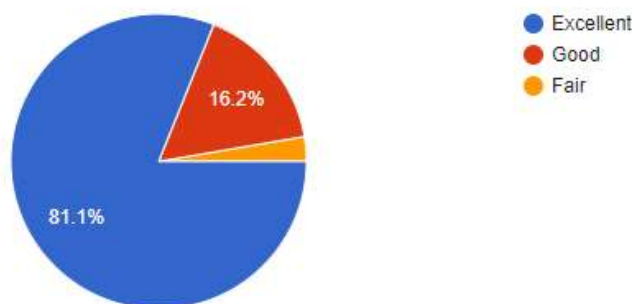
Quality of Audio/Video Streaming?

37 responses



Way of Presentation?

37 responses



[Signature]
Coordinator
(Mr.S.Sabanayagam)

[Signature]
R & D Convener
(Dr.P.P.Shantharaman)

[Signature]
Principal
(Dr.J.Arputha Vijaya Selvi)



Centre for Promotion of Research

National Science Day Celebrations

In view of National Science Day Celebrations, Poster Design Competition on the theme “**Science for a Sustainable Future**” was organized in online mode from 20.02.2024 to 28.02.2024. 27 entries were received, based on the creativity and relevance to the theme two posters was selected. Ms. P. Sneha of IV EEE bagged the first prize and Mr. S. Lexmadurai of II CSE bagged the second prize. The winners were given shield and certificate of appreciation.

Event Flyer



Sample Poster

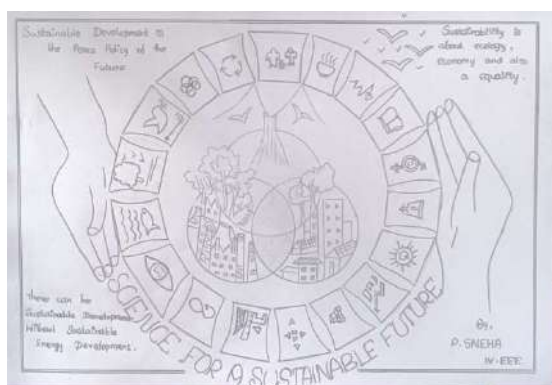


Photo – Winners



First Prize - Ms. P. Sneha / EEE



Second Prize - Mr. S. Lexmadurai / CSE

Certificate



Participants List

| S. No | Name of the Participant | Year | Dept |
|-------|-------------------------|--------|------|
| 1 | M. Santhosh | First | MECH |
| 2 | Hasidhikshana S | Second | ECE |
| 3 | Bhavatharani.V | Fourth | CSE |
| 4 | Kiruthika D | Second | ECE |
| 5 | Saravanan K | Third | CSE |
| 6 | Kishore Kumar | Fourth | MECH |
| 7 | S. GOPINATH | Third | EEE |
| 8 | R.Reema Jasmine | Second | ECE |
| 9 | Dhaslima Shafreen.M | Second | CSE |
| 10 | J. Abinayasree | Fourth | EEE |
| 11 | Vasudevakrishnan | Third | ECE |
| 12 | Aswini.S | Second | CSE |
| 13 | Rahul S | Third | CSE |
| 14 | G.Rasika | Second | CSE |
| 15 | Prithish M | Third | ECE |
| 16 | Jegan.k | Fourth | MECH |
| 17 | Jegan K | Fourth | MECH |

| | | | |
|----|-------------------|--------|-------|
| 18 | Lexmadurai. S | Second | CSE |
| 19 | Sneha.P | Fourth | EEE |
| 20 | N. Jenova Jasmine | Fourth | Civil |
| 21 | Prithish M | Third | ECE |
| 22 | H. Maharish | Fourth | Civil |
| 23 | Bharath.G | Fourth | Civil |
| 24 | Sneha.S | Fourth | Civil |
| 25 | Sriram MC | Fourth | Civil |
| 26 | D.Maheswaran | Third | ECE |
| 27 | Vasikaran | Third | ECE |


HEAD/CPR 18/3/24


PRINCIPAL 18/3/2024



Report on
International Conference on Recent Trends in Engineering and Science
(ICRTES 2024) - 02nd & 03rd May, 2024

Organized by
Center for Promotion of Research

Inauguration

ICRTES 2024 commenced with formal registration. Inaugural ceremony was initiated with prayer song. **Dr. J. Arputha Vijaya Selvi, Principal and Conference Chair**, welcomed the gathering with the words also she emphasized that, this kind of conference will provide the opportunity for the students community as well as the participants to listen to the talk from eminent speakers followed by lighting of ceremonial lamp by the dignitaries. **Dr. R. Rajendran**, Secretary of the college honored the guests.



Dr. J. Arputha Vijaya Selvi, Principal delivering welcome address



Dignitaries on the Dias



Dignitaries lighting the Lamp



Dr. R. Rajendran, honoring Dr. B. Subramanian

Dr. R. Rajendran, Secretary presided over the function and delivered the Presidential Address. In his presidential he described the establishment of department of science and technology to promote innovation in science and engineering.



Dr. R. Rajendran delivering Presidential Address



A View of the participants

Dr. S. Sabanayagam, Prof. / Dept. of Mechanical Engineering introduced **Dr. B. Subramanian**. The Inaugural Address was delivered by **Dr. B. Subramanian**, in his address, he detailed about the Electroplating Technology and its material characterization.



Dr. S. Sabanayagam, Prof. / Dept. of Mechanical Engineering introducing the Chief Guest



Dr. B. Subramanian delivering Inaugural Address

Dr. S. Udayakumar, Associate Professor / Dept. of Science and Humanities introduced **Dr. M. Revanasiddappa**, Professor, PES University, Bangaluru. The Special Address was delivered by **Dr. M. Revanasiddappa**, in his address, he detailed about the importance of Science in Engineering.



Dr. S. Udayakumar, Assoc. Prof. / Dept. of S & H introducing the Chief Guest



Dr. M. Revanasiddappa delivering Special Address

Hard copy of the Conference Proceedings was released by **Dr. B. Subramanian** and received by **Dr. J. Arputha Vijaya Selvi Principal, Kings College of Engineering**.



Release of Conference Proceedings



The Conference also featured an invited talk by **Dr. M. Revanasiddappa** on the title, “**Recent Innovations in Science and Technology**” and an invited talk by **Dr. Sivakumar Subramanian**, Associate Professor, Electronics Engineering, Universiti Teknikal Malaysia, Melaka on the title, “**IoT Technology for Disaster Mitigation**”.



Invited Talk by Dr. M. Revanasiddappa



Invited Talk by Dr. Sivakumar Subramanian

On the day, papers were presented in 6 tracks; Track-1– Civil Engineering was chaired by **Dr. R. Saravanan & Mr.K.Arun**, Track-2 – Computer Science & Engineering was chaired by **Dr. S.M. Uma & Ms.M.Abinaya**, Track-3 – Electronics & Communication Engineering was chaired by **Dr. T. Shanthi & Mr.R.Balakrishnan**, Track-4 – Electrical & Electronics Engineering was chaired by **Mr.R.Sundaramoorthi & Dr.G.Suganya**. Track-5 – Mechanical Engineering was chaired by **Dr. T. Pushparaj & Mr.H.Agilan** and Track-6 – **Science & Humanities** was chaired by **Dr. V. Sureshkumar & Ms.T.Gananajeya**.



Participant presentation their papers



HoD's distributing certificates to the participants



HoD's distributing certificates to the participants

| S. No. | Details | | Department | | | | | | |
|--------------|-----------------------|-------------------|------------|-----|-----|-----|------|-----|-------|
| | | | CIVIL | CSE | ECE | EEE | MECH | S&H | Total |
| 1 | External participants | Research Scholars | 01 | | | | 02 | | 03 |
| 2 | | Offline mode | 20 | | 08 | 03 | 09 | 1 | 41 |
| 3 | | Online mode | | 38 | 07 | 25 | 06 | 12 | 88 |
| 4 | Internal participants | Students | 04 | 27 | 20 | 13 | 19 | | 83 |
| 5 | | Staffs | | 11 | 02 | | | | 13 |
| Total Papers | | | 25 | 76 | 37 | 41 | 36 | 13 | 228 |

Out of 283 papers received, 228 papers research articles were presented by the students, research scholars and faculty members from various reputed Institutions across India. In the valedictory function, **Dr. P.P. Shantharaman**, Convenor, presented the Conference Summary to the audience and distributed the Conference Certificates to the delegates. **Ms. S. Abikayil Aarthi**, Asst. Prof. / Department of Computer Science and Engineering, proposed the vote of thanks to all the participants.


Convenor 26/7/24


Publication Chair


Conference Chair



KINGS
COLLEGE OF ENGINEERING
An Autonomous Institution

Near Thanjavur, Punalkulam, Gandarvakottai Taluk, Pudukkottai Dist. - 613 303.

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23 Years of
Academic Excellence
SEEK • STRIVE • SUCCEED

INTERNATIONAL CONFERENCE ON RECENT TRENDS IN ENGINEERING & SCIENCE (ICRTES-2024) (Hybrid Mode)

02nd & 03rd May, 2024

Organized by

Centre for Promotion of Research (CPR)

ORGANIZING COMMITTEE

PATRON

Dr. R. Rajendran,
Secretary.

CONFERENCE CHAIR

Dr. J. Arputha Vijaya Selvi,
Principal.

PUBLICATION CHAIR

Dr. S. Sivakumar,
Vice Principal.

CONVENER

Dr. P. P. Shantharaman,
Head /CPR

STEERING COMMITTEE

Dr. R. Saravanan,
Head, Dept. of Civil.

Dr. K. Abhirami,
Head (i/c), Dept. of CSE

Dr. T. Shanthy,
Head, Dept. of ECE

Mr. R. Sundaramoorthi,
Head, Dept. of EEE

Dr. T. Pushparaj,
Head, Dept. of MECH

Dr. V. Suresh Kumar,
Head, Dept. of S&H

COORDINATORS

Mr. D. Nandhakumar,
Dept. of Civil

Ms. S. Abikayil Aarthy,
Dept. of CSE

Mr. A. Herald,
Dept. of ECE

Dr. P. Narasimman,
Dept. of EEE

Dr. S. Sabanayagam,
Dept. of MECH

Dr. S. Udhayakumar,
Dept. of Science & Humanities

About the Conference:

The International Conference on Recent Trends in Engineering and Science (ICRTES-2024), from 02nd May to 03rd May 2024 in KCE, aims to bring together academic communities, researchers and scientists to exchange information, experiences and research results on all aspects of specialized and interdisciplinary areas. The conference provides an opportunity for everyone to network, exchange ideas and present their research to the international community.

Topics (but not limited to)

- Information & Communication Technologies
- Artificial Intelligence and Machine Learning
- Cyber Security
- Data Science & Cloud Computing
- Electronics & IoT
- Power Systems & Power Electronics
- Materials & Manufacturing Processes
- Energy Sources
- Robotics & Mechatronics
- Developments in Civil Engineering
- Sustainable Development in Construction
- Science & Mathematics
- Environmental Sustainability
- Education, Online education – eLearning



Important Dates:

Registration Opens : 04.03.2024
Last Date for Submission : 19.04.2024
Last Date of Registration : 26.04.2024

Registration Fee:

UG/PG Students Rs. 750/-
Research Scholar &
Faculty / Industrialist Rs. 1000/-

Publication

All accepted papers registered for presentation will be published in the conference proceedings with ISBN. Selected Papers will be recommended for publication in Scopus / WoS / UGC journals*

In Association with



Address for Communication

Dr. PP. Shantharaman
Professor / Mechanical
ICRTES-2024
Kings College of Engineering
Punalkulam, Near Thanjavur
Pudukkottai Dt - 613 303, India
iconkce2023@gmail.com
www.kingsengg.edu.in
+91 99448 76644

For Registration & Submission



Event Flyer


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Centre for Promotion of Research (CPR)

Cordially invites you to the

International Conference on Recent Trends in Engineering & Science (ICRTES-2024)

 02.05.2024 & 03.05.2024
  Chera Hall

Chief Guest



Dr. B. Subramanian,
 Senior Principal Scientist,
 Central Electrochemical Research Institute,
 Karaikudi.

Keynote Speakers



Sivakumar Subramanian,
 Associate Professor,
 Electronics Engineering,
 Universiti Teknikal Malaysia Melaka.



Dr. M. Revanasiddappa
 Professor
 P E S University
 Bengaluru

In Association with








Dr.P.P.Shantharaman,
 Convener

Dr.S.Sivakumar,
 Publication Chair

Dr.J.Arputha Vijaya Selvi,
 Conference Chair

Event Invitation


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Certificate of Participation

This Certificate is awarded to **Dr. A. SASI KUMAR, Dept of Production Engg.,**
 of Government College of Technology, Coimbatore for
 presenting a paper titled Experimental analysis of friction stir processed
aluminium alloy 6082 surface composites
 in the **International Conference on Recent Trends in Engineering & Science**
(ICRTES-2024) on 2nd & 3rd May 2024, organized by the Centre for Promotion of
 Research (CPR), Kings College of Engineering, Pudukkottai.



Convener
Dr.P.P.Shantharaman



Publication Chair
Dr.S.Sivakumar



Conference Chair
Dr.J.Arputha Vijaya Selvi

Sample Certificate



KINGS PROJECT EXPO'2024

Organized by

Center for Promotion of Research

Center for Promotion of Research in association with IEEE STB 16621 organized KINGS PROJECT EXPO' 2024 on 03.05.2024. This project expo aims to encourage the students' creativity and innovations on Engineering & Technology. Dr.S.Sabanayagam, CPR Member & Associate Professor / Mechanical Engineering, welcomed the gathering. Dr.J.Arputha Vijaya Selvi, Principal, inaugurated the expo and delivered the inaugural address. In her speech, she emphasized the significance of innovations in projects. Mr.J.Niranjan Samuel, JRF/R&D, introduced the chief guest Mr. M. I. Abdul Halik, Secretary of IEEE Madras Young Professionals, Chennai. Mr. M. I. Abdul Halik delivered special address on importance of IEEE membership and his IEEE membership journey. Also he shared his memories as Passion to Progress: My IEEE Member Experience. Dr. S. Sivakumar, Vice Principal, delivered the felicitation address. He insisted the students to enhance their technical knowledge both in software and hardware. The projects of internal and external students were evaluated by senior faculty members of every department nominated as jury's. Totally 70 batches participated in the project expo. Jury's evaluated the projects and gave feedback & valuable comments to the students. Based on the innovation, presentation, implementation and demonstration marks were awarded by the jury's. Two projects were selected for rewards from each department. The valedictory ceremony of the project expo started by 01:30 p.m. at Pallava Hall. Dr.R.Rajendran, Secretary of the college distributed the prizes and certificates to the participants. Project Expo came to an end with vote of thanks by Ms. S. Abikayil Aarthi, AP/CSE cum Event Coordinator – IEEE MAS YP and Secretary – IEEE STB 16621.

Participant Details:

| S.No. | Department | Internal Batches | External Batches | Total |
|--------------|------------|------------------|------------------|-----------|
| 1. | CIVIL | 04 | - | 04 |
| 2. | CSE | 20 | - | 20 |
| 3. | ECE | 03 | - | 03 |
| 4. | EEE | 11 | 02 | 13 |
| 5. | MECH | 19 | - | 19 |
| 6. | S&H | 01 | - | 01 |
| Total | | 58 | 02 | 60 |

Details of Prize winners:

| S.No | Department | Name of the Participants/College | Title of the project |
|------|---------------------------------------|--|--|
| 1. | Civil Engineering | <u>First Prize</u> P.Kathireswari J.Kiruthika sri J.Niksha Kings College of Engineering | Experimental Investigation on Partial Replacement of cement by seashell powder in concrete. |
| | | <u>Second Prize</u> G.Bharath U.Hariharan M.Joshuva N.Krishnakanth Kings College of Engineering | Experimental analysis of recycled construction and demolition waste as partial replacement of coarse aggregates in concrete. |
| 2. | Computer Science & Engineering | <u>First Prize</u> S.Mohammed Sameer S.Dinesh S.Sarvesh D.Guhan Kings College of Engineering | Spoton: A Hassle Free Car Parking System for smart cities using block chain technology |
| | | <u>Second Prize</u> K.kayalvizhi S.Keeethiga V.Mahalakshmi Kings College of Engineering | Deep Learning with optimal Hierarchical spiking Neural Network for Medical image classification |
| 3. | Electronics Communication Engineering | <u>First Prize</u> Natika K S Nivya P Priyadharshini J Vennila D Kings College of Engineering | Design And Implementation Of Robotic Spray Machine Using Artificial Intelligence |
| | | <u>Second Prize</u> Devadharshini B Dhivya dharshini M Preethi S Swathi shuki M Kings College of Engineering | Design And Implementation Of Iot Based Non-Invasive Blood Pressure Monitoring |

| | | | |
|----|-------------------------------------|--|---|
| 4. | Electrical& Electronics Engineering | First Prize Akash.A Harikumar.K Mesia Godwin.F Varsha.R Kings College of Engineering | Self generated E-Train modelling for future technology. |
| | | Second Prize Dhivakar.S Morishkumar.S Guruprasath.N Ponnagaraan.M.G Kings College of Engineering | Power generation. |
| 5. | Mechanical Engineering | First Prize Prakash K Jegan K Lalithkumar E Mahendran M Kings College of Engineering | Designing a joystick operated tricycle for person with disability. |
| | | Second Prize Eraniyan K Arunkumar M Manoj kumar R Hariharan K Kings College of Engineering | Fabrication of development of a Remote Controlled scrap collecting vehicle for industrial applications. |
| 6. | S&H | First Prize Swetha S Ashviniya A Praveen V Vinodhini A | Geothermal power plant |



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KINGS PROJECT EXPO'24
03.05.2024 | FRIDAY | 10:00A.M.
Organised by
Centre for Promotion of Research

Chief Guest
Mr. Abdul Halik,
Secretary,
IEEE Madras Young Professionals
Chennai

Pallava Hall *All are Invited*

Mr. D. Nandakumar, AP/Civil
Mr. J. Niranjan Samuel, JRF/R&D
Dr. P P. Shantharaman
Head/CPR
Dr. J. Arputha Vijaya Selvi
Principal
Dr. R. Rajendran
Secretary

Invitation



Chief guest invitation



Welcome Address by Dr.S.Sabanayagam



Honouring the Chief Guest



**Inaugural Address by Dr.J.Arputha Vijaya Selvi,
Principal,KCE**



Chief Guest Address



Participants demonstrated their projects in front of the jury's



Participants demonstrated their projects



Valedictory Session of Project Expo'24



Certificate Distribution by Dr.R.Rajendran, Secretary, KCE

Outcomes of the Project Expo'24

Experts evaluated the student's projects and gave their valuable remarks and feedback on the topic of the project and interacted with students about how to improve the quality of the work and project at large scale.

Students were able to

- Efficiently present their ideas.
- Design the project with all technical aspects.

D. Narasimhan 10/7/24
Project Expo Coordinators

P. S. S. S. S. 10/7/24
DRC Convener

J. Ramesh 10/7/2024
Principal



INSTITUTIONS INNOVATION COUNCIL (IIC)
ACADEMIC YEAR 2023-2024

| S.No | Date | Details | Page No. |
|------|-----------|--|----------|
| 1. | 29.8.2023 | Seminar on Accelerators/Incubation - Opportunities Students & Faculties - Early Stage Entrepreneurs | 2 |
| 2. | 30.8.2023 | Workshop on Innovation /Prototype Validation - Converting Innovation to startup | 6 |
| 3. | 18.10.23 | Intra Institutional Idea Competition-2023 | 9 |
| 4. | 2.11.23 | Industry Visit-Siemens Center of Excellence in Manufacturing, NIT, Trichy | 11 |
| 5. | 17.5.2024 | MoE's sponsored Impact lecture series on "role of Innovation in startup success and Enforcement of Intellectual property Rights-Patents and Design | 15 |
| 6. | 20.5.2024 | Workshop on "Intellectual Property Rights(IPRs) and I.P management for start up | 22 |
| 7. | 23.5.2024 | Workshop on "Business model canvas" | 25 |
| 8. | 29.5.2024 | Workshop on Entrepreneurship skill, Attitude and Behavior development. | 27 |
| 9. | 31.5.2024 | Seminar on "Entrepreneurship Awareness" | 29 |



ACADEMIC YEAR 2023-24 (ODD SEMESTER)

QUARTER-IV-IIC ACTIVITY REPORT

Session Details:

Title of the Session : Seminar on "Accelerators/Incubation - Opportunities for Students & Faculties - Early Stage Entrepreneurs "

| | |
|--|--|
| Date : 29.8.2023 | Duration : 3 Hour (10 A.M TO 1.00 P.M) |
| Activity Category :Internal | Nature of the Session : Physical Mode |
| Facebook link for the event organized | Facebook/Kings College of Engineering |
| Instagram link for the event organized | Kings College of Engineering |

Speaker Details:

| | |
|------------------------|-----------------------|
| Name:Prof.A.Manikandan | Designation:Head-DOMS |
|------------------------|-----------------------|

Organization: St.Joesph's College of Engineering and Technology, Thanjavur

Programme Report:

Objective:

- To provide a brief idea of Incubation opportunities and about it's important in the Industry and other sectors.
- To give Innovative ideas to the students to upgrade and know about the development and Technology.
- To provide a platform for the Teaching faculties and students to upgrade and know about the Innovation and Incubation opportunities.
- In addition, this programme will help to improve the student's ability in carrying out simple innovation and to bring to product through professional discussions.

Institution's Innovation Council (IIC) of Kings College of Engineering organized seminar on "Accelerators/Incubation - Opportunities for Students & Faculties - Early Stage Entrepreneurs" on 29.8.2023. The session was started by 10.00 A.M. Vice Principal, Dr.S.Sivakumar delivered presidential address. The event had a whopping number of 75 participants of whom 70 were students and 05 were Faculty. Introduction about the resource person was delivered by Dr.K.Sudhkar, ED Cell Coordinator, Kings College of Engineering.

The following points were discussed during session:

During the session, he started to explain about the role of importance and incubation process and Entrepreneurship skills to be implemented in the Institution levels. Students allow entrepreneurs to preserve capital and gain external support to accelerate their businesses growth. Through business incubation, the Enterprise Center captures each entrepreneur's uniqueness and offers support and customized services to maximize businesses potential. The ultimate goal of incubation is to launch profitable, sustainable entrepreneurial companies. Student entrepreneurship is an important but not well-studied field of research. Student venturing activity is characterized by the lack of experience and expertise among founders, which is a critical barrier in technology-based venturing.

Importance of Entrepreneurship:

Entrepreneurship drives the growth and diversification of the economy and contributes to the creation of wealth. Before we get into the specifics of the role of entrepreneurship in economic development, let's briefly encapsulate its significance. Entrepreneurship's importance lies in the following:

- Drives economic growth and creates new job
- Encourages innovation by bringing new ideas, products, and services to the market
- Contributes to social change by developing products or services that reduce people's dependence on outdated technologies
- Addresses social and economic problems by creating solutions that meet the needs of society
- Enables competition which improves business efficiency and lowers prices for consumers

Economic Independence:

Entrepreneurship can be a path to economic independence for both the country and the entrepreneur. It reduces the nation's dependence on imported goods and services and promotes self-reliance. The manufactured goods and services can also be exported to foreign markets, leading to expansion, self-reliance, currency inflow, and economic independence. Similarly, entrepreneurs get complete control over their financial future. Through their hard work and innovation, they generate income and create wealth, allowing them to achieve economic independence and financial security.

Entrepreneurship promotes economic growth, provides access to goods and services, and improves the overall standard of living. Many entrepreneurs also make a positive impact on their communities and improve their well-being by catering to underserved areas and developing environment-friendly products.

Increases Gross National Product and Per Capita Income:

Entrepreneurship can play a significant role in increasing economic growth and prosperity by increasing Gross National Product (GNP) and Per Capita Income (PCI). GNP measures the total economic output of a country while PCI calculates the average income per person. The increase in GNP can lead to a rise in PCI. Entrepreneurship can contribute to GNP by creating new businesses and industries, which can lead

to job creation, increased consumer spending, and higher tax revenue. The entrepreneurship education programs in which students create their own ventures are commonly referred to as "action-based" entrepreneurship education. Entrepreneurship education has therefore become increasingly popular in technology-focused education such as engineering education and now involve several different designs and methods to achieve problem-based learning and real-life projects in education.

Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to spread their skill in the various steps involved in incubation and various processes involved in design & development. The feedbacks from the participants were collected. Mr.G.Bharath, IIC Member delivered the vote of thanks.

Outcome of the activity:

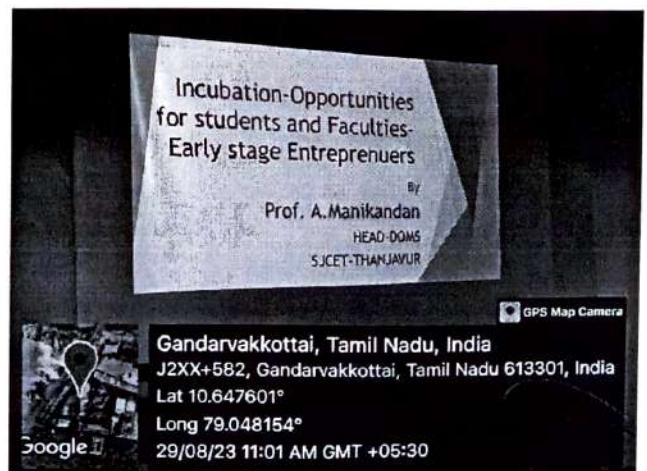
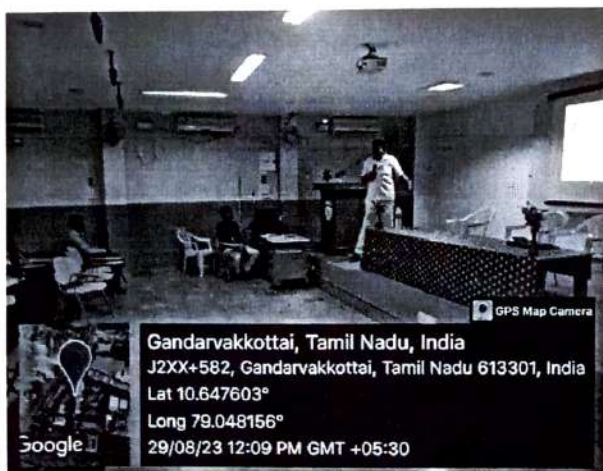
- All the participants have benefitted and gained knowledge about Incubation Process Design and Development.
- Programme helped to adapt new technologies in all the sectors.
- Portrays the accelerated learning curve for students in involving different technologies associated with different Industries and funding Agencies.

Participants Details:

Total No. of Student Participation: 70 Members

Total No. of Staff (Teaching / Non-Teaching) Participation: 05 Members

SNAPSHOTS:





Prof. Anisur Rahman
 9/9/23
 Coordinators

Prof. Anisur Rahman
 9/9/2023
 Vice President, IIC

J. R. Ramesh
 09/9/2023
 Principal/President, IIC



ACADEMIC YEAR 2023-24 (ODD SEMESTER)
QUARTER-IV-IIC ACTIVITY REPORT

Session Details:

Title of the Session : Workshop on **"Innovation /Prototype Validation –Converting Innovation to startup "**

| | |
|--|---|
| Date :30.8.2023 | Duration : 3 Hour (10.00 A.M TO 1.00 P.M) |
| Activity Category :Internal | Nature of the Session : Physical Mode |
| Facebook link for the event organized | Facebook/Kings College of Engineering |
| Instagram link for the event organized | Kings College of Engineering |

Speaker Details:

| | |
|-------------------|---------------------|
| Name:Dr.S.Srinath | Designation:Founder |
|-------------------|---------------------|

Organization: The Director, Ziwwit Educational and Research center, Thanjavur

Programme Report:

Objective:

- To provide a brief idea of Innovation and Prototype validation and about it's important in the Industry and other sectors.
- To give Innovative ideas to the students to upgrade and know about the development and Technology.
- To provide a platform for the Teaching faculties and students to upgrade and know about the Innovation and product development.
- In addition, this programme will help to improve the student's ability in carrying out simple innovation to start up and to bring to product through professional discussions.

Institution's Innovation Council (IIC) of Kings College of Engineering organized seminar on **"Innovation /Prototype Validation –Converting Innovation to startup "** on 30.8.2023. The session was started by 11.00 A.M. VicePrincipal, Dr.S.Sivakumar delivered presidential address. The event had a whooping number of 80 participants of whom 75 were students and 05 were Faculty. Introduction about the resource person was delivered by S.Sneha, UG Student IIC Member.

The following points were discussed during session-I:

Innovation and Importance:

- Innovation is often necessary for Organizations to adapt and overcome the challenges of change. Achieving organizational and economic growth through innovation is key to staying afloat in today's highly competitive world. Innovation refers to introducing novelty in a product, service, strategy, or business model. Moreover, innovation also increases the usability and durability of the entity above. It is a concept that helps stay ahead of the competition and induces creativity and efficiency in businesses. Innovation is important to the advancement of society as it solves these kinds of social problems and enhances society's capacity to act.
- It's responsible for resolving collective problems in a sustainable and efficient way, usually with new technology. These new technologies, products and services simultaneously meet a social need and lead to improved capabilities and better use of assets and resources. In order to be able to solve these kinds of societal problems, private, public and non-profit sectors are involved.
- He explained about the following research areas: Experimental and theoretical research is carried out on the development and application of aero space Engineering, space propulsion system, electric propulsion systems, including electro thermal propulsion systems, electromagnetic propulsion systems and electrostatic propulsion systems.

Innovation/Prototype Design:

- Innovation/Prototyping is the process of designing and building an early model of a product to test it. Any system or device that will be sold to consumers, government agencies, or businesses will begin as a prototype that typically does not have all of the components or functions that will be used in the final product that is brought to market.
- A prototype can serve as a proof of concept showing that the system or device can be built and will perform correctly.

SessionII:

- During the session-II resource person has started from his research experience in the field of Aerospace Engineering and satellite communications are used in Prototype design and process designing order to develop the prototype. He has broadly given the agenda such as Introduction about prototype, basic circuit designing, latest software and applications etc. He clearly explained from basics of prototype through some practical examples such as LED TV and Refrigerator.
- Finally he has mentioned that general Instructions and guidelines to solve real world problems to convert prototype to product. The session was very informative and the participants have interacted with the resource person.

Valedictory Function:

This session proposed a chance to the Undergraduate and Faculty members to spread their skill in the various steps involved in prototype and various processes involved in design & development. The feedbacks from the participants were collected. Mr.G.Bharath, IIC Member delivered the vote of thanks.

Outcome of the activity:

- All the participants have benefitted and gained knowledge about Innovation/Prototype validation design and Development.
- Programme helped to adapt new technologies in all the sectors.
- Portrays the accelerated learning curve for students in involving different technologies associated with different Industries and funding Agencies.

Participants Details:

Total No. of Student Participation: 75 Members

Total No. of Staff (Teaching / Non-Teaching) Participation: 05 Members

SNAPSHOTS:



Dr. S. SRINATH

(B.E., M.Sc.-Engg. (by Res.),
Ph.D., Post-Doc)
Director - Ziwit Educational and
Research Center, Tamil Nadu,
India.

Seminar on

" INNOVATION/PROTOTYPE
VALIDATION - CONVERTING
INNOVATION INTO STARTUP "

Date : 30.08.2023

Time : 11.00 am - 12.30 pm

Venue : Pallava hall

IIC Member

Dr.K.Sudhakar
AP/MGT

IIC Vicepresident

Mr.R.Sundaramoorthy
AP/EEE

IIC President & Principal

Dr.J.Arputha Vijaya Selvi



[Signature]
Coordinators
9/9/23

[Signature]
Vice President, IIC
9/9/23

[Signature]
09/9/2023
Principal/President, IIC



KINGS
COLLEGE OF ENGINEERING

WELCOME TO THE WORLD OF KNOWLEDGE
AND INNOVATION



INSTITUTION'S
INNOVATION
COUNCIL

ACADEMIC YEAR 2023-24(ODD SEMESTER)

INTRA INSTITUTIONAL IDEA COMPETITION 2023-REPORT

Session Details:

Title of the Session : **INTRA INSTITUTIONAL IDEA COMPETITION -2023**

Date : 18.10.2023

Duration : 10 A.M TO 4.30 P.M

Activity Category : Internal

Nature of the Session : Physical Mode

Facebook link for the event organized Facebook/Kings College of Engineering

Theme : Problem Statements for Idea Competition 2023

- Agriculture, Food Tech & Rural Development
- Renewable / Sustainable Energy
- Smart Automation
- Smart Vehicles
- Block chain and Cyber security

Speaker Details:

Name: Dr. A. Albert Martin Ruban

Designation: Head of the Department / EEE

Organization: Kings College of Engineering

Jury Details

- Mrs. R. Suagantha lakshmi, AP/CSE – suganthalakshmi.cse@kingsengg.edu.in
- Dr. P. Narasimman, AP/EEE – narasimman.eee@kingsengg.edu.in

Programme Report:

Objective:

- To enhance the knowledge of students and motivate them to compete in the wide-ranging aggressive engineering field.
- To showcase the research talents, innovativeness, and inventiveness among the students.
- It provides a platform for the students to upgrade and know about the development and Technology for the preparation of SIH 2024.
- To provide a forum for sharing new design and alternative technologies and to promote affable interactive environment leading to exchange of new research ideas.

Institution's Innovation Council (IIC) of Kings College of Engineering organized Intra institutional Ideathon-2023 on 18.10.2023 at Smart Class room. A total of 10 teams (40 Members) were actively presented their ideas. Each team consists of four members and different themes are selected from the Hackathon Ideas . The session was started by 10.30 A.M with Tamil Thaaai Vaazthu .Welcome address was delivered by Mr.R.Sundaramoorthi,AP/EEE,IIC/Vice President. Presentation started by 11.00 a.m as per schedule circulated in Agenda. Instructions and Guidelines about presentation acknowledged. The following department teams were participated.

Participants Details:

Total No. of Student Participation: 40 Members(10 Teams)

Total No. of Staff (Teaching / Non-Teaching) Participation: 10

| SL.NO | DEPARTMENT | NO OF TEAMS | SECTOR |
|-----------------------|------------|-------------|----------------------------------|
| 1 | CSE | 05 | • Block chain and Cyber security |
| 2 | ECE | 02 | • Smart Automation |
| 3 | EEE | 03 | • Smart Vehicles |
| TOTAL :10(40 Members) | | | |

Valedictory Function:

The shortlisted teams were declared. Evaluation made based on the following criteria :(a)Problem Evaluation-5 Marks(b)Description-5 Marks (c)Presentation-10 Marks (d)Queries-5Marks.A total of 25 marks allotted for each presentation. The feedbacks from the participants were collected. Dr.K.Sudhakar,AP/T&P, Startup Coordinator, IIC Member delivered the vote of thanks.



Outcome of the activity:

- All the participants have benefitted and gained knowledge about Problem statements and finding solutions.
- Programme helped to adapt new technologies in all the sectors also platform for SIH 2024.
- Portrays the accelerated learning curve for students in involving different technologies associated with different Industries and funding Agencies.

IIC-Vice President

IIC- President



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-24 (ODD)

Report - Industrial Visit

Place Visited : Siemens Centre of Excellence in Manufacturing, NIT, Trichy.

Date of Visit : 02.11.2023

Number of Beneficiaries: 40 – Students from IIC students members & 4 Staff Members on 02.11.2023

As part of our curriculum, department has arranged one day Naan Mudhalvan Industrial Visit for IIC students at NIT, Trichy. Our team, comprising three faculty members and final year students, embarked on an insightful industrial visit to the National Institute of Technology, Trichy (NIT Trichy) to explore and understand the practical applications of Programmable Logic Controllers (PLC) in industrial settings.

Objectives of Industrial Visit at NIT Trichy:

The objective of an industrial visit is to provide an insight regarding internal working of industries.

- The primary goal of the visit was to gain hands-on experience and knowledge about PLC schematics, their implementation in real-world scenarios, and the role they play in industrial automation.
- **Automation:** Facilitate the automation of industrial processes by executing predefined logic, reducing the need for manual intervention and enhancing efficiency.
- **Control Logic Implementation:** Provide a platform for implementing and executing control logic diagrams, enabling precise control over various components and devices in a system.
- **Reliability:** Ensure reliable and consistent operation of industrial processes by minimizing errors, reducing downtime, and optimizing response times to input signals.
- **Monitoring and Diagnostics:** Enable real-time monitoring of system parameters and the ability to diagnose faults promptly, facilitating efficient maintenance and troubleshooting.
- **Interfacing with Sensors and Actuators:** Facilitate seamless integration with sensors and actuators, allowing PLCs to receive input data from the field and control output devices based on the programmed logic.
- **Cost Efficiency:** Contribute to cost savings by streamlining operations, reducing the need for manual labor, and optimizing resource utilization within industrial settings.

- **Scalability:** Provide a scalable solution that can accommodate the expansion or modification of industrial processes without significant changes to the control system.
- **Standardization:** Facilitate standardization of control processes, making it easier to replicate and maintain similar systems across different sections of an industrial facility.
- **Enhanced Safety:** Contribute to the overall safety of industrial operations by implementing fail-safe mechanisms and emergency shutdown protocols through the PLC control logic.
- **Data Logging and Reporting:** Support data logging and reporting functionalities, allowing for the collection and analysis of operational data for process optimization and regulatory compliance.
- **Integration with Communication Networks:** Enable communication with other automation and information systems, fostering connectivity and integration within the broader industrial ecosystem.

Overview of NIT Trichy:

NIT Trichy, renowned for its excellence in engineering education, provided an ideal backdrop for our exploration. The institution's state-of-the-art laboratories, experienced faculty, and industry collaborations make it a hub for cutting-edge research and practical learning.

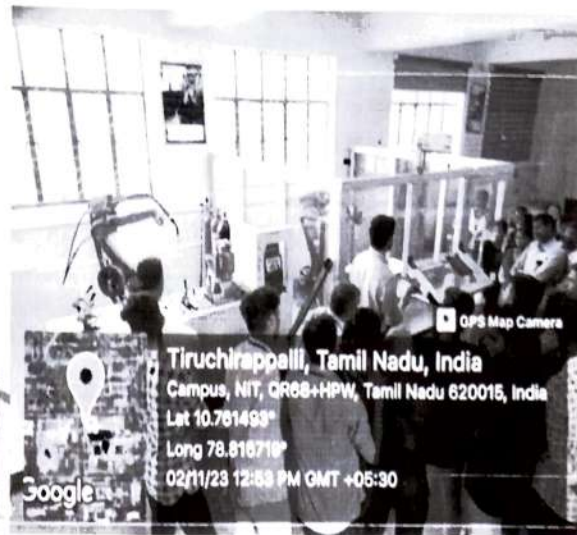
Introduction:

We recently visited the National Institute of Technology (NIT), Trichy, accompanied by three esteemed faculty members and a group of final year students. The purpose of the visit was to gain insights into Programmable Logic Controller (PLC) schematics in an industrial setting.

The Students visited the following places at NIT:



Students discussed with resource person



Snapshot at NIT, Trichy

Outcome:

- Industrial visits help students to enhance their interpersonal, communication skills, and teamwork abilities.
- This visit not only broadened our understanding of PLC schematics but also underscored the importance of experiential learning in preparing students for the challenges of the industrial landscape.
- At the end of this visit, students should be able to improve their knowledge relevant to PLC to the learn new technologies and areas.

Key Observations:

Our visit to NIT Trichy provided invaluable insights into PLC schematics, reinforcing theoretical knowledge with practical applications. The hands-on sessions allowed students to interact with PLC systems, enhancing their problem-solving skills and familiarity with real-world scenarios.

Faculty Collaboration:

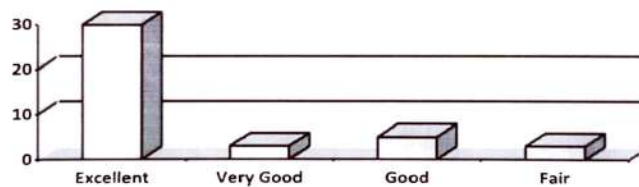
The collaboration with NIT Trichy's faculty members facilitated in-depth discussions and clarification of doubts. Their expertise in the field added depth to our understanding of PLC schematics and their role in modern industrial automation.

Practical Application:

Witnessing the real-time application of PLC schematics reinforced the importance of practical knowledge in engineering education. The hands-on experience allowed students to grasp concepts beyond the theoretical realm.

Conclusion:

The industrial visit to NIT Trichy was a resounding success, offering a comprehensive understanding of PLC schematics. The practical exposure provided a bridge between theoretical concepts and their practical implementation, enriching the learning experience for both faculty and students.

Students Feedback:

Principal



ACADEMIC YEAR 2023-24(EVEN SEMESTER)

MoE'S Sponsored Impact Lecture series

On

"Role of Innovation in startup success and Enforcement of Intellectual Property Rights-Patents and Design"

17.05.2024

IIC ID:IC201810951

REPORT

Institution's Innovation Council (IIC) of Kings College of Engineering organized Impact lecture series on **"Role of Innovation in startup success and enforcement of Intellectual Property Rights - Patents and Design"** sponsored by MoE's Innovation cell on 17.5.2024.

Objective:

The main objective of this Impact Lecture series:

- To provide ideas of future Innovation in various fields and Patent Rights.
- It provides a platform for the teaching faculties and students to upgrade and know about the Innovation and patents skills.
- In addition, this programme will help to improve the student's ability in carrying out how to build Product through simple innovation and convert to Patent rights to bring up professional discussions.

Speaker details:

Session 1: Session on "Enforcement of Intellectual Property Rights -Patents and Design" by Mrs.Preethi Narayannan, IP Consultant, Chennai.

Session 2: Session on "Role of Innovation in startup success "by Mr.P.Vinoth, Leadership Professional, Bangalore.

President:

Dr.J.Arputha vijaya selvi,Principal,KCE

Vice- President

Mr.R.Sundaramoorthi, Head of the Department / EEE

Convener

Dr.R.Shankar, Associate Professor /MECH

Members

Mr.R.Sundharam,AP/CIVIL

Ms.M.Mangalambigai,AP/CSE

Dr.K.Sudhakar,AP/T&P

Mr.J.Niranjan Samuel, JRF/R&D.

Programme Type: Enforcement of Intellectual Property Rights –Patents and Design

Promotion in social media: Facebook and Instagram

Inaugural Session:

Inaugural session was started 10.15 A.M presided over by **Dr.J.ArputhaVijaya Selvi, IIC President,Head of the Institution.** The dignitaries during the inaugural session were **Dr.S.Sivakumar, Vice Principal, Mrs.Preethi Narayanan, IP Consultant, Chennai,** Resource person all the IIC Program Coordinators and IIC faculty and student Members. The program was started with Welcome address and Introduction about Impact lecture series delivered by **Mr.R.Sundaramoorthi,HOD/EEE.** Resource Person Introduction given by **Mrs.M.Mangalambigai,AP/CSE.**

Participants:

Faculty:10; Internal students :85 Total : 95

Session 1: Session on “Enforcement of Intellectual Property Rights –Patents and Design by Mrs.Preethi Narayanan, IP Consultant, Chennai.

The session was started by 10.30 A.M.Before starting the session, Resource person thanked Management, Principal, IIC Coordinators and members of Kings College of Engineering.

The following key points are discussed during presentation:

- Introduction about Intellectual Property Rights (IPR) such as necessity of Property Rights, Progress of nation towards Innovations, Patent, and prospers. Patents are one of the most crucial tools for protecting an inventor's ideas, innovations and promoting technological progress. Patents provide inventors with the exclusive right to use make and sell their inventions for a specified period of time, giving them a competitive edge in the marketplace. Patents also promote innovation and economic growth by incentivizing inventors and companies to invest in research and development.
- Patents encourage the sharing of ideas and knowledge, as inventors must publicly disclose their inventions in order to obtain a patent. She mentioned about increasing role, world Economy (The Paradigm shift) and Importance of science & technology and shared knowledge about the Eco system and various terminologies used in the IPR such as Intellect (Power of mind), Property (generally refers to something that can be traded), Intellect Property (refers to the ideas and creation of the mind having commercial values) and Intellect Property Rights (refers to legal rights associated with Intellectual Property).she also shared about copy rights with suitable examples such as literary, films, dramatic, musical, sound recording, artistic and procedure, registration, penalty (section63 §ion 63A) and duration for copy rights.
- A patent is a legal protection granted by a government to an inventor or assignee of an invention. In the United States, patents are granted by the United States Patent and Trademark Office (USPTO).

Types of Patents

There are three types of patents: utility patents, design patents, and plant patents.

- Utility patents are the most common type of patent and are granted for new and useful processes, machines, manufactures, or compositions of matter.
- Design patents are granted for new, original, and ornamental designs for an article of manufacture.
- Plant patents are granted for new and distinct varieties of plants that have been asexually reproduced.

She also explained about Patent life cycle such as Idea, basic research; understand the economic importance, prior art research, patent filing, and patent prosecution. The complete procedure explained by flowchart which represents patent process and timeline was highly informative. The session was very useful and the participants have interacted with the resource person.

Session 2: Session on “Role of Innovation in startup success” by Mr.P.Vinoth, Leadership Professional, Bangalore.

The session-II was started by 1.45 p.m. Introduction about the resource person was delivered by Mrs.M.Mangalmbigai,AP/CSE,IIC faculty Member. Initially, resource person thanked Management, Principal, IIC Coordinators and student members. In his initial part of the session, he started about general introduction about Innovations which help to catch the career and difference between Invention and Innovation with plenty of examples.

The following key points are discussed during presentation:

- Startups are important because they are the engine of economic growth. They are the source of new jobs, new products, and new services. They drive innovation and create wealth. Startups are riskier than established businesses, but they also have the potential to generate higher returns.
- In the dynamic landscape of modern business, startups stand out as vibrant hubs of innovation and entrepreneurship, playing a pivotal role in shaping economies and societies worldwide.
- Beyond innovation, startups play a crucial role in driving economic growth and job creation. As they expand and scale, startups generate employment opportunities, fuel demand for goods and services, and stimulate investment in related sectors.
- Moreover, startups inject dynamism and competitiveness into stagnant markets, spurring incumbents to adapt and evolve. The cumulative effect of startup activity contributes significantly to GDP growth, fostering a thriving ecosystem of entrepreneurship and prosperity.

- A startup is a company or organization in its early stages, typically characterized by high uncertainty and risk. Many startups are founded with the aim of solving a problem or filling a gap in the market, and they typically operate in fast-paced and dynamic environments.
- Startups are important for a number of reasons. Firstly, they are often the source of new and innovative ideas. This is because startups are typically founded by people who are passionate about their idea and are willing to take risks to make it a reality. Secondly, startups play a key role in driving economic growth. They create new jobs and wealth, and they often bring new products and services to the market. Finally, startups are important for social progress.
- He briefly explained about his career and innovations developed recently in different sectors such as Agriculture and medical applications. He shared the knowledge about product development and Entrepreneur. He has given an idea about how to start the Innovation and startup. The entire session was interactive through snapshots pictures and live examples. The session was very informative and the participants have interacted with the resource person. The feedbacks from the participants were collected.

Benefits In terms of Learning/Skills/Knowledge obtained:

- All the participants have benefitted and gained knowledge about Innovation and Patent Rights skills set through practical concepts and examples.
- Programme helped to initiate simple Innovations and how to convert to Patents.
- Portrays the accelerated learning curve for students in involving innovation and Intellectual Property Rights through practical examples.
- It helps to gain new experiences, train students brain to handle a wide range of Challenges and concentrate through Innovation.

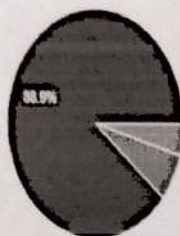
Valedictory Function:

The feedbacks from the participants were collected. Dr.R.Shankar,AP/MECH, IIC delivered the vote of thanks.

Feedback Analysis:

Designation

45 responses



- Associate Professor
- Assistant Professor
- Research Scholar
- PG Student
- UG Student

1 How satisfied you were with the session content?

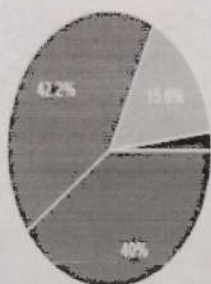
45 responses



- Excellent
- Very Good
- Good
- Fair

2 What percentage of the information was new to you?

45 responses



- 100%
- 90%
- 80%
- 70%

3 Would you like to learn more about this topic?

45 responses

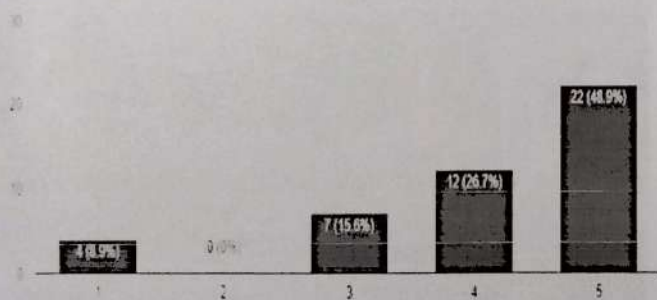


- Yes
- No
- Maybe

4 Please rate the speaker's knowledge of the topic

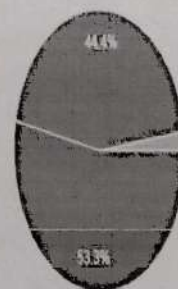
45 responses

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6 Overall session evaluation

45 responses



- Excellent
- Good
- Fair
- Poor

Session -I Photographs



Session - II Photographs



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21/5/2024
A. Sankar
IIC Members

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21/5/2024
Vice President-IIC & HOD/EEE

Handwritten signature
03/6/2024
President-IIC & Principal



KINGS
COLLEGE OF ENGINEERING
Recognised under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi
Affiliated to Anna University, Chennai



ACADEMIC YEAR 2023-24 (EVEN SEMESTER)



WORKSHOP
On

**"INTELLECTUAL PROPERTY RIGHTS (IPRs) AND IP MANAGEMENT FOR
STARTUP"**

20.05.2024

REPORT

Institution's Innovation Council (IIC) of Kings College of Engineering organized workshop on
"Intellectual Property Rights (IPRs) and I.P. Management For Startup" on 20.05.2024.

OBJECTIVE:

- To provide the attendees a broad idea about IPR and IP Management for start-up and its importance.
- To give idea about process, the useful steps for getting IPR approval for any start-up with useful links and information.

Resource person:

Dr. M. Satthiyaraju

Associate Professor,

Department of Mechanical Engineering

Kathir College of Engineering,

Coimbatore.

President:

Dr. J. Arputha vijaya selvi, Principal, KCE

Vice- President

Mr. R. Sundaramoorthi, Associate Professor / EEE

IIC member & Coordinator

Dr.R.Shankar, Associate Professor / MECH

Quarter series-III

Programme Type: Workshop

Promotion in social media: Facebook

Workshop summary

This report provides a brief summary of the lecture on **“Intellectual Property Rights (IPRs) and IP Management For Startup”** organized by Institutions Innovation Cell on **20.05.2024** at Smart class, ground floor, Block II. There were about 61 students of B.E. and 15 faculty members attended the workshop. The session was started by 11.10 am. Introduction about the resource person was delivered by IIC Vice president **Mr.R.Sundaramoorthi**, Associate Professor/EEE. The lecture was delivered by **Dr.M.Satthiyaraju**, Associate Professor, Department of Mechanical Engineering, Kathir College of Engineering, Coimbatore.

Resource person focuses on how to equip startup entrepreneurs with essential knowledge and tools to navigate the intricacies of intellectual property. Through interactive sessions and practical examples, students gain insights into different types of IP rights and learn how to develop a strategic approach to IP management. From understanding the basics of patents, trademarks, copyrights, and trade secrets to devising effective IP protection and commercialization strategies, the workshop covers a wide range of topics crucial for startup success.

Most of the participants who attended the workshop were students and faculty. By attending this workshop, students interested in startups will be better prepared to leverage their intellectual property assets for growth, innovation, and competitive advantage in the marketplace. The lecture provided an interactive atmosphere between the resource person and the participants.

In the valedictory function, participants expressed their feedback about the workshop. **Dr.R.Shankar**, coordinator of the workshop expressed the vote of thanks and the programme ended with a National Anthem.

Benefits Intermis of Learning/Skills/Knowledge obtained:

- Student got detailed information about IPR and IP Management. They also got knowledge about the patenting process, its stages and time taken for the selection procedure. They also acquainted the use of IPR and IP Management for Startup.

Brochure-Sample copy



INSTITUTION'S INNOVATION COUNCIL



Workshop ON

Intellectual Property Rights (IPRs)
and IP Management for startup

Resource Person



Dr. M. Satthiyaraju,
Associate Professor,
Department of Mechanical Engineering,
Kathir College of Engineering,
Coimbatore.

Date: 20/05/2024

Time: 11:00am

Venue: Smart Classroom, 1st floor, Block II

Dr. R. Shankar, Mr. R. Sundaramoorthi, Dr. J. Arputha Vijaya Selva
Member IIC Vice President IIC Principal

Event Photographs



Pudukkottai, Tamil Nadu, India
Block 2, Manamadurai - Tanjavur Rd, Tamil Nadu 613301, India
Lat 10.647994°
Long 79.048838°
20/05/24 03:07 PM GMT +05:30



Pudukkottai, Tamil Nadu, India
Block 2, Manamadurai - Tanjavur Rd, Tamil Nadu 613301, India
Lat 10.647994°
Long 79.048838°
20/05/24 03:06 PM GMT +05:30

Resource person Dr. M. Satthiyaraju delivering the lecture on Intellectual Property Rights (IPRs)
and IP Management for Startup

[Signature]
27/5/24

Member - IIC & Coordinator

[Signature]
27/5/24

President-IIC & Principal



ACADEMIC YEAR 2023 – 24

24.05.2024

Workshop

on

"BUSINESS MODEL CANVAS"

23.05.2024

REPORT

MoEs - Institution Innovation Council and Entrepreneurship Development Cell of Kings College of Engineering organized a workshop on **"BUSINESS MODEL CANVAS"** on 23.05.2024.

Objective:

To provide necessary skills to the students who are aspiring to be entrepreneurs to turn their creative ideas into a successful business.

Resource persons:

1. Mr. G. Abraham Lincoln, District Field Coordinator, EDII – TN, Thanjavur and Mr. R. Amarnath, District Field Coordinator, EDII – TN, Pudukkottai.

Participants:

IIC and ED Cell members of II year students of all disciplines 41 participants attended the programme.

Inaugural Session:

Dr. K. Sudhakar, Coordinator of ED Cell, gave away the welcome address and introduced the resource persons to the participants.

Session highlights:

The workshop on the Business Model Canvas provided a comprehensive overview of this strategic tool, aimed at enhancing participants' understanding of business model development. Attendees engaged in detailed sessions covering each of the nine building blocks, including key aspects such as customer segments, value propositions, and revenue streams. Through interactive activities and case studies, participants applied the concepts to their own business ideas, gaining practical insights into model optimization and innovation.

Benefits in terms of Learning/Skills/Knowledge obtained:

Student members gained

- **Comprehensive Understanding:** Gained in-depth knowledge of the nine essential components of the Business Model Canvas.

- **Strategic Thinking:** Learnt various skills in strategic analysis and planning, allowing you to assess and refine your business model in a structured and systematic way.
- **Practical Application:** Learnt to apply theoretical concepts to real-world scenarios, enhancing your ability to create and implement actionable business strategies.
- **Problem-Solving Skills:** Know how to improve the ability to identify business challenges and opportunities, and develop effective solutions through hands-on exercises and case studies.
- **Innovation Techniques:** Acquired the techniques for fostering innovation within their business model, enabling them to adapt and stay competitive in a rapidly changing market.
- **Collaborative Learning:** To Enhance skills in teamwork and collaboration by engaging with peers and facilitators, gaining diverse perspectives and constructive feedback.
- **Continuous Improvement:** To Build knowledge on how to regularly evaluate and adjust the business model to ensure on going relevance and effectiveness, supporting long-term success and adaptability.

Valedictory Function:

Finally, Mr. Ramprasad, member of ED Cell delivered a vote of thanks.

Event Photographs



Event Photograph-1



Event Photograph-2



ACADEMIC YEAR 2023 – 24

02.06.2024

Workshop

on

"Entrepreneurship Skill, Attitude and Behaviour Development"

29.05.2024

REPORT

MoEs - Institution Innovation Council and Entrepreneurship Development Cell of Kings College of Engineering organized a workshop on **"Entrepreneurship Skill, Attitude and Behaviour Development"** on 29.05.2024.

Objective:

- To equip participants with practical entrepreneurship skills such as business planning, financial management, marketing strategies, and effective networking techniques.
- To foster a positive entrepreneurial mindset by encouraging traits such as resilience, adaptability, and proactive problem-solving, essential for overcoming challenges and seizing opportunities.
- To develop key entrepreneurial behaviors, including leadership, decision-making, risk-taking, and self-discipline, to help participants navigate the entrepreneurial journey more effectively.

Resource person:

1. Dr. B. Suresh Babu, Assistant Professor, Department of Management Studies, Kings College of Engineering, Punalkulam, Pudukottai

Participants:

IIC and ED Cell members of IInd year students of all disciplines 36 participants attended the programme.

Inaugural Session:

The inaugural session started with a welcome address by Mr. Ramprasad, ED Cell Member welcomed the gathering.

Session highlights:

The speaker highlighted the following points:

Introduction to Entrepreneurial Skills: Overview of essential skills for entrepreneurs, including business planning, financial management, marketing strategies, and effective communication. Developing a Positive Entrepreneurial Attitude: Interactive exercises and discussions focused on cultivating resilience, adaptability, and a growth mindset, crucial for navigating the entrepreneurial landscape. Behavioral Traits of Successful Entrepreneurs: Exploration of key

entrepreneurial behaviors such as leadership, risk-taking, decision-making, and self-discipline, with practical tips for developing these traits. Creativity and Innovation Workshops: Hands-on activities designed to enhance creative thinking and problem-solving skills, encouraging participants to generate and refine innovative business ideas.

Self-Assessment and Personal Development: Sessions dedicated to self-awareness, including tools and techniques for identifying personal strengths and areas for improvement, and setting actionable goals for growth. Networking and Collaboration: Opportunities for participants to connect with peers, mentors, and industry experts through networking sessions, collaborative exercises, and group discussions. Actionable Business Planning: Guidance on developing practical business plans and setting realistic goals, including creating detailed roadmaps and strategies for launching and scaling entrepreneurial ventures.

Benefits in terms of Learning/Skills/Knowledge obtained:

Student members gained

- The hands-on experience in crucial areas such as business planning, financial management, marketing, and operational strategies, enhancing their ability to effectively manage and grow their ventures.
- Awareness to develop a resilient and proactive mindset, learning to view challenges as opportunities and adopt a growth-oriented perspective essential for long-term entrepreneurial success.
- The strategy to cultivate key entrepreneurial behaviors, including strong leadership, strategic decision-making, and effective risk management, which are vital for navigating the complexities of entrepreneurship.
- Knowledge about the techniques to boost their creativity and innovate effectively, leading to the development of unique and competitive business ideas.
- Idea to create and implement detailed business plans and strategic goals, providing a clear roadmap for launching, managing, and scaling their entrepreneurial ventures effectively.

Valedictory Function:

Finally, Mr. T. Priyadharshini, member of ED Cell delivered a vote of thanks.

Event Photographs



Event Photograph-1

ACADEMIC YEAR 2023-24(EVEN SEMESTER)

Seminar

On

"Entrepreneurship Awareness"

31.05.2024

REPORT

Institution's Innovation Council (IIC) of Kings College of Engineering organized Seminar on "Entrepreneurship Awareness" on 31.5.2024.

Objective:

The main objective of this Seminar is :

- Entrepreneurship Awareness Program training program objective is to create awareness among faculty and students of Engineering and Science courses about various facets of entrepreneurship as an alternative career option as also to highlight the merits of pursuing such an option.
- It is aim to inspire and educate potential entrepreneurs, equipping them with essential knowledge and skills to pursue entrepreneurial ventures.
- This Seminar typically cover topics such as business ideation, market research, financial planning, legal aspects, and networking.

Speaker details:

Session 1: 10.30 am-11.30am

Session on "Entrepreneurship Awareness" by
Mr. Mohamed Juher ,Founder and CEO, ESTOC ,Kumbakonam.

Session 2: 11.30am-12.30am

Session on "District Industries Centre Loan Scheme "by
Ms.S.R.Saranya, Founder and Managing Director, J-Holidays, Kumbakonam

President:

Dr.J.Arputha vijaya selvi,Principal,KCE

Vice- President

Mr.R.Sundaramoorthi, Head of the Department / EEE

Members

Mr.R.Sundharam,AP/CIVIL

Ms.M.Mangalambigai,AP/CSE

Dr.K.Sudhakar,AP/T&P

Mr.J.Niranjan Samuel, JRF/R&D.

Programme Type: Awareness of Start-up

Promotion in social media: Instagram

Inaugural Session:

Inaugural session was started 10.15 A.M presided over by Dr.J.ArputhaVijaya Selvi, IIC President,Head of the Institution. The dignitaries during the inaugural session were Mr. Mohamed Juher ,Founder and CEO, ESTOC & Ms.S.R.Saranya,Founder and Managing Director,J-Holidays Resoure persons all the IIC Program Coordinators and IIC faculty and student Members.The program was started with Welcome addres delivered by Mr.R.Sundaramoorthi,HOD/EEE. Resource Person Introduction given by Mrs.M.Mangalambigai,AP/CSE.

Participants:

Faculty:05; Internal students :35 Total : 40

**Session 1: Session on "Entrepreneurship Awareness" by
Mr. Mohamed Juher ,Founder and CEO, ESTOC ,Kumbakonam.**

The session was started by 10.30 A.M. Before starting the session, Resource person thanked Management, Principal, IIC Coordinators and members of Kings College of Engineering.

The following key points are discussed during presentation:

Introduction:

- The term business refers to an organization or enterprising entity engaged in commercial, industrial, or professional activities. The purpose of a business is to organize some sort of economic production of goods or services. Businesses can be for-profit entities or non-profit organizations fulfilling a charitable mission or furthering a social cause. Businesses range in scale and scope from sole proprietorships to large, international corporations.
- Discuss about the Essentials of entrepreneur.
- Explain about how to build a team and the hierarchy of team for Start-up.
- Firm Registration of Proprietorship, Partnership, LLP, Private Limited, Public Limited, OPC
- Elaborated the details of Registration like Trademark, Copyright, Taxation, Licenses.
- Discuss about the importance of hierarchy Like CEO, General Manager, Manager, Supervisor, Executive.
- Finally he share the following tips about the Business Development is,
- Competitors are Good for Business
- Don't put profit into another business
- A month profit is not for whole year
- Closely monitor profit & loss for first 100 Days
- Loss Handling Capacity

- Understand AI technology & Algorithms
- Use social media wisely
- Always behind ROI
- Keep update yourself in your strong areas
- Find all kind of freebees' to support your firm

**Session 2: Session on "District Industries Centre Loan Scheme "by
Ms.S.R.Saranya,Founder and Managing Director,J-Holidays,Kumbakonam**

The session-II was started by 11.30 a.m. Introduction about the resource person was delivered by Mrs.M.Mangalmbigai,AP/CSE,IIC faculty Member. Initailly, resource person thanked Management, Principal, IIC Coordinators and student members. In her initial part of the session, she started about general introduction about Business loan provided by government and also explain how to apply that government loan and benefits of DIC Loan which helps to know about the financial support by the government.

Benefits In terms of Learning/Skills/Knowledge obtained:

- As an entrepreneur, you have the freedom to work on your terms and set your own schedule. This flexibility allows you to balance work and personal life effectively.
- Entrepreneurship involves learning new things every day. Whether it's market trends, customer preferences, or industry developments, staying informed is crucial for success.
- Running your own business provides an opportunity to generate wealth for yourself and your venture.
- Successful entrepreneurs create value and extract it from researched opportunities.
 - Overcoming challenges and turning ideas into reality builds confidence. As you achieve milestones, your belief in your abilities grows.

Valedictory Function:

The feedbacks from the participants were collected. Mrs.D.Mangalambigai, IIC member delivered the vote of thanks.

Feedback:

- Entrepreneurship education plays a crucial role. When students receive formal or informal education about entrepreneurship, they gain insights into the challenges, skills, and mindset required. This education can positively impact their attitude by demystifying entrepreneurship.
- Positive experiences and role models can foster a favorable attitude, while negative perceptions may lead to skepticism. Encouraging awareness and providing relevant education can foster a positive mindset and inspire future entrepreneurs.

Session -I Photographs



Innagural Function



Session Handling



Welcome address

Session-II Photographs



Honoring Chief guest



Discussions

1. *Deepa* 3/6/24
2. *B. R.* 3/6/24

IIC Members

G. S. S. S. 3/6/24
Vice President-IIC& HOD/EEE

S. S. S. 03/6/2024.
President-IIC&Principal



3.2.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the year 2023 - 2024

IEEE Student Branch - 16621 Activities

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Dany
11/6/24
Coordinator

S. Praveen
11/6/2024
SB Counsellor / Principal
Principal
Kings College of Engineering
(Autonomous)
Punalakulam - 613 303

JULY 2023

1. Student Branch meeting for the academic year 2023 – 2024 (odd semester) was held on 31.07.2023. Dr. J. Arputha Vijaya Selvi, SB Counsellor presided over the meeting. After a brief discussion, the following members were nominated as office bearers: Chair: Mr. Ranjith M; Treasurer: Ms. Swathi V; Vice Chair: Ms. Nithyashri B.M.; Webmaster: Mr. Muruganantham P and Secretary: Ms. Abikayil Aarthi S.

AUGUST 2023

1. IEEE STB 16621 in association with KINGS Project Center organized an Awareness Programme for School Students on Robotics on 18.08.2023 at Swami Dayanandha Nursery & Primary School, Thanjavur. The training mainly focused on encouraging school students in the field of robotics and automation. The students were introduced to different types of robots and their applications. The club members taught the students about the different parts and equipment's required to develop robots. The highlight of the programme was the hands-on training session, where students worked in small groups to assemble simple electronics projects. Step-by-step instructions were provided, allowing participants to construct their electronics project and gain insight into electronics and mechanical engineering principles. This workshop was coordinated by Dr. P. Narasimman, AP/EEE, Mr. R. Sathyaraj, AP/ECE and Mr. P.Jaya Prasad, Student Volunteer, STB 16621.



2. National Level Training Programme on Innovative Project Development Using IoT

National Level Training Programme on “Innovative Project Development using IoT” was organized on 21st August 2023 & 22nd August 2023. Ms.U.Jeyamalar, AP/ECE welcomed the gathering and introduced the resource persons. Mrs.N.Mangaiyarkarasi, HOD/ECE delivered the Inaugural address. In her speech, she motivated the students towards innovation and how the trainings help students to implement their ideas. **During session 1**, Ms.H.Hajitha Banu, Embedded Specialist, Jadayu Enterprises presented a brief technical note on the fundamentals of embedded system, features of Microprocessors, Microcontrollers and interfacing devices. She demonstrated how arduino development platform is used for a typical embedded application. **During the session 2**, she gave a complete description about the arduino pin configuration,

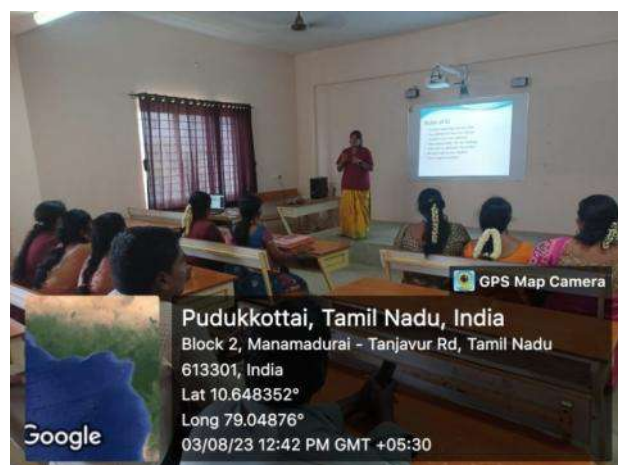
architecture and interfacing methods. She explained various blocks in the arduino development kit, she also demonstrated the students about Embedded C Programming using Arduino IDE.

During session 3, Mr.T.Jeyaseelan, AP /ECE, demonstrated the students with LCD interfacing and also trained the students, how to read temperature and humidity data from DHT11 sensor and display the sensor data's in the LCD display. **During session 4**, Dr.P.Narasasimman, AP /EEE, delivered about the wireless connectivity interface for arduino. He explained the pin details of ESP8266 and the specifications of wi-fi module. During this session he created a small android based application and demonstrated the on and off control of LED and motor. Finally he outlined typical project ideas and explained the methods for implementing these ideas. Students queries were addressed during the interactive sessions. Mr.R.Thandayuthapani, AP/ECE, delivered Vote of Thanks. Certificates were distributed by Mrs.N.Mangaiyarkarasi, HoD/ECE. Totally 39 external participants have enthusiastically participated in this workshop.



3. Seminar on Emotional Intelligence

Department of CSE in association with IEEE STB 16621 organized a seminar on Emotional Intelligence on 03.08.2023. Ms.N.Dhamayandhi and Ms.B.Bavithra explained the basics of Emotional Intelligence, factors that affect the human mind. They have described about DISC assessment tool which analyzes the behavior of a person. A DiSC assessment also measures the values of a person's prioritize. The results explain the percentage of each style of a person are and what that means for how the person handle challenges, interact with others, approach life and how others perceive that person.



4. Seminar on A fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO

Department of CSE in association with IEEE STB 16621 organized a seminar on fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO on 22.08.2023. Ms. K. Abinaya, AP/ CSE delivered lecture. She explained the concepts of Wireless Sensor Networks, need of fault tolerance in WSN and discussed various algorithms to achieve the fault tolerance.



5. Internal Staff Seminar on Design Automation for Embedded Systems

Department of ECE in association with IEEE STB 16621 organized a seminar on Design Automation for Embedded Systems on 24.08.2023. Mr. T. Jeyaseelan, AP/ ECE delivered lecture.



6. Webinar on Tips and Tricks to Succeed in Hackathon

Multimedia Club, Department of CSE in association with IEEE STB 16621 organized a webinar on Tips and Tricks to Succeed in Hackathon on 26th August 2023. Ms. K. Amirtha Lakshmi, System Engineer, TCS, Chennai and Ms. V. Mathumitha, Software Engineer, CEI, Chennai delivered lectures. During the session, they shared their experiences how they won in the hackathon. At the end of the session, students gained awareness about identifying and prototyping Smart India Hackathon problem statements. A total of 56 students from CSE, ECE and EEE participated in the event.



7. Technical Quiz Series - Control Systems - 01

Department of EEE in association with IEEE STB 16621 organized a Technical Quiz on Control Systems on 26th August 2023. 30 Students participated in the Programme and was coordinated by Dr. P. Narasimman, AP/EEE.

1. Engineers' Day Celebration - Technical Quiz

Research & Development Section in association with IEEE STB 16621 jointly organized Technical Quiz on 12.09.2023. Three rounds were conducted and 231 students participated in the event. Mr. Praveen kumar, IV EEE and Mr. Veerakumar, III Mech bagged the First Prize, Mr. Thirumurugan, IV CSE and Mr. Murugaraj, IV CSE bagged Second Prize. The event was coordinated by Ms. Abikayil Aarthi S, AP/CSE.



2. Engineers' Day Celebration - Circuit Making

Research & Development Section in association with IEEE STB 16621 jointly organized Circuit Making on 12.09.2023. 23 students participated in the event. Mr. A.Yuvaraj, III EEE won First Prize, Mr. S.Sathish, IV EEE won Second Prize. The event was coordinated by Dr. Narasimman P, AP/EEE.



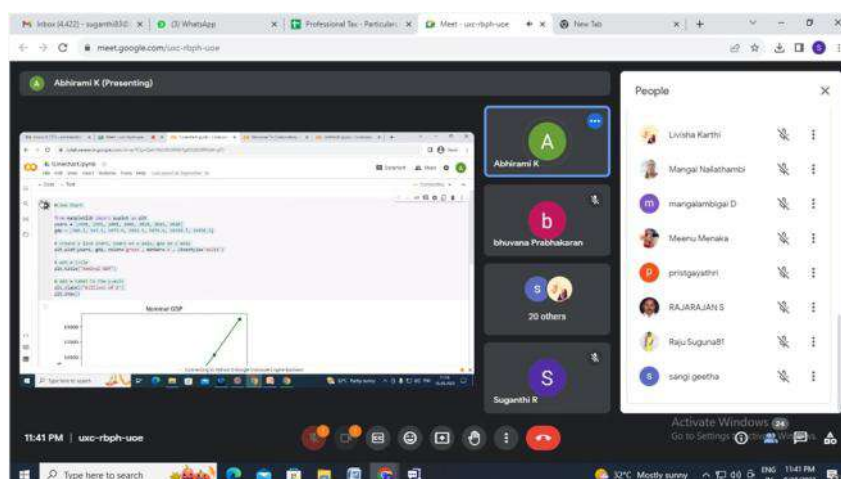
3. Engineers' Day Celebration - Code Debugging

Research & Development Section in association with IEEE STB 16621 jointly organized Code Debugging on 12.09.2023. 112 students participated in the event. Mr.Kumaresan.K.P and Mr. Manoj. M, of III CSE won First Prize, Ms. Roohi Shifa.M and Ms. Shalini.K, of III CSE won Second Prize. The event was coordinated by Dr. Pasupathi T, AP/ECE.



4. FDP on Microsoft Power BI , Anaconda Tools and IBM Congos Analytics for Business Analytics and Data Science

Department of Computer Science and Engineering in association with IEEE STB 16621 organized an five days FDP on Microsoft Power BI , Anaconda Tools and IBM Congos Analytics for Business Analytics and Data Science from 19.09.2023 - 23.09.2023. On 19.09.2023, session-1 was handled by Dr.K.Abhirami, Assoc. Prof/CSE on the topic Introduction to Data Science & Business Analytics and session-2 was handled by Ms.S.Abikayil Aarthi, AP/ CSE on the topic Microsoft Power BI Data Fundamentals. On 20.09.2023 and 21.09.2023, session-1&2 were handled by Ms.P.Kaviya, AP/IT Kamaraj College of Engineering & Technology, Virudhunagar on the topic IBM Congos Analytics Tool. On 22.09.2023, Hands on session on Anaconda Navigator was handled by Mr.S.Rajarajan, AP/CSE and Hands on session on Hands on Session Microsoft Power BI Tool was handled by Ms.S.Abikayil Aarthi , AP/ CSE Ms.N.Dhamayandhi , AP/CSE. On 23.09.2023, in the forenoon, a Hands-on-session on Microsoft Power BI Tool was handled by Dr.K.Abhirami and Ms.R.Sugantha Lakshmi, AP/CSE. During the afternoon session, Ms.S.Puvaneswari, AP/CSE and Ms.R.Sugantha Lakshmi, AP/CSE handled the session with case study. The programme was coordinated by Ms.S.Puvaneswari, AP/CSE Ms.R.Sugantha Lakshmi, AP/CSE. Xx participated and 36 participants got benefitted.



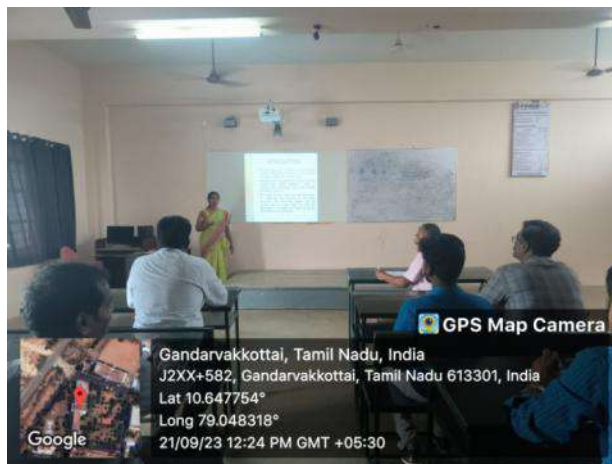
5. Orientation Programme on Arduino Programming

Department of Electronics and Communication Engineering in association with IEEE STB 16621 organized an orientation Programme on Arduino Programming on 20.09.2023. Mr. T. Jayaseelan, AP/ECE delivered lecture. 40 participants participated in the programme.



6. Seminar on Evolution of Issues on Distributed Systems: A Systematic Review

Department of Electrical and Electronics Engineering in association with IEEE STB 16621 organized a seminar on Evolution of Issues on Distributed Systems: A Systematic Review on 20.09.2023. Dr. A. Prabha, AP/EEE delivered lecture. In her lecture, she briefed on issues in distributed systems.



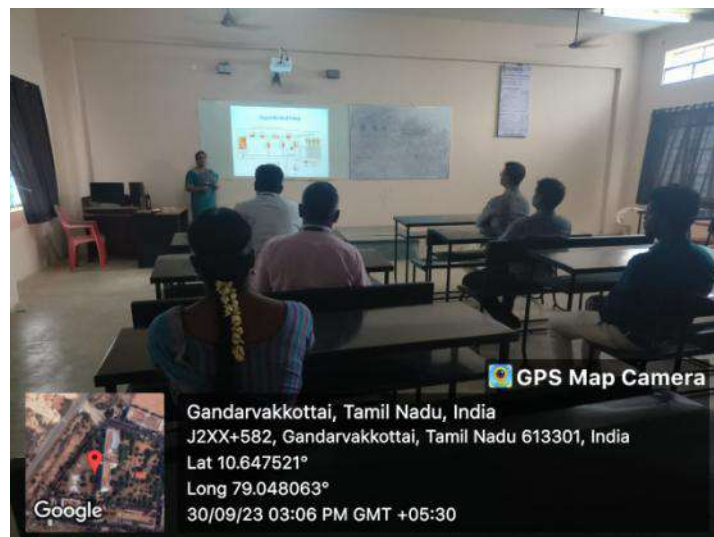
7. Seminar on Hybrid Common-mode EMI Filter Design for Electric Vehicle Traction Inverters

Department of Electrical and Electronics Engineering in association with IEEE STB 16621 organized a seminar on Hybrid Common-mode EMI Filter Design for Electric Vehicle Traction Inverters on 29.09.2023. Dr. P. Narasimman, AP/EEE delivered lecture, in his lecture, he briefed on EMI filter design for electric vehicle traction inverters.



8. Seminar on Study of PD Signatures in Transformer using Lightning Impulse Voltage Analysis

Department of Electrical and Electronics Engineering in association with IEEE STB 16621 organized a seminar on Study of PD Signatures in Transformer using Lightning Impulse Voltage Analysis on 30.09.2023. Dr. G. Suganya, AP/EEE delivered lecture, in his lecture, he briefed on PD Signatures in Transformers.



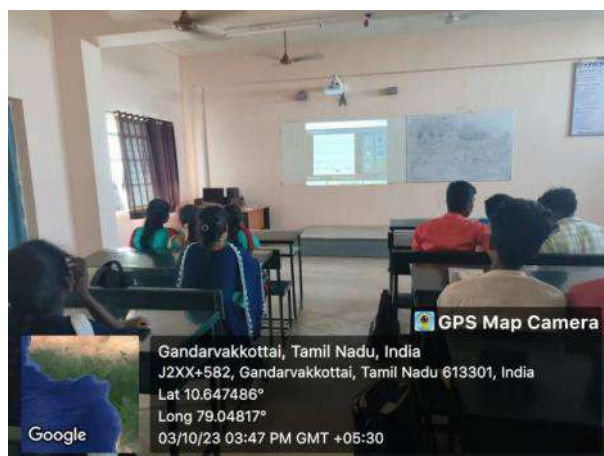
1. Technical "Connections"

Department of Electronics and Communication Engineering in association with IEEE STB 16621 organized an event named Technical Connections on 03.10.2023. The event was conducted with three rounds. Ms. Jaishree and Ms. Suruthi from IV year ECE won the First Prize. Winners of the event were appreciated with prizes and certificates. 52 students participated in the event. The event was coordinated by Ms. Eniyarasi and Ms. Swathi of III ECE.



2. Webinar on Essential ML Techniques for Engineering Projects - A case study Approach.

IEEE STB 16621 organized a webinar on **Essential ML Techniques for Engineering Projects - A case study Approach** on 04.10.2023. Dr. G. Suganya, AP/EEE welcomed the gathering and introduced the resource person. Dr. K. Kannan, Professor, School of Computing, SASTRA Deemed University, Thanjavur was the resource person. In his lecture, the essentials of Machine learning and various machine learning techniques was presented. While concluding his lecture, he demonstrated a case study on how ML can be applied in various real-time applications. 39 students participated in this webinar.

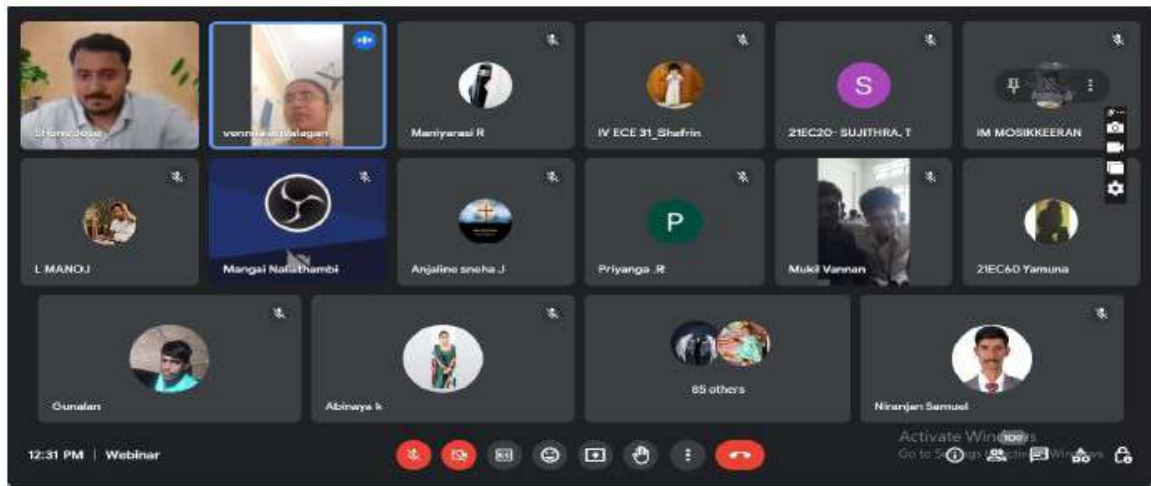


3. **One Day Workshop on “Recent Trends in Electrical Engineering”**

Department of Electrical and Electronics Engineering in association with IEEE STB 16621 organized a **One Day Workshop on “Recent Trends in Electrical Engineering”** on 04.10.2023. **Dr. A.Prabha, AP/EEE** delivered welcome address. **Dr.S.Sivakumar**, Vice Principal delivered Presidential Address, in his address, he emphasized that this workshop will be a platform to gain more knowledge about the various technical skills for electrical engineers. He also insisted the students to have a clear idea about the recent trends in Electrical Engineering. **Session-1 was handled by** Dr.S.Sivakumar, Vice Principal on the topic “Introduction to MATLAB”, In his lecture, he explained how MATLAB is used by millions of engineers and scientists to analyze data, develop algorithms, and create models. **Session-2 was handled by Dr.G.Suganya,AP\EEE on the topic** “Exploring High Voltage: Applications and Innovations”. In her lecture, she briefed that High voltage engineering is a key technology used to ensure the power supply and also plays a major role in many technical sectors such as industrial manufacturing or the automotive industry. **Session-3** was handled by **Dr.A.Prabha, AP/EEE** on the topic, “Optimization and Intelligent Algorithms” In her lecture, she briefed on the optimization of a design and how optimization algorithm is executed iteratively by comparing various solutions till an optimum or a satisfactory solution is found. **Session-4** was handled by **Dr.P.Narasimman, AP/EEE on the topic** “Electrical Lighting Design and Calculation”. In his lecture, he discussed the basic types of lighting in a room in order to accomplish Ambient or general lighting, Accent lighting and Task lighting. At the end of the session, feedback was collected from the students. Finally, Event coordinator Mrs.P.Thirumagal, AP/EEE delivered the vote of thanks.

4. **Webinar on 5G Skilling**

Department of Electronics and Communication Engineering in association with IEEE STB 16621 organized a webinar on 5G Skilling on 04.10.2023. Mrs. R. Ponni, AP/ECE welcomed the gathering. Mrs. D.Vennila, AP/ECE introduced the resource person. In his lecture, he explained about the evolution of 5G. He also explained about the job roles in the 5G technology sector in India, Such as Network Engineer, System Integrator, Solutions Architect, Software Developer, Data Analyst, Network Security Specialist and Product Manager. 101 students participated in the programme and got benefitted.



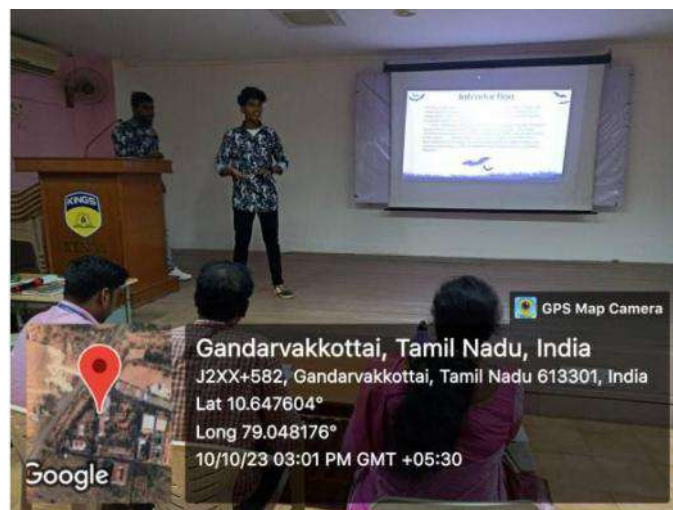
5. Tech PBC

As part of IEEE day, Department of Computer Science and Engineering in association with IEEE STB 16621 organized an event named **TECH PBC** (Pictorial, Bingo, Chardes) on 06.10.2023 involving 74 teams from the departments of CIVIL, CSE, ECE, EEE & MECH. The event took place on three levels. Five teams made it to the final round out of 74 teams. R.Veerakumar & Team from MECH won I Prize, S.Reena & Team from CSE won II Prize, S.Ananthi & Team from CIVIL, S.Divakar & Team from EEE and S.Saravanana & Team from ECE won III Prize.



6. National Level Technical Symposium Enigma2K23

Department of Electrical and Electronics Engineering in association with IEEE STB 16621 organized National Level Technical Symposium Enigma2K23 on 10.10.2023. The session started with the prayer song Tamizhthai vazhthu. Lighting the holy lamp is considered as an important ceremony. The Chief Guest, Secretary, Principal, Vice Principal and a Participant from the student are invited to light the lamp. Our Secretary Dr.R.Rajendran honored the chief guest Dr.M.Venkata kirthiga, Professor, NIT, Trichy with a memento. Dr.R.Rajendran, Secretary, Kings College of Engineering delivered his presidential address. Dr.J.ArputhaVijaya Selvi, Principal of KCE delivered her Inaugural address. Dr.S.Sivakumar, Vice Principal, KCE delivered his Special Address. The symposium souvenir has been released by chief guest and received by HOD/EEE. Mr.M.Mukesh of IV Year EEE, introduced the chief guest. Chief Guest address was given by Dr.M.Venkata kirthiga, Professor, NIT, Trichy. The valedictory session started with feedback from the participants. The winners for the paper presentation were awarded with the cash prize. Finally, vote of thanks was delivered by Mr.C.PraveenKumar of final year EEE.



7. National Level Technical Symposium Electrovibez

Department of Electronics and Communication Engineering in association with IEEE STB 16621 organized National Level Technical Symposium Electrovibez on 10.10.2023. The session started with the prayer song, Holy lamp was lit by the dignitaries. Our Secretary Dr.R.Rajendran honored the chief guest **Dr M Senthil Sivakumar**, Assistant Professor, Indian Institute of Information Technology, Tiruchirappalli. Dr.R.Rajendran, Secretary, Kings College of Engineering delivered his presidential address. Dr.J.ArputhaVijaya Selvi, Principal of KCE delivered her Inaugural address. Dr.S.Sivakumar, Vice Principal, KCE delivered his Special Address. The symposium souvenir has been released by chief guest and received by HOD/ECE. Chief Guest address was given by **Dr M Senthil Sivakumar**. During the valedictory session feedback was collected from the participants. The winners for the paper

presentation were awarded with the cash prize. Finally, vote of thanks was delivered by student member.



8. National Level Technical Symposium CISABZ'23

Department of Computer Science and Engineering in association with IEEE STB 16621 organized National Level Technical Symposium CISABZ'23 on 10.10.2023. Ms. B. Senthamizh Selvi, who currently serves as the Talent Acquisition Lead at Think Global Technologies Pvt. Ltd in Chennai was the chief guest. The chief guest offered valuable insights into the world of job interviews and the art of crafting compelling resumes. Her guidance was particularly beneficial to the students who were on the cusp of graduating and stepping into the job market. CISABZ'23 managed to attract the participation of nearly 200 students from different engineering colleges. . As the day drew to a close, the event concluded with a valedictory function, the certificates were distributed to the winners and participants. The symposium was ended with vote of thanks delivered by Ms. A.C.Arunothaya, Vice president of IV year CSE.



9. Mini Project Expo

Department of Electronics and Communication Engineering in association with IEEE STB 16621 organized **Mini Project Expo** on 10.10.2023. **Mr. Swami Prabakaran**, Senior Software Engineer, Ejyle Technologies Pvt. Ltd., Bangalore acted as Jury for the expo. 16

Projects were displayed and 65 students participated in the expo. The event was coordinated by Mr. R.Thandayuthapani, AP/ ECE.



10. IEEE MAS sponsored Workshop on "Data Science & Machine Learning"

Department of Computer Science and Engineering in association with IEEE STB 16621 organized **IEEE Madras Section sponsored A Three-Day National Level Workshop on "Data Science & Machine Learning"** from 18.10.2023 to 20.10.2023. On 18.10.2023, Inaugural function was graced by Dr. J. Arputha Vijaya Selvi Selvi, Principal & STB SBC. Dr.K. Abhirami, HOD(i/c)/CSE welcomed the gathering. Dr. J. Arputha Vijaya Selvi, delivered inaugural address, in her address, she stressed on the importance of IEEE membership and benefits to IEEE members. Also she stated the Data Science is a booming field and there is a large market open for Data Science and Machine Learning experts. Session-1 was handled by Dr. K. Lakshmi, Professor, Sri Manakula Vinayagar Engineering College, Puducherry. In her session, she briefed on Python programming and foundational statistics. Session-2 was handled by Mr.K.M.Arivu Chelvan, S/w Architect, E.K software solutions, Thanjavur. In his session, he briefed on NumPy and Pandas. Session-3 was handled by Dr.M.Brindha, Asst Professor, National Institute of Technology, Trichy. Her session brought a deep dive into data visualization. Session-4 was handled by Dr.S.Kanimozhi, Asst Professor, Vellore Institute of Technology, Vellore. During her session, she briefed on statistical analysis tailored for data. Session-5 was handled by Mr.S.Ramprakash, Teaching Fellow, UCE, Thirukkuvalai. In his session, he showcased real-world data science applications. Session-6 was handled by Mr.S.Dinesh Dhanabalan, Asst Professor, Arifa Institute of Technology, Esanoor and the session was an interactive hands-on session. Participants not only gained theoretical knowledge but also honed their practical skills, empowering them to tackle real-world challenges in the ever-evolving fields of data science and machine learning. The overall summary was dictated by Ms. S. Abikayil Aarthi, Convener of the programme. Feedback was collected from the participants. Certificate of Participation was provided to

all the Participants. Vote of Thanks was proposed by Ms. B. Bavithra, AP/CSE, KCE. The programme was attended by 94 participants from all over India.



11. Two Days Workshop on IoT with Arduino / Raspberry Pi

Center of Excellence in IoT in association with IEEE STB 16621 and Armada Industrial Automation organized **Two Days Workshop on IoT with Arduino / Raspberry Pi** on 26.10.2023 & 27.10.2023. Session-1 was handled by resource persons from Armada Industrial Automation, Thanjavur. During the session different types of sensors & IoT concepts were discussed. Session-2 was handled by Dr. T. Pasupathi. In his lecture, he discussed on Arduino basics & simple projects. Session-3 was handled by Dr. P. Narasimman. In his lecture, he handled Arduino based real- time projects using Tinkercad. Session-4 was handled by Mr. T. Jayaseelan. During his session, He demonstrated Arduino interface with different sensor and serial communication. 46 students participated in the programme and got benefitted. The event was coordinated by student coordinator Mr. P. Jayaprasad, III ECE.



12. Webinar on "Paper Writing and Patents"

Research & Development Section in association with IEEE STB 16621 organized **Webinar on "Paper Writing and Patents"** on 28.10.2023. Ms. Jayachitra Sekar, Asst. Professor, PSNA College of Engineering and Technology in Dindugal was the resource person. She began by discussing the fundamentals of academic paper writing, covering the structure, content, and organization of research papers. She provided practical tips on how to select suitable journals, write an abstract, and format references, among other key elements. Ms. Jayachitra Sekar's expertise in this area was evident, and her guidance was highly valuable

to the audience. Following the discussion on paper writing, Ms. Jayachitra Sekar shifted her focus to patents. She explained the significance of patents in protecting intellectual property and the innovation process. Ms. Jayachitra Sekar detailed the patent application process and highlighted its legal and commercial implications. Her comprehensive explanation shed light on the relevance of patents to researchers, inventors, and professionals in various fields.



INTELLECTUAL PROPERTY (IP)

- Intellectual Property is a property that arises from the human intellect. It is a product of human creation.
- Intellectual Property comprises 2 distinct forms:
- Literary & Artistic Works
- Industrial Property

J

JAYACHITRA SEKAR (Presenting)

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Sabanayagam Sundaram

Pasupathi T

25 others

Ninanjan Samud

9:52 AM | hqg-lwef-omj

1. **Motivational Talk on Career Guidance**

Department of Computer Science and Engineering in association with IEEE STB 16621 organized a **Motivational Talk on Career Guidance** on 01.11.2023 at Government Boys Higher Secondary School, Budalur, Near Thanjavur. Mrs. R. Sugantha Lakshmi, AP/CSE addressed the students. In her lecture, she shared the tips to excel in their higher education and career. 80 students participated in the programme and got benefitted.



2. **Motivational Talk on Unlocking the Power Within You**

Department of Computer Science and Engineering in association with IEEE STB 16621 organized a **Motivational Talk on Career Guidance** on 01.11.2023 at Government Girls Higher Secondary School, Budalur, Near Thanjavur. Mrs.D.Mangalambigai, AP/CSE addressed the students. 150 students participated in the programme and got benefitted.



3. **Staff Seminar on Load Balancing framework for cross region tasks in cloud computing**

Department of Computer Science and Engineering in association with IEEE STB 16621 organized a **Seminar on Load Balancing framework for cross region tasks in cloud computing** on 04.11.2023. Ms.B.Sangeetha, AP/CSE delivered lecture. In her lecture, she presented a load balancing framework designed to manage and distribute tasks across

multiple regions in cloud computing environments. The framework aims to optimize resource utilization, enhance fault tolerance, and improve overall performance by intelligently distributing tasks across different regions. 12 staff members attended the seminar.



4. Staff Seminar on Emerging Technologies

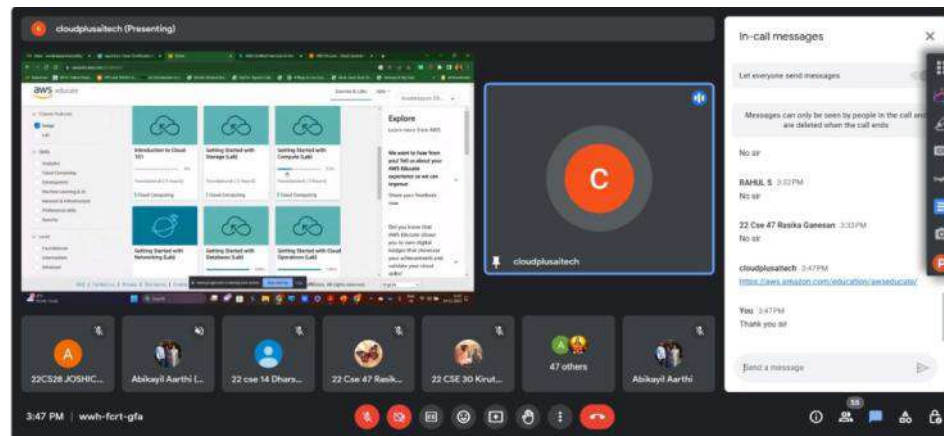
Department of Computer Science and Engineering in association with IEEE STB 16621 organized a **Seminar on Emerging Technologies** on 07.11.2023. Ms.S.Abhikayil Aarthi, AP/CSE delivered lecture. In her lecture, she briefed on the various areas in the emerging technologies. In Design Thinking Starter, we adopt Empathy, Define, Idea and Prototypes. During the Project Management Phase, Collection of data, Analysis, Building of Prototypes, Prediction, Testing and Feedbacks. Also discussed about Cyber Security and AI Technologies. 13 staff members attended the seminar.



5. Workshop on Cloud Computing (AWS)

Department of Computer Science and Engineering organized a Workshop on "**Cloud Computing with Amazon Web Services (AWS)**" on 14.11.2023. **Dr. T. Avudaiappan**, AWS- Certified Solution Architect, Associate Professor, K. Ramakrishnan College of Technology, Tiruchirapalli was the resource person. The workshop provided a comprehensive overview of cloud concepts, AWS services, and certification courses on

cloud. The interactive sessions and hands-on exercises contributed to a comprehensive learning experience. 70 students participated in the programme and got benefitted.



6. Technical Quiz Series - Control Systems

Department of EEE in association with IEEE STB 16621 organized Technical Quiz Series - Control Systems on 14.11.2023. 25 students participated in the quiz. The event was coordinated by Dr. P. Narasimman, AP/EEE.

7. Technical Quiz – VLSI

Department of ECE in association with IEEE STB 16621 organized technical quiz on VLSI on 22.11.2023 between 05:00 p.m. and 07:00 p.m. 44 students participated in the quiz. The event was coordinated by Dr. T. Pasupathi, AP/ECE.

8. Students EXECOM meeting

IEEE Student Branch EXECOM meeting was organized on 22.11.2023 between 01.15 p.m. and 01.45 p.m. Dr. J. Arputha Vijaya Selvi, SBC presided over the meeting. Ms. B.M. Nithyashri, Vice Chairman, STB 16621 welcomed the members. Ms. Abikayil Aarthi S, Secretary briefed on the Action Plan for the year 2024 and conduct of membership development drive.



1. **Awareness Programme on Women's Safety in Society**

Women's cell and IEEE jointly organized by awareness session on "**Women's Safety in Society**" to girl students. **Dr.A.Prabha**, Assistant Professor, Kings College of Engineering, Thanjavur acted as resource person, on 01st December 2023 from 11.00 a.m. -12.30 p.m. at Pallava Hall. The resource person insisted the students to follow parents' guidance. Also she pointed out intuition is a powerful weapon it works and save every one. Teenage is golden age because in this stage the future is built. So she asked the students to focus on developing skills. She insisted the students to practice yoga and Meditation. Training our mind in a right direction will help us to lead a peaceful life. Self discipline and safety are like two sides of a coin.



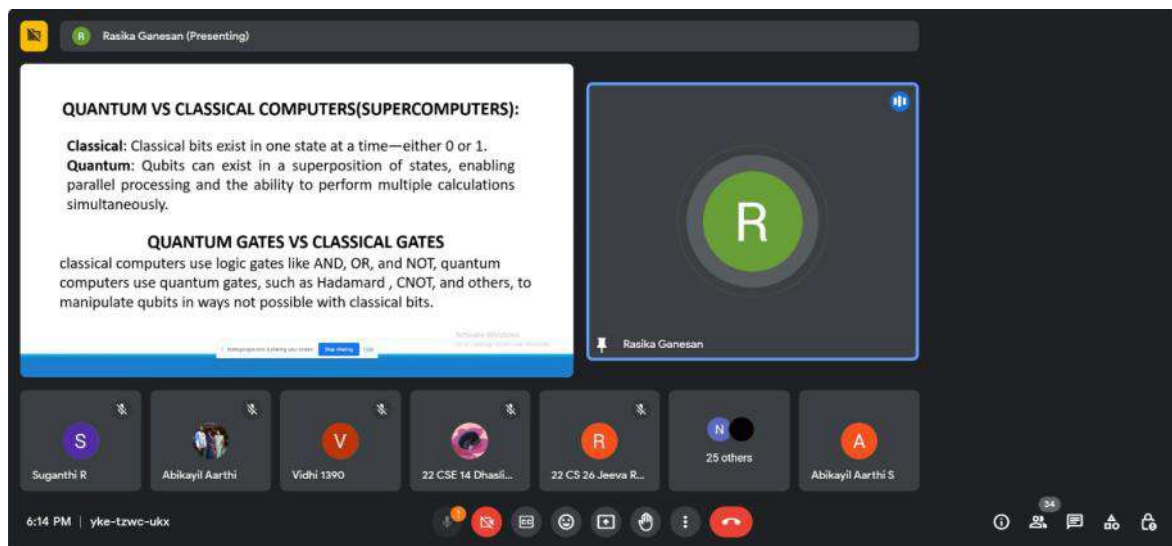
2. **Student Branch Meeting**

IEEE Student Branch meeting of STB 16621 was held on 08.12.2023 by 10:00 a.m. at Pallava Hall. Ms. B.M. Nithyashri, Vice Chair and III CSE student welcomed the gathering. Dr. J. Arputha Vijaya Selvi, IEEE SB Counselor briefed on the activities carried out by the branch and importance on IEEE membership. Ms. S. Abikayil Aarthi, Secretary STB 16621 listed out the future plans for the year 2024. Around 50 students attended the meeting. Ms. xxx delivered vote of thanks.



3. IEEE Spectrum Talk on IBM Quantum Computing

IEEE STB 16621 organized a Spectrum Talk on IBM Quantum Computing on 08.12.2023. Ms. G.Rasika, II CSE student delivered lecture. In her lecture, gave an introduction to Quantum computing, that utilizes the principal of quantum mechanics to perform computation whereas classical computers use bits to represent information as 0's and 1's. Also she quoted that quantum computers gives faster and accurate results than classical computers in solving the hardest problems. While concluding she listed the specialty in IBM's quantum computer using ZNE technique and by using this technique they reduced the issues in quantum computing. Ms. S. Abikayil Aarthi, Secretary STB 16621 moderated the event. 44 students participated and got benefitted. Ms. B.M. Nithyashri and Ms. J. Keerthana of CSE department acted as Student volunteers.



4. Energy Conservation Day - Technical Quiz

Department of EEE in association with IEEE has organized Technical Quiz through Google forms from 14th to 18th December, 2023. Quiz comprised of 25 questions and 2 points were awarded for each correct answer. 183 students participated in the programme. Ms. Abinayasri K, II Year Civil Engineering bagged I position, Mr. AJAY, IV Year ECE bagged II position and Ms. Abhiraami SP, I Year from KPR Institute of Engineering and Technology bagged III position. Mr. J. Arokkiaraj, AP/EEE and Mr. S.R. Karthikeyan, AP/EEE coordinated the event.



5. Seminar on Development of a Battery Management system with special focus on capacity Estimation and Thermal Management

Department of EEE in association with IEEE has organized Internal Seminar on **“Development of a Battery Management System with Special Focus on Capacity Estimation and Thermal Management”** on 16.12.2023. During his session, he started with basic Introduction about converter topologies and the importance of Electric and Hybrid Electric vehicles. He pointed out that, the large number of automobiles in use around the world has caused and continues to cause serious problems of environment and human life. Air pollution, global warming, and the rapid depletion of the earth’s petroleum resources are now serious problems. Electric Vehicles (EVs), Hybrid Electric Vehicles (HEVs) and Fuel Cell Electric Vehicles (FCEVs) have been typically proposed to replace conventional vehicles in the near future.



6. IEEE Spectrum Talk on The Rise of Floating Wind Power: Advancements and Challenges

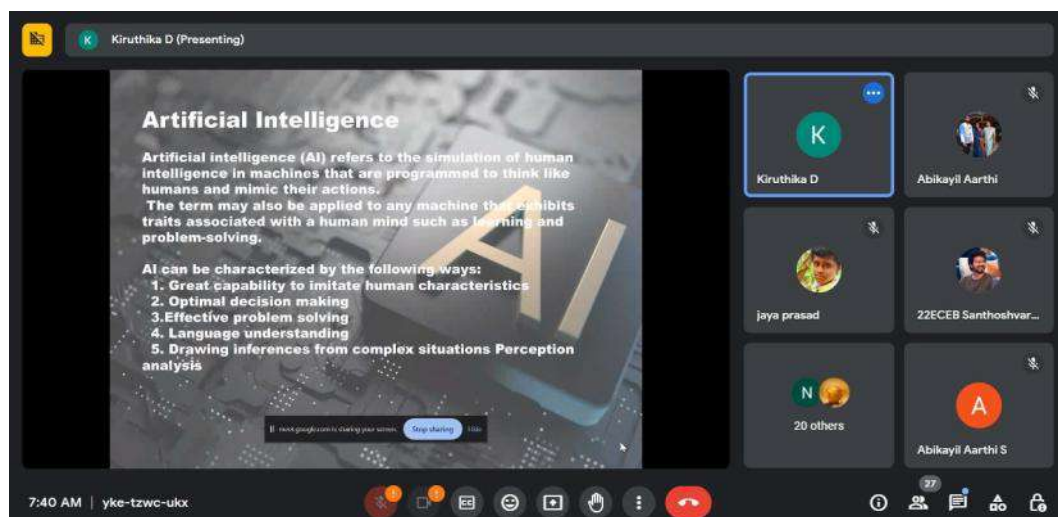
IEEE STB 16621 organized a Spectrum Talk on **The Rise of Floating Wind Power: Advancements and Challenges** on 20.12.2023. Ms. P Priya Niranjani, II EEE student delivered lecture. In her lecture, she briefed on the significance of harnessing wind energy over deep waters as well as overview of India’s initiatives and plans in the floating wind power project. Ms. S. Abikayil Aarthi, Secretary STB 16621 moderated the event. 53 students

participated and got benefitted. Ms. Sivasangari G and Ms. Abinaya M from EEE department acted as student volunteers.



7. IEEE Spectrum Talk on AI Powered Micro Display for Eyesight

IEEE STB 16621 organized a Spectrum Talk on **AI Powered Micro Display for Eyesight** on 29.12.2023. Mr. P. Jaya Prasad, welcomed the gathering. Ms. Kiruthika D, II ECE student delivered lecture. In her lecture, she briefed the application of AI in the area of biomedical engineering. The design perspective of micro display for eyesight using AI and the challenges are explained. Ms. S. Abikayil Aarthi, Secretary STB 16621 moderated the event. Members of student branch and 45 students from CSE, ECE and EEE departments participated and got benefitted. Mr. Ranjith M proposed vote of thanks. Mr. Ranjith M, IV ECE and Mr. P. Jaya Prasad, III ECE acted as student volunteers.



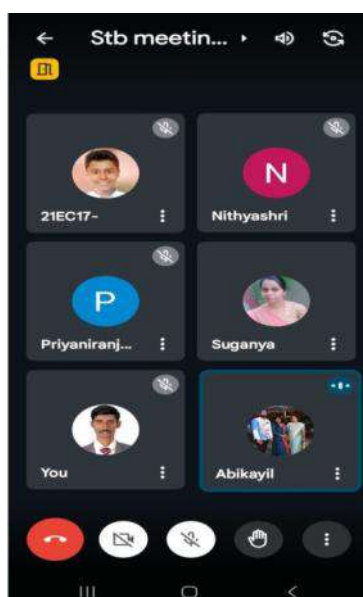
1. Poster Design Competition

IEEE STB 16621 organized **Poster Design Competition** on the theme IEEE Banner Designing from 17.12.2023 to 05.01.2024 through Google forms. 10 participants submitted their entries. Juries selected three contestant based on design and creativity: First Position, Mr. K. Suresh, Third Year, Dept. of Mech, Second Position Mr. K. Akash, First Year, Dept. of CSE and Third Position Mr. S. Hasidhikshana, Second Year, Dept. of ECE. Special Mentions Mr. C. Veeramani, First Year, Dept. of CSE - AI & DS. They were awarded with certificate of appreciation. Ms. B.M. Nithyashri and Ms. J. Keerthana of CSE Department acted as student volunteers.



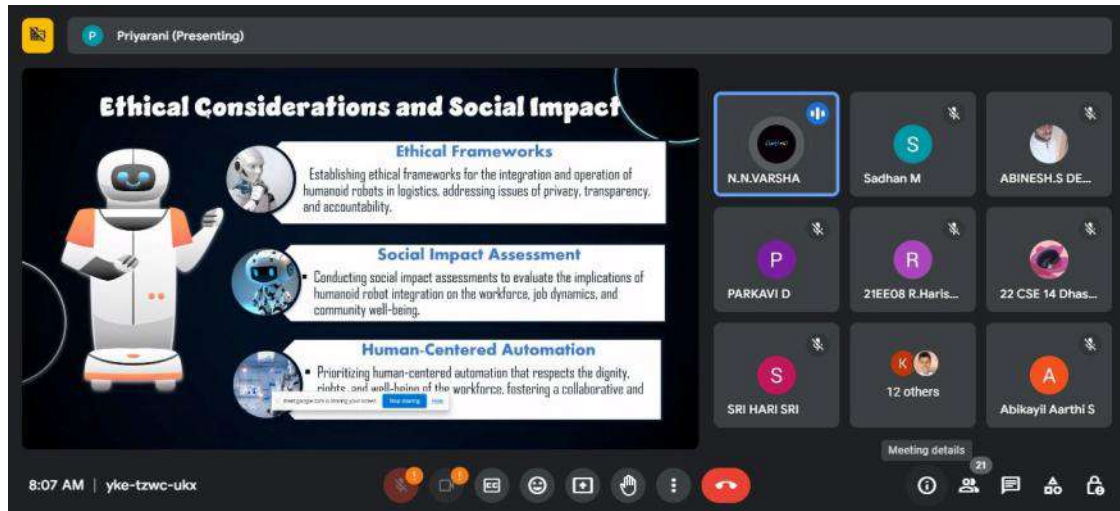
2. EXECOM Meeting – I

Executive Meeting of the STB 16621 was held on 12.01.2024. Dr. J. Arputha Vijaya Selvi presided over the meeting. Ms. B.M. Nithyashri, Vice Chairman welcomed the EXECOM members and briefed the plan for the first quarter of the year 2024. SB Counselor insisted the office bearers to involve volunteers in SB activities and concentrate more on extension activities. Also she approved the plan presented by the Vice Chairman. Ms. Abikayil Aarthi S, Secretary proposed vote of thanks.



3. IEEE Spectrum Talk on **Commercial Development of Humanoid Robots in Logistics**

Department of Computer Science and Engineering in association with IEEE STB 16621 is organizing IEEE Spectrum Talk on **Commercial Development of Humanoid Robots in Logistics** on 26.01.2024 between 06:00 p.m. and 07:00 p.m. Ms. B.M. Nithyashri, SB Chairperson, welcomed the gathering. Ms. B. Priyarani & Ms. N.N.Varsha, IV CSE student shared their views. 27 students participated in the event. Ms. Dhaslima shafreen proposed Vote of Thanks. Ms. G.Rasika & Ms. R V Atchaya acted as student volunteers.



1. Orientation Programme – CSE

Department of Electronics and Communication Engineering organized orientation programme on 01.02.2024. The session was handled by Ms. S. Abikayil Aarthi, AP/CSE cum Secretary IEEE Student Branch. In her lecture, she narrated that IEEE membership has benefits including venues and tools for members to network with people across the globe and acquire leadership skills by organizing events. Also, she listed out the various funding schemes in IEEE. Around 60 students participated in the event.

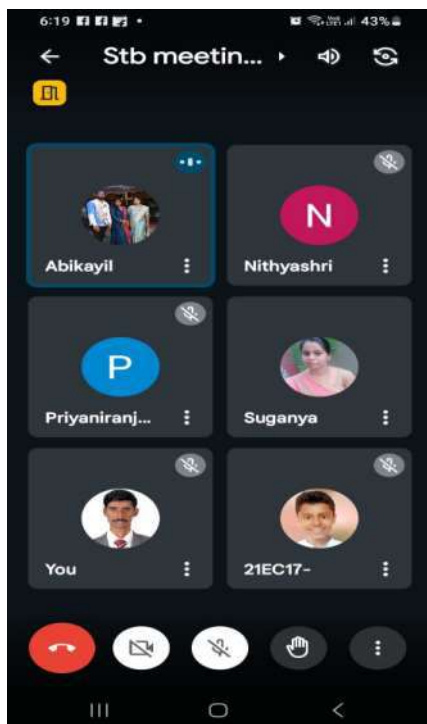


2. Orientation Programme – ECE

Department of Electronics and Communication Engineering organized orientation programme on 01.02.2024. During the session-1, Dr. T. Shanthi, Assoc. Prof/ECE delivered a lecture on Emerging Trends in Networking. In the session-2, Mrs. Shyamala, CADD center, Thanjavur gave a Talk on Artificial Intelligence and Machine Learning. In the session-3, Mrs. U. Jeyamalar, AP/ECE delivered a lecture on Introduction to Virtual Instrumentation. In the session-4, Mr.T.Jeyaseelan, AP/ECE gave a talk on Embedded Systems and IOT Design. During the session-5, Mr.S. Jagadish Kumar, CEO, Navil Software, Thanjavur gave a talk on Digital marketing. In this programme, 60 students participated in the programme and was coordinated by Mr.T.Jeyaseelan, AP/ECE.

3. Student Branch Meeting – I

IEEE Student Branch meeting of STB 16621 was held on 06.02.2024 by 06:30 p.m. in online mode. Ms. B.M. Nithyashri, Chair and III CSE student welcomed the gathering. Ms. S. Abikayil Aarthi, Secretary STB 16621 listed out the plans for the month of February 2024.



4. Spectrum Talk Recent Trends in Agrivoltaics

Department of Electrical and Electronics Engineering organized online spectrum talk on Recent Trends in Agrivoltaics on 09.02.2024. Ms. R. Kanimozhi, IV EEE student delivered lecture. In her lecture, she briefed on the efforts to combine solar technology and farming that have been underway for a decade. Also, she briefed on Hildebrandt concept, that vertical solar panels can be used on farmland to collect energy both in the morning and evening, which counterbalances other solar plants. She also briefed on the India's largest vertical solar farm with a capacity of 120kW in Bengaluru by Tata Power Solar and Dell India. While concluding her talk, she mentioned that Gro Solar Energy has installed a 7 MW solar project in Maharashtra, where it has integrated solar panels with drip irrigation for crops like sugarcane and banana. The project has increased the crop yield and reduced the water consumption by 40%. Ms. G. Sivasankari and Ms. M. Abinaya acted as student volunteers.



5. Awareness Programme for Farmers

An awareness program on the **Welfare and Development of Farmers** was organized by IEEE Student Branch, Kings College of Engineering. Dr. J. Arputha Vijaya Selvi, Principal & IEEE SBC, Kings College of Engineering, welcomed all the special invitees and farmers to the program. Dr.

R. Rajendran, Secretary, KCE delivered a presidential address on the challenges faced by the farmers, their well-being and sustainable practices to improve agricultural productivity. The program was inaugurated by Dr. A. Velayutham, Principal, Dr. MS Swaminathan Agricultural College and Research Centre, Eachankottai. In his address, Dr. A. Velayutham, gave insights into the current state of agriculture, challenges faced by farmers and possible solutions for sustainable development. Dr. R.Umashankareshwari, Associate Professor of the Agricultural College highlighted various potential components like agricultural policies, technical interventions, financial assistance and market linkages. Agriculture Officer T. Kannan explained the farmers about the use of modern technologies in agriculture (Uzhavan App) in a very simple way that the farmers could easily understand. At the end of the program, Dr. S. Sivakumar, Vice Principal & Advisor IEEE STB delivered a vote of thanks. At the end of the programme, all the farmers were given 5 kg of natural fertilizer by SPIC Ltd., to encourage organic farming. The farmers happily expressed their gratitude and appreciated the college administration and the organizers. Around 250 farmers participated in the programme.



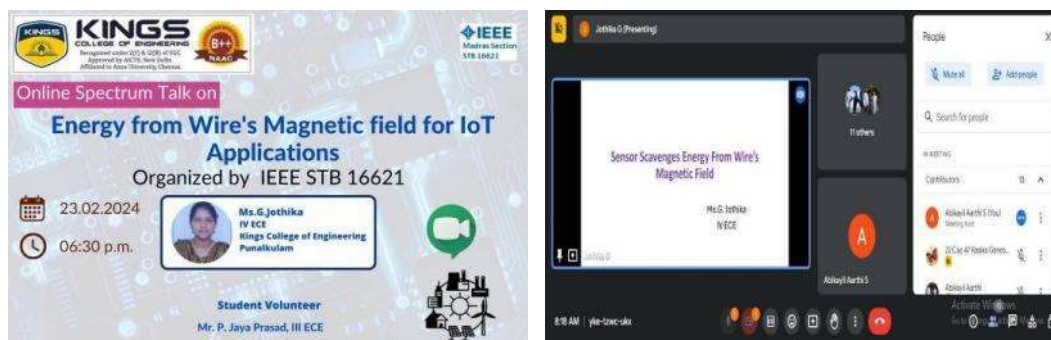
6. Outreach Programme on Awareness of IoT

Department of Electronics and Communication Engineering organized Outreach Programme on Awareness of IoT on 22.02.2024 at Little Flowers Higher Secondary School, Kumbakonam. The session was handled by Mr.T.Jeyaseelan, AP/ECE. During the session, he briefed on the simple projects using Raspberry Pi. Around 120 students participated in the programme.



7. Spectrum Talk

Department of Electronics and Communication Engineering organized online spectrum talk on Energy from Wire's Magnetic Field for IoT Applications on 23.02.2024. Ms. G. Jothika, IV ECE student delivered lecture. In her lecture, she briefed on technique of generating energy from wire's magnetic field. The generated energy could be used for IoT Applications. Energy is generated by clamping energy harvester around a wire carrying current which uses electromagnet induction harvest energy from the magnetic field produced by the current. Mr. P. Jaya Prasad acted as student volunteer.



8. National Science Day Celebrations

In view of National Science Day Celebrations, Poster Design Competition on the theme “**Science for a Sustainable Future**” was organized in online mode from 20.02.2024 to 28.02.2024. 27 entries were received, based on the creativity and relevance to the theme two posters was selected. **Ms. P. Sneha** of IV EEE bagged the first prize and **Mr. S. Lexmadurai** of II CSE bagged the second prize. The winners were given shield and certificate of appreciation.

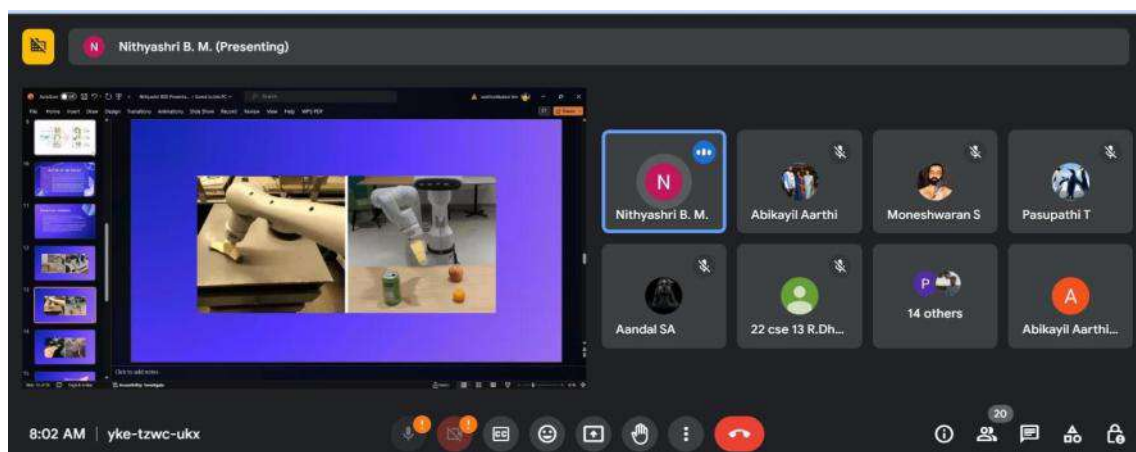


1. WIE - Officer Bearers Meeting

The IEEE Women in Engineering Affinity Group office bearers meeting was held on 01.03.2024. Dr. A. Prabha, Faculty Mentor presided over the member, and the office bearers were assigned the responsibilities, Ms. B. Priyarani, **Chairperson**, Ms. G. Rasika, **Vice Chair**, Ms. D. Kiruthika, **Secretary** and Ms .S .Abikayil Aarthi, **Treasurer**. The activities to be done during the year 2024 was discussed.

2. IEEE Spectrum Talk on The Global Project to Make a General Robotic Brain

IEEE Spectrum Talk on The Global Project to Make a General Robotic Brain was organized on 01.03.2024. Ms. B.M. Nithyashri, III CSE delivered lecture. In her lecture, she briefed on the concept of creating a general robotic brain referring to a global effort aimed at developing Artificial Intelligence (AI) systems that possess versatile cognitive abilities akin to those of the human brain. This ambitious project seeks to imbue robots with the capacity to perceive, learn, reason, and adapt to various tasks and environments, mirroring the broad spectrum of capabilities exhibited by humans. Key objectives of this endeavor include advancing machine learning algorithms, enhancing sensor technologies, and fostering interdisciplinary collaboration among experts in robotics, neuroscience, computer science, and related fields. Ultimately, the goal is to produce intelligent machines capable of autonomously performing complex tasks across diverse domains, from healthcare and manufacturing to exploration and service industries. Despite its promising potential, the project faces significant challenges, including ethical considerations, safety concerns, and the need for robust regulatory frameworks to govern the deployment and usage of advanced AI systems.



3. Inauguration of WIE AG

Women in Engineering Affinity Group of our college was inaugurated on 07.03.2024. Dr. A. Prabha, Faculty Mentor – WIE, welcomed the gathering. Dr. J. Arputha Vijaya Selvi, Principal & Faculty Advisor delivered the Inaugural Address. Ms. G. Rasika, Vice Chairman – SBA 16621 introduced the chief guest. Dr. T. Sree Sharmila, Chair- IEEE WIE Madras Section,

Chennai (Region -10) delivered a special address. In her address she explained how we can make use of IEEE –WIE for the development of our Engineering career and also explained about the available Scholarships and Awards under WIE. IEEE members of Kings College of Engineering attended the function. Ms. S. Abikayil Aarthi, Treasurer proposed the vote of thanks.



4. Webinar on AI Tools for Academic Research, Writing, and Publishing

Department of Computer Science and Engineering in association with R & D Section and IEEE STB 16621 organized a webinar on AI Tools for Academic Research, Writing, and Publishing. Dr. K. S. Sowmiya Rani, Cactus Communications, Mumbai delivered a lecture. In her lecture, she briefed on the various AI tools available for academic research writing and publishing. Also she demonstrated the usage of the tools that can be used for research writing. 69 participants participated in the webinar and got benefitted.



5. International Women's Day Celebration

Women's Cell of our institution in association with IEEE WIE AG organized the International Women's Day Celebration on 08.03.2024. Faculty members were sharing their experience and knowledge. Dr. J. Arputha Vijaya Selvi, Principal explained the importance of Education to girl child. Also she pointed out the impact of technology which affects the teenage students. Dr. T. Shanthi Professor & Head /ECE insisted the students participate in extracurricular activities. Dr. A. Abirami, Head /IQAC and Mrs. D. Mangalambigai, AP CSE explained about Health and how to maintain good health to lead a successful life. They

discussed the difficulties faced by them and how they converted them as stepping stones to success. Dr.A.Prabha, AP/ EEE suggested the students to be bold to face the challenges in life. Various competitions were conducted for the students, viz Singing, Dancing, Drawing and Speech.



6. Orientation Programme

Department of Electronics and Communication Engineering, Kings College of Engineering organized an Orientation Program for II year undergraduate ECE students on 13.03.2024. Ms. Shyamala, CADD center, Thanjavur presented a guest talk on **"Artificial Intelligence"** and her team member Mr.Sathish presented about **"Machine Learning"**. Mr.R.Thandayuthapani, AP/ECE presented a Motivation Talk on **"Mini project"**. Mr. W. Newton David Raj, AP/ECE presented a talk on **"Personal Health practices"**. Mr.R.Balakrishnan, AP/ECE presented a talk on **"procedures and Benefits of Industrial Training and Internship"**. Mr. T. Jeyaseelan, AP/ECE presented a Technical Talk on **"Embedded and IOT Systems Design"**.



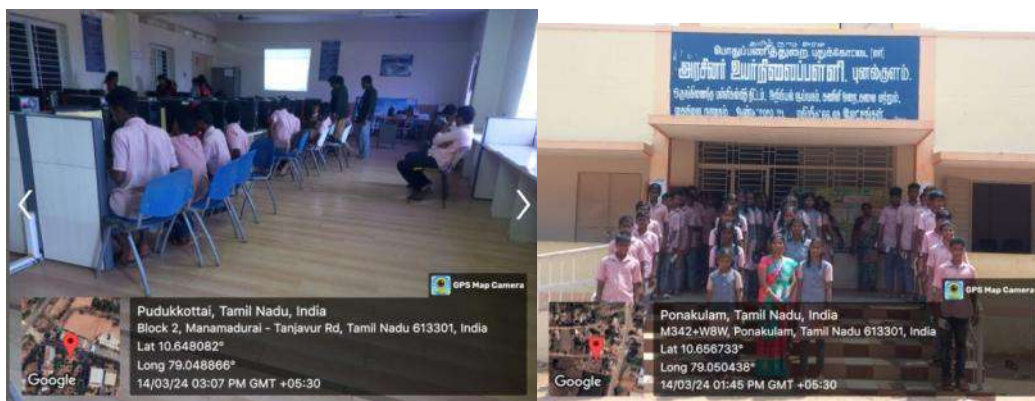
7. Internal staff seminar - Cloud Computing Security and Deep Learning: An ANN Approach

Department of Computer Science and Engineering organized internal staff seminar on **Cloud Computing Security and Deep Learning: An ANN Approach** on 14.03.2024. Ms.M. Vidhya, AP/ CSE delivered the lecture. In her lecture, she explored the intersection of two rapidly evolving fields, cloud computing security and deep learning. Also she briefed on the integration of Deep Learning with Cloud Computing Security and Key Components of the Approach. While concluding, Cloud Computing Security and Deep Learning: An ANN Approach represents a promising research direction to address critical security challenges in cloud environments through the application of advanced deep learning techniques.



8. Outreach Programme for School Students on Microsoft Office

Department of Computer Science and Engineering organized an Outreach Programme on Microsoft Office for School Students of Government High School on 14.03.2024. Ms. B. Sangeetha, AP/CSE and Mr.M. Arun, AP/CSE handled the sessions.



9. Career Guidance Programme

Career Guidance Programme for the students of Government Polytechnic College, Gandarvakottai was organized on 19.03.2024. Dr. R. Sarvanan, HOD/Civil briefed the students on the various career opportunities available in Government and Private Sector. Also, he briefed on the scope of higher education.



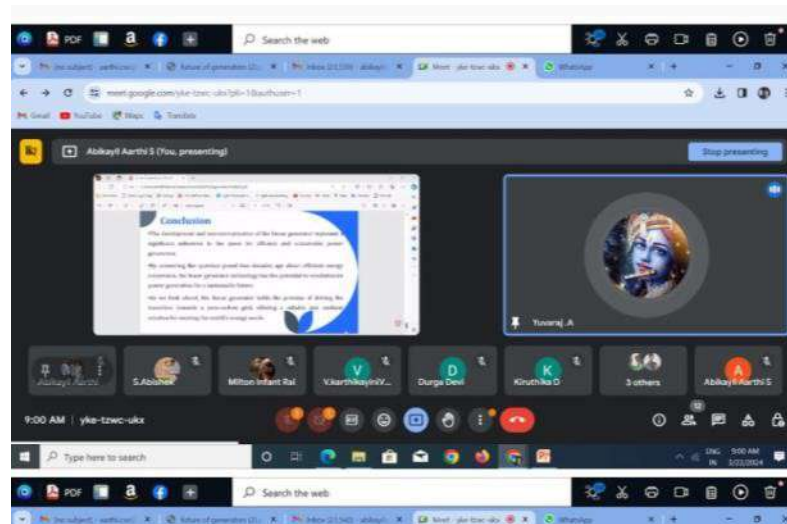
10. Workshop on Full stack Development

Department of Computer Science and Engineering organized a workshop on Full Stack Development on 22.03.2024. Mr. K. S. Guruprakash, AP/CSE, K. Ramakrishnan College of Engineering, Tiruchirappalli delivered a lecture. In his lecture, he briefed on comprehensive knowledge and practical skills in developing both the front-end and back-end components of web applications. Also he briefed on the Overview of Full Stack Development, importance and benefits of Full Stack Development in modern web development. The participants gained a structured learning experience with hands-on exercises, projects, and opportunities for interaction and collaboration, ultimately empowering participants to pursue careers or projects in Full Stack Development. Around 48 students participated in the programme.



11. Online Spectrum Talk on Future of Generators!!!

IEEE Spectrum Talk on Future of Generators !!! was organized on 22.03.2024. Mr. A. Yuvaraj, III EEE delivered a lecture. In his lecture, he described that linear generator can quickly switch between different types of green fuel, including biogas, ammonia, and hydrogen and Figuring out the generator's design. Also he briefed on how power generation using the linear generator is affordable and the journey how Linear generation reached the real world.



12. IEEE YESIST'12 PRELIMS

The YESIST12 2024 Prelims was hosted by **Kings College of Engineering**. The event brings together young minds from diverse backgrounds to collaborate, innovate, and create solutions that have a positive impact on society. The prelims was declared open at 09:30 a.m. and the juries addressed the participants both in online and offline mode. In the project expo, **41 batches presented their ideas including 04 from the host institution**. In the forenoon session, 24 batches were screened and remaining batches were screened in the afternoon session. The valedictory session was conducted and the results were announced. 3 tracks viz. innovation Challenge, Maker Fair, Special tracks were conducted. Based on the recommendation of the juries, **Abstract ID 6116 is selected as I position and 6092 as II position**, Also the juries appreciated the teams **6138, 3201, 3109, 6129, 6101** for their work. Dr. M. G. Kavitha, HoD, Dept. CSE, University College of Engineering, Anna University, Pattukottai and Mr. P. Vinoth, Business Analytics Machine Learning, Indian Institute of Management, Tiruchirappalli acted as juries.



13. GATE Awareness

IEEE WIE AG organized a session on GATE Perspectives on 23.03.2024. Ms. N. Dhamayanthi, AP/CSE briefed on the Syllabus coverage preparing for examinations. Mr. K. S. Guru Swathik, PG Scholar, NIT Warangal, briefed on the various study materials to prepare for GATE. Also, he shared his experiences and challenges he faced during his preparation.

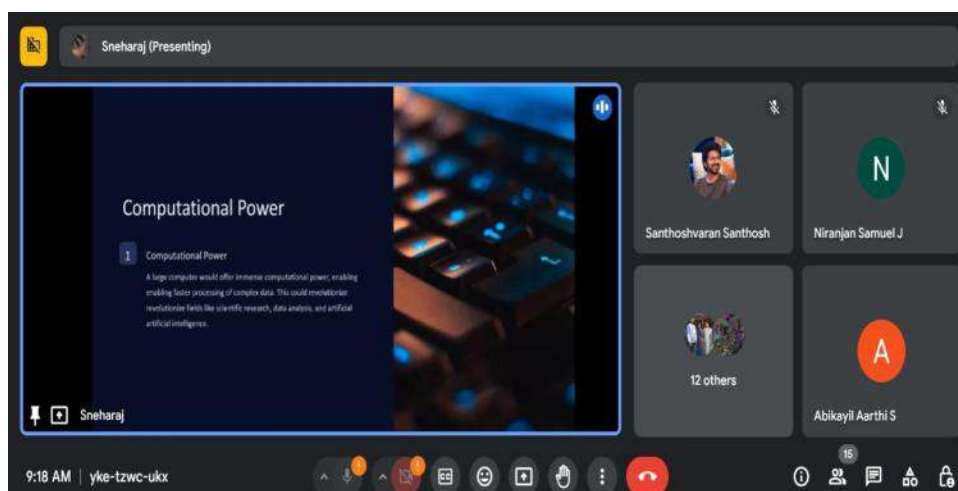
1. Professional Development Session on Office Management

Training and Placement Cell in association with IEEE STB 16621 organized a professional development session on **Office Management** on 04.04.2024. Dr. T. Devasenathipathi, OD Consultant, Mentor, Siddha Vedha University, Director, SR Tech Training Academy, Coimbatore delivered the lecture. In his lecture, he briefed on the various strategies for effective office management. Around 20 staff members participated in the programme and was coordinated by Dr. B. Suresh Babu, Placement Officer.



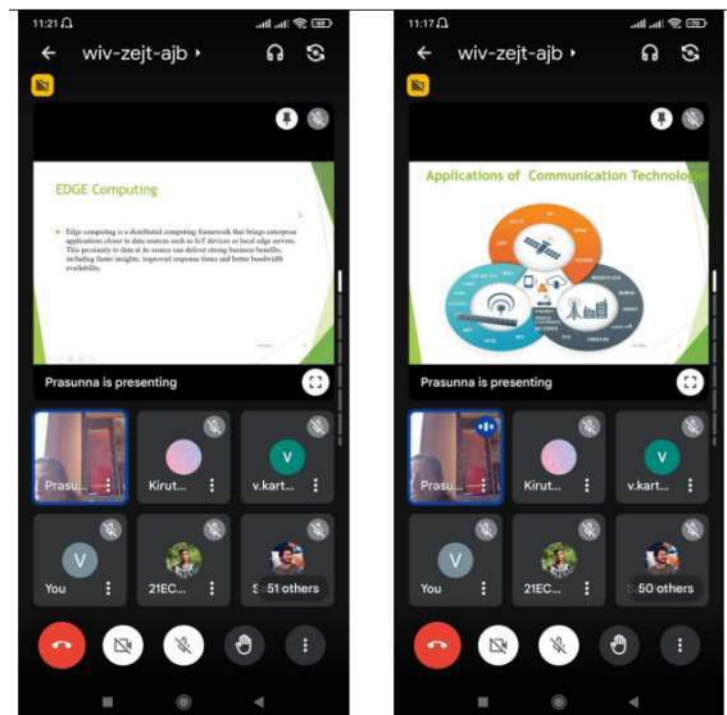
2. IEEE Spectrum Talk on What if we build a really Big Computer

IEEE STB 16621 organized an IEEE Spectrum on **What if we build a really Big Computer** on 05.04.2024. Ms. Sneharaj, II year ECE student delivered the lecture. In her presentation, she explored the Impact of Building a Massive Computer. She also briefed on the 1. Computational Power, 2. Scientific Advancements, 3. AI Development, 4. Data Handling, 5. Energy and Environmental Impact. While concluding her lecture, she discussed the challenges & disadvantages and potential applications. The event was coordinated by student volunteers Mr. P. Jaya Prasad and Ms. D. Kiruthika of ECE department.



3. Webinar on Communication Technologies and its real time Applications using Edge Computing Technologies

Department of Electronics and Communication Engineering organized a webinar on Communication Technologies and its real time applications using Edge Computing Technologies on 09.04.2024. The resource person for the webinar was Dr. Vaddi Naga Padma Prasuna, Associate Professor, Atria Institute of Technology, Bangalore. Ms. D. Kiruthika, Student of II ECE and secretary - WIE SBA 16621, welcomed the resource person and the participants by the words. Mrs. D.Vennila, AP/ECE coordinator of this webinar gave the Introduction about the resource person. In her lecture, she explained about the various communication Technologies, The layered architecture of communication, Major communication protocols available, Edge computing technologies, Edge computing in real time applications etc. She emphasised the evolution of mobile networks and their characteristics. She gave an overview about the basic communication systems layered architecture, layered architecture protocols and compared the various protocols. 91 students participated in the programme and got benefitted.



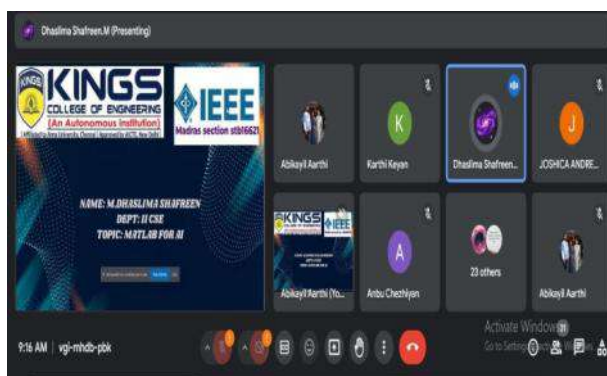
4. Internal Seminar on Solutions of soil Moisture Sensing with RFID for Landslide Monitoring

Department of Electronics and Communication Engineering organized an Internal Seminar on **Solutions of Soil Moisture Sensing with RFID for Landslide Monitoring** on 13.04.2024. Mr.R.Thandayuthapani, AP/ECE delivered the lecture. In his lecture, he briefed on the UHF RFID tags for soil moisture sensing and described the construction of the soil moisture sensor. Also he compared the results obtained from the two types of sensors.



5. Online Spectrum Talk on MATLAB for AI

IEEE STB 16621 organized an IEEE Spectrum talk on MATLAB for AI on 05.04.2024. Ms. M. DhaslimaShafreen, II year CSE student delivered the lecture. In her presentation, she gave an introduction to the MATLAB environment and briefed on AI fundamentals. Also she briefed the various stages in AI based data processing namely, Data Preprocessing, Model Training, Performance Evaluation, Deployment and Integration and Optimization Techniques. While concluding her lecture, he discussed MATLAB essentials, challenges and solutions, performance optimization and future of AI and MATLAB. The event was coordinated by E. Karthikeyan and P. Marimuthu of CSE Department.



6. Workshop on Emerging Techniques in Electrical Engineering

Department of EEE in association with IEEE STB 16621 organized a workshop on Emerging Techniques in Electrical Engineering was organized on 30.04.2024. **Dr.S.Sivakumar**, Vice Principal delivered the Inaugural Address. He emphasized that; this workshop will provide more knowledge about the various technical skills and the future scope for electrical engineers. He insisted the students to ask more doubts and have a clear idea about the emerging techniques in Electrical Engineering. Session 1 on the title “Emerging Technologies in Electrical Engineering” was handled by **Dr.S.Sivakumar**, Vice Principal. In his lecture, he briefed on the emerging technologies in electrical engineering which involve advancements in battery technologies, supercapacitors, and even innovative solutions like gravity-based

energy storage. Session 2 on the title “Witricity” was handled by **Dr.A.Prabha**, AP/EEE, KCE. In her lecture, she briefed that WiTricity's technology allows wireless transfer of power over distance via magnetic resonance. Alternating Current (AC) electricity runs through an electromagnetic coil within a charging station to form an oscillating electromagnetic field. Session 3 was hands- on-session on RES Laboratory and was handled by **Mr.J.Arokiaraj** AP/EEE, KCE. During the session, the participants were demonstrated about renewable energy sources. Session 4 on the title RES and EV for Optical EM of microgrids with the aim of co2 emission reduction was handled by **Dr.S.Naveen** Prakash, AP/EEE, KCE. In his lecture, he detailed the different review works on microgrids network and their main focuses. Also, he illustrated hybrid renewable energy-based MG optimization using graphical construction, probabilistic approach, iterative technique, artificial intelligence (AI), dynamic programming, and linear programming. While concluding he discussed the optimized framework of MG operation. A total of 71 students participated and got benefitted.



1. Two Day Techie Fest

Department of CSE in association with IEEE Student Branch organized two days Techie Fest on 02.05.2024 & 03.05.2024. On day 1, session on UI & UX design, WebApp Development and Building a Machine Learning Model was organized. On day 2, design contest such as Mini Project Expo, Logo Designing and Coding Skill was organized. 121 students participated in the event. Ms. D. Mangalambigai, Mr. M. Arun and Mr. S. Rajarajan were the coordinators of the programme.



2. International Conference on Recent Trends in Engineering and Science (ICRTES'24)

The International conference on “Recent Trends in Engineering and Science –ICRTES 2024” was held from 02-05-2024 to 03-05-2024. The function was graced by the Chief Guest, Dr. B. Subramanian, Senior Principal Scientist, Central Electrochemical Research Institute, Karaikudi. The Keynote Speaker of the function was Dr. M. Revanasiddappa, Professor, PES University, Bangaluru. The special invitee of the function was Dr. Sivakumar Subramanian, Associate Professor, Electronics Engineering, Universiti Teknikal Malaysia, Melaka. Dr. J. Arputha Vijaya Selvi, Principal, delivered the Welcome Address. She welcomed the gatherings with the words also she emphasized that, this kind of conference will provide the opportunity for the students community as well as the participants to listen to the talk from eminent speakers. Dr. R. Rajendran, Secretary, delivered the Presidential Address. The conference proceedings were released by the Chief Guest Dr. B. Subramanian. The chief guest, Dr. B. Subramanian, delivered the inaugural address. He detailed about the Electroplating Technology and its material characterization. The special invitee of the function was Dr. Sivakumar Subramanian, Associate Professor, Electronics Engineering, Universiti Teknikal Malaysia, Melaka, has delivered the invited talk on “IoT Technology for Disaster Mitigation”. The keynote address was given by Dr. M. Revanasiddappa, Professor, PES University, Bangaluru. Nearly 206 research articles were presented by the students, research scholars and faculty members from various reputed Institutions across India and abroad.



3. Kings Project Expo'24

Center for Promotion of Research in association with IEEE STB 16621 organized KINGS PROJECT EXPO' 2024 on 03.05.2024. This project expo aims to encourage the students' creativity and innovations on Engineering & Technology. Dr.S.Sabanayagam, CPR Member & Associate Professor / Mechanical Engineering, welcomed the gathering. Dr.J.Arputha Vijaya Selvi, Principal, inaugurated the expo and delivered the inaugural address. In her speech, she emphasized the significance of innovations in projects. Mr.J.Niranjana Samuel, JRF/R&D, introduced the chief guest Mr. M. I. Abdul Halik, Secretary of IEEE Madras Young Professionals, Chennai. In his address, he briefed on importance of IEEE membership and his IEEE membership journey. Also he shared his memories as Passion to Progress: My IEEE Member Experience. Dr. S. Sivakumar, Vice Principal, delivered the felicitation address. He insisted the students to enhance their technical knowledge both in software and hardware. The projects of internal and external students were evaluated by senior faculty members of every department nominated as jury's. Totally 70 batches participated in the project expo. Jury's evaluated the projects and gave feedback & valuable comments to the students. Based on the innovation, presentation, implementation and demonstration marks were awarded by the jury's. Two projects were selected for rewards from each department. The valedictory ceremony of the project expo started by 01:30 p.m. at Pallava Hall. Dr.R.Rajendran, Secretary of the college distributed the prizes and certificates to the participants. Project Expo came to an end with vote of thanks by Ms. S. Abikayil Aarthi, AP/CSE cum Event Coordinator – IEEE MAS YP and Secretary – IEEE STB 16621.



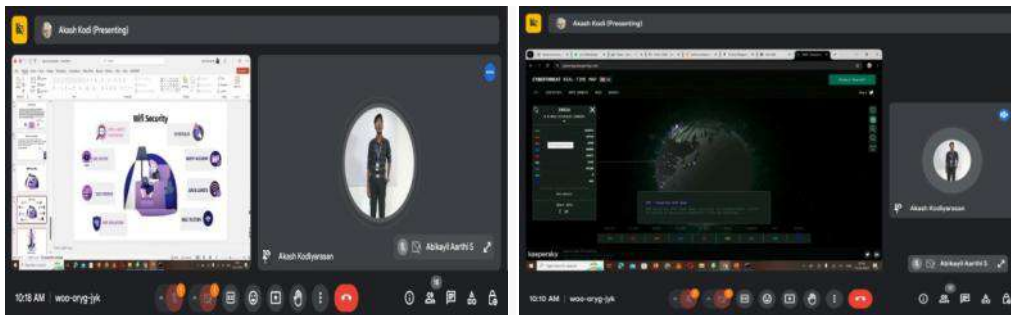
4. Session on Passion to Progress : My IEEE Member Experience

IEEE STB organized a session titled **Passion to Progress: My IEEE Member Experience** on 03.05.2024. Mr. M. I. Abdul Halik, Secretary of IEEE Madras Young Professionals, Chennai shared how IEEE membership for their career. Also he shared his experience, how IEEE membership was useful to him, how it helped to excel in his career. IEEE Student branch members participated in the session.



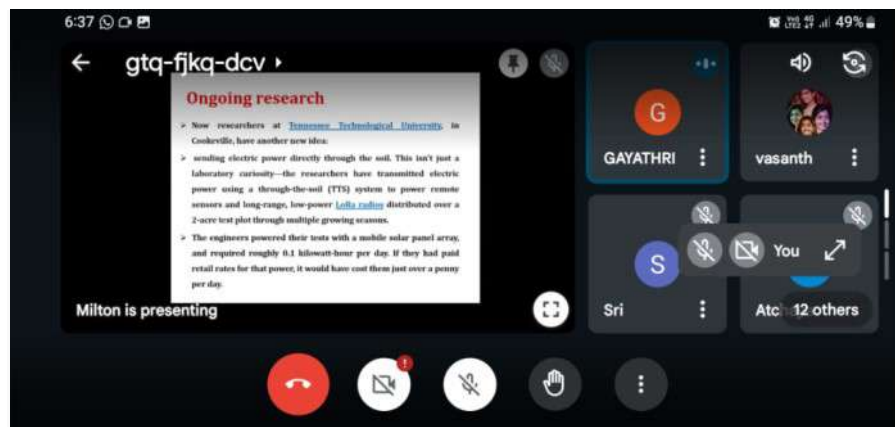
5. Two Days Workshop on Cyber Security : Safeguard your Digital World

The two days workshop on “Cyber Security: Safeguard Your Digital World” was organized on 11.05.2024 & 12.05.2024, aimed to celebrate National Technology Day at educating participants about the fundamentals and advanced aspects of cyber security. On Day 1, Fundamentals of Cyber security with Interactive Session: Case Studies and on day 2, Advanced Cyber Security Practices were covered. At the end of the session, Q&A and Expert Panel Discussion were organized. The workshop was attended by 65 participants from various sectors including corporate, education, and government. The sessions were led by cyber security experts, providing comprehensive insights into protecting digital assets and enhancing overall cyber security posture.



6. Online Spectrum Talk on Power Sensor for Agricultural IoT System

IEEE STB 16621 organized Online Spectrum Talk on Power Sensor for Agricultural IoT System on 24.05.2024. **Ms. K.C. GAYATHRI**, III EEE, delivered lecture. In her lecture, she briefed on the Evolution of IOT in agricultural system, role of IoT in agricultural systems, key milestones and developments and the ongoing research work. Also she briefed on the, design of Agricultural IoT System. While concluding her lecture, she briefed on the future scope of IoT in Agricultural systems.



7. Webinar on How to Write a Grant Proposal in an Effective Manner


Webinar titled "How to Write a Grant Proposal in an Effective Manner" was conducted on 31.05.2024. The session was organised by department of CSE in association with Centre for Promotion of Research & IEEE STB 16621. **Mr. M. Logeshwaran, Trainer, IGNZEE Software Solutions** was the resource person. The following topics were covered during the session, Introduction to Grant Proposals, Preparing to Write, Components of a Grant Proposal, Writing Tips and Strategies, Review and Submission. At the end, Q&A Session was organized and participants clarified their doubts with the resource person. The webinar attracted 62 participants. The session aimed to equip attendees with the skills and knowledge required to craft compelling grant proposals.



**3.2.2 - Number of workshops/seminars conducted on
Research Methodology, Intellectual Property Rights (IPR)
and entrepreneurship during the year 2023 - 24**

Entrepreneurship Development Cell

| S. No | Name of the Activity | Page No. |
|-------|---|----------|
| 1. | Awareness programme on “Niral Thiruvizha 2023” | 2 |
| 2. | Orientation Programme about BEST Centre at SASTRA | 4 |
| 3. | Workshop on Business Model Canvas | 6 |
| 4. | Workshop on Entrepreneurship Skill, Attitude and Behaviour Development. | 9 |


Coordinator, ED Cell


Principal

ACADEMIC YEAR 2023–24

03.01.2024

*Awareness programme
on
“Niral Thiruvizha 2023”
26.12.2023 to 28.12.2024*

REPORT

Entrepreneurship Development Cell of Kings College of Engineering organized an Awareness Programme on “Niral Thiruvizha 2023” from 26.12.2023 to 29.12.2023..

Objective:

The objective of this event is to trigger an innovation mindset among the student community which in turn develops the skills of our students across various sectors.

Resource persons:

Dr. B. Suresh Babu and Dr. K. Sudhakar , Coordinators, ED Cell, Kings College of Engineering, Punalkulam, Pudukottai

Participants:

Ist, IInd, IIIrd and IV year students of all disciplines attended the programme.

Programme Highlights:

Dr. K. Sudhakar, Coordinator, ED Cell and Dr. B. Suresh Babu, Member, ED Cell highlighted the importance of Niral Thiruvizha and the theme behind it. Also, outlined the key objectives of the event.

The event concluded with a summary of the key points covered and a call to action for participants to actively engage in the Niral Thiruvizha competition. The programme encouraged attendees to share their newfound knowledge with others and participate in upcoming events.

Outcome:

The awareness programme successfully met its objectives by providing a comprehensive overview of Niral Thiruvizha. As per the direction, innovative ideas from various departments were registered in the portal.

Valedictory Function:

Mr. Mohamed Sultan, IV Mechanical, delivered vote of thanks.

Event Photographs



EventPhotograph-1



EventPhotograph-2



EventPhotograph-3


Coordinator, ED Cell


Principal

Orientation Programme about BEST Centre at SASTRA 04.04.2024

REPORT

Entrepreneurship Development Cell of Kings College of Engineering organized an Orientation Programme about BEST Centre at SASTRA, Thanjavur on 04.04.2024.

Resource Person:

Mr. Martin, Marketing Manager, BEST Centre SASTRA, Thanjavur.

Participants:

Interested Final year students of all disciplines, 44 participants attended the programme.

Inaugural Session:

The inaugural session started with a welcome address by Dr. K. Sudhakar, Coordinator, ED Cell delivered welcome address and introduced the resource person to the participants.

About the Programme:

Mr. Martin, resource person of the orientation programme narrated about Bajaj Engineering Skill Training (BEST) CENTRE at SASTRA, Thanjavur with a detailed presentation on the various courses and training modules offered, including curriculum structure, learning objectives, and career prospects which helps trainees select the right programs based on their career aspirations and skill development goals. Also, disclosed the information on administrative procedures, including enrollment details, scheduling, and support services such as career counseling, mentorship programs, and technical support. Overall, the orientation program focused to ensure that new trainees are well-informed, comfortable, and prepared to make the most of their educational experience at the Bajaj Engineering and Skill Training Centre.

Finally, in the question and answer session participants were clarified their doubts.

Valedictory Function:

Mr. Gushendra Prasad, IV EEE, delivered vote of thanks.

Event Photographs



EventPhotograph-1



EventPhotograph-2


Coordinator, ED Cell


Principal

ACADEMIC YEAR 2023 - 24

24.05.2024

Workshop
on
"BUSINESS MODEL CANVAS"
23.05.2024

REPORT

MoEs - Institution Innovation Council and Entrepreneurship Development Cell of Kings College of Engineering organized a workshop on **"BUSINESS MODEL CANVAS"** on 23.05.2024.

Objective:

To provide necessary skills to the students who are aspiring to be entrepreneurs to turn their creative ideas into a successful business.

Resource persons:

1. Mr. G. Abraham Lincoln, District Field Coordinator, EDII - TN, Thanjavur and Mr. R. Amarnath, District Field Coordinator, EDII - TN, Pudukkottai.

Participants:

IIC and ED Cell members of II year students of all disciplines 41 participants attended the programme.

Inaugural Session:

Dr. K. Sudhakar, Coordinator of ED Cell, gave away the welcome address and introduced the resource persons to the participants.

Session highlights:

The workshop on the Business Model Canvas provided a comprehensive overview of this strategic tool, aimed at enhancing participants' understanding of business model development. Attendees engaged in detailed sessions covering each of the nine building blocks, including key aspects such as customer segments, value propositions, and revenue streams. Through interactive activities and case studies, participants applied the concepts to their own business ideas, gaining practical insights into model optimization and innovation.

Benefits in terms of Learning/Skills/Knowledge obtained:

Student members gained

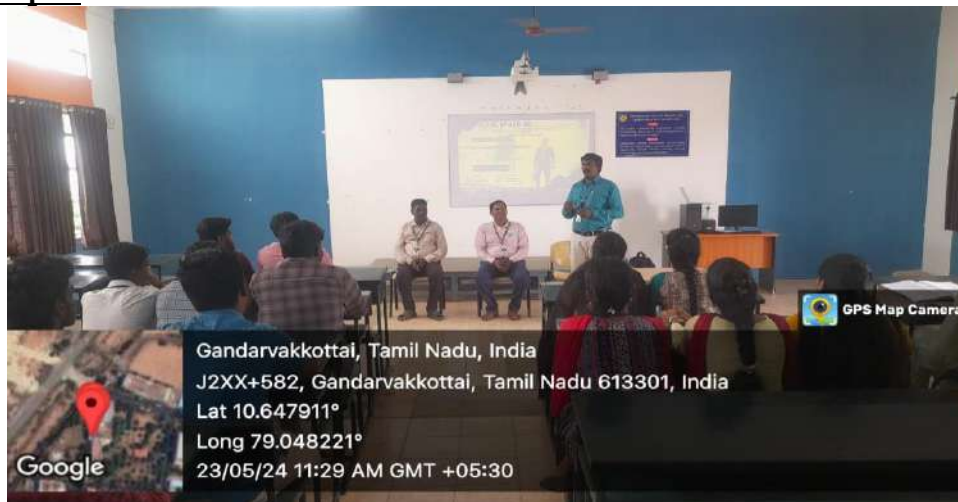
- **Comprehensive Understanding:** Gained in-depth knowledge of the nine essential components of the Business Model Canvas.

- **Strategic Thinking:** Learnt various skills in strategic analysis and planning, allowing you to assess and refine your business model in a structured and systematic way.
- **Practical Application:** Learnt to apply theoretical concepts to real-world scenarios, enhancing your ability to create and implement actionable business strategies.
- **Problem-Solving Skills:** Know how to improve the ability to identify business challenges and opportunities, and develop effective solutions through hands-on exercises and case studies.
- **Innovation Techniques:** Acquired the techniques for fostering innovation within their business model, enabling them to adapt and stay competitive in a rapidly changing market.
- **Collaborative Learning:** To Enhance skills in teamwork and collaboration by engaging with peers and facilitators, gaining diverse perspectives and constructive feedback.
- **Continuous Improvement:** To Build knowledge on how to regularly evaluate and adjust the business model to ensure on going relevance and effectiveness, supporting long-term success and adaptability.

Valedictory Function:

Finally, Mr. Ramprasad, member of ED Cell delivered a vote of thanks.

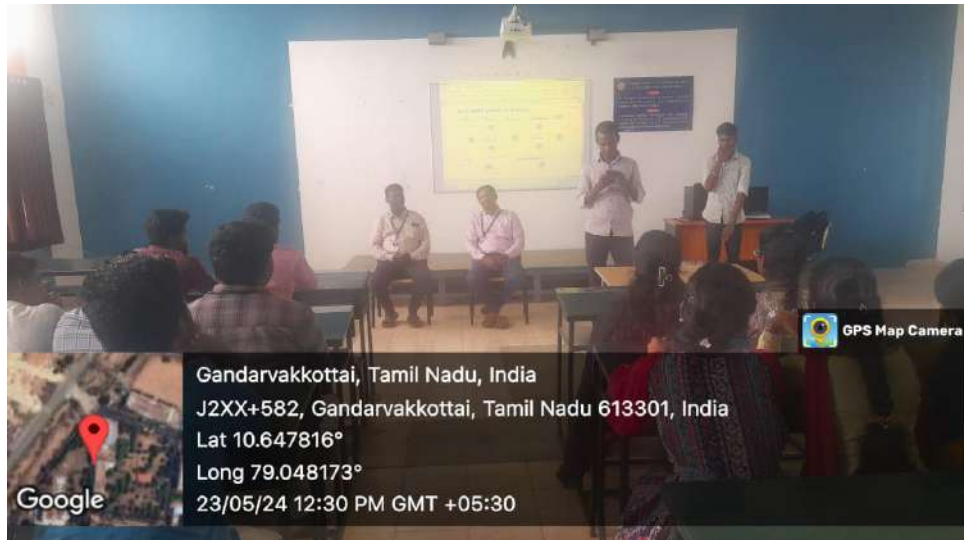
Event Photographs



Event Photograph-1



Event Photograph-2



Event Photograph-3

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 Coordinator - ED Cell

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 24/5/24
 Vice President-IIC & AP/EEE

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 24/5/2024
 President-IIC & Principal



ACADEMIC YEAR 2023 – 24

02.06.2024

Workshop
on
“Entrepreneurship Skill, Attitude and Behaviour Development”
29.05.2024

REPORT

MoEs - Institution Innovation Council and Entrepreneurship Development Cell of Kings College of Engineering organized a workshop on **“Entrepreneurship Skill, Attitude and Behaviour Development”** on 29.05.2024.

Objective:

- To equip participants with practical entrepreneurship skills such as business planning, financial management, marketing strategies, and effective networking techniques.
- To foster a positive entrepreneurial mindset by encouraging traits such as resilience, adaptability, and proactive problem-solving, essential for overcoming challenges and seizing opportunities.
- To develop key entrepreneurial behaviors, including leadership, decision-making, risk-taking, and self-discipline, to help participants navigate the entrepreneurial journey more effectively.

Resource person:

1. Dr. B. Suresh Babu, Assistant Professor, Department of Management Studies, Kings College of Engineering, Punalkulam, Pudukottai

Participants:

IIC and ED Cell members of IInd year students of all disciplines 36 participants attended the programme.

Inaugural Session:

The inaugural session started with a welcome address by Mr. Ramprasad, ED Cell Member welcomed the gathering.

Session highlights:

The speaker highlighted the following points:

Introduction to Entrepreneurial Skills: Overview of essential skills for entrepreneurs, including business planning, financial management, marketing strategies, and effective communication. Developing a Positive Entrepreneurial Attitude: Interactive exercises and discussions focused on cultivating resilience, adaptability, and a growth mindset, crucial for navigating the entrepreneurial landscape. Behavioral Traits of Successful Entrepreneurs: Exploration of key

entrepreneurial behaviors such as leadership, risk-taking, decision-making, and self-discipline, with practical tips for developing these traits. Creativity and Innovation Workshops: Hands-on activities designed to enhance creative thinking and problem-solving skills, encouraging participants to generate and refine innovative business ideas.

Self-Assessment and Personal Development: Sessions dedicated to self-awareness, including tools and techniques for identifying personal strengths and areas for improvement, and setting actionable goals for growth. Networking and Collaboration: Opportunities for participants to connect with peers, mentors, and industry experts through networking sessions, collaborative exercises, and group discussions. Actionable Business Planning: Guidance on developing practical business plans and setting realistic goals, including creating detailed roadmaps and strategies for launching and scaling entrepreneurial ventures.

Benefits in terms of Learning/Skills/Knowledge obtained:

Student members gained

- The hands-on experience in crucial areas such as business planning, financial management, marketing, and operational strategies, enhancing their ability to effectively manage and grow their ventures.
- Awareness to develop a resilient and proactive mindset, learning to view challenges as opportunities and adopt a growth-oriented perspective essential for long-term entrepreneurial success.
- The strategy to cultivate key entrepreneurial behaviors, including strong leadership, strategic decision-making, and effective risk management, which are vital for navigating the complexities of entrepreneurship.
- Knowledge about the techniques to boost their creativity and innovate effectively, leading to the development of unique and competitive business ideas.
- Idea to create and implement detailed business plans and strategic goals, providing a clear roadmap for launching, managing, and scaling their entrepreneurial ventures effectively.

Valedictory Function:

Finally, Mr. T. Priyadharshini, member of ED Cell delivered a vote of thanks.

Event Photographs



Event Photograph-1



Event Photograph-2

[Signature]
 02/06/24
Coordinator - ED Cell

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 2/6/24
Vice President-IIC & AP/EEE

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 02/6/2024
President-IIC & Principal