




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 Dist. - 613 303.

R&D Newsletter

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Books Published

- Dr.AL.Kavitha, Assistant Professor/ Chemistry, published a book titled “**Engineering Chemistry**” (ISBN No. 978-93-86712-50-9) in February 2019, Jeyalakshmi Publications.

Grants sanctioned

- A grant-in-aid of Rs. 24.96 lakhs is sanctioned from AICTE, New Delhi under AQIS scheme towards establishment of Skill and Personality Development Programme Centre. Coordinator: Dr. S. Sivakumar, Professor/EEE

Proposals submitted

- Department of ECE submitted a proposal to TNSCST, Chennai, on “Developing Instrumentation System & Modeling for Civil Structure Deformation / Dynamic rehabilitation with Fiber Optic Sensors (FOS)” for a grant-in-aid of Rs. 4,83,000/-. Investigators: Dr.J.Arputha Vijaya Selvi, Professor/ECE & Mr.T.Pasupathi, Asst.Prof/ECE.
- Department of ECE submitted a proposal to TNSCST, Chennai, on “Virtual fencing to avoid Human Animal Conflict” for a grant-in-aid of Rs.4,38,000/-. Investigators: Dr. T. Shanthi, ASP/ECE & Mr.P.Rajapirian, AP/ECE.
- Department of Mechanical Engineering submitted a proposal to AICTE – AQIS under MODROBS scheme for establishing laboratory with “Variable Compression Ratio Engine” for a grant-in-aid of Rs. 8,47,058/- Coordinators: Dr. T. Pushparaj, ASP/Mech & Mr. G. Mathivanan, AP/Mech.
- Department of ECE submitted a proposal to AICTE – AQIS under RPS for a project titled “Developing Instrumentation System & Modeling for Civil Structure Deformation / Dynamic rehabilitation with Fiber Optic Sensors (FOS)” for a grant-in-aid of Rs. 24,94,117/- Investigators: Dr. J. Arputha Vijaya Selvi, Prof/ECE & Mr. T. Pasupathi, AP/ECE
- Department of ECE submitted a proposal to AICTE – AQIS for organizing STTP on “Experimental Study and Development of Mitigation Techniques for Free Space Optical Communication” for a grant-in-aid of Rs. 1,60,000/- Coordinator: Mr. T. Pasupathi, AP/ECE
- Department of Chemistry, submitted a proposal to TNSCST, Chennai, on “Low cost methods for the removal of heavy metals in waste water using Nanotechnology” for a grant-in-aid of Rs. Rs.4,75,999/-
- Department of T&P submitted two proposals to DST-NIMAT for organizing Entrepreneurship Awareness Camps requesting a grant-in-aid of Rs. 20,000/- each. Coordinator: Mr. K. Sudhakar, AP/T&P.

Student Project Grants

- L.Mowli and K.Jaishree, IV ECE students, under the guidance of Mrs.R.Ponni, AP/ECE, received a grant-in-aid of Rs. 7,500/- from TNSCST, Chennai towards the project titled “R3 Menstrual Kit”.
- Festus Devarpiyan .J.D and Nethaji.T.S, IV CSE students, under the guidance of Ms.R.Sugantha Lakshmi, AP/CSE, received a grant-in-aid of Rs. 5,000/- from TNSCST, Chennai, towards a project titled “Pacifier (Mobile APP)” .
- S.Sheeba, II PG VLSI student, under the guidance of Mr.T.Jeyaseelan, AP/ECE, received a grant-in-aid of Rs. 7,500/- from TNSCST, Chennai, towards the project titled “VLSI Implementation of automated monitoring and detection for tonsillitis by image processing”.

Publications

Department	Conference	Journals
Civil	29	29
CSE	0	08
ECE	24	03
EEE	0	11
MECH	10	01
S&H	06	01

Faculty completed Ph.D.

Dr. A. Albert Martin Ruben, Associate Professor/EEE	Dr. G. Ramya Arockiamary, Assistant Professor/S&H
Dr. D. Sivakumar, Assistant Professor/CSE	Dr. G. Shankarakalidoss, Assistant Professor/S&H
Dr. J. Jegan, Assistant Professor/CSE	Dr. D. Suresh, Physical Education

Faculty doing Ph.D.

Name / Dept	Area of Research
Mrs. K. Abhirami, Computer Science & Engg.,	Data Mining
Mrs.P. Nalayini, Computer Science & Engg.,	Wireless Networks
Mr. S. Rajarajan, Computer Science & Engg.,	Wireless Networks
Mr. A. Herald, Electronics & Communication Engg.,	Optical Communications
Mr. T. Pasupathi, Electronics & Communication Engineering	Free Space Optics
Mr. P. Raja Pirian, Electronics & Communication Engineering	Wireless Sensor N/w s
Mrs. R. Ponni, Electronics & Communication Engineering	Adhoc N/w s
Mr. R. Sundaramoorthy, Electrical & Electronics Engineering	Power Converters
Mrs. A. Prabha, Electrical & Electronics Engineering	Power Systems
Mrs. S. Rajeswari, Electrical & Electronics Engineering	Smart Grid
Mr.P.P.Shantharaman, Mechanical Engineering	Composite Material
Mr. R. Sankar, Mechanical Engineering	Surface Coating
Mr. B. Adhichelvan, Mechanical Engineering	Emission optimization
Mr.N. Magesh, Mechanical Engineering	Alternative Fuels
Mr. H.Agilan, Mechanical Engineering	Alternative fuels
Mr. Melwin J Sridhar, Mechanical Engineering	Composite Materials
Mr. J. Rajaparthiban, Mechanical Engineering	Machining studies
Mr. G. Jeyakrishnan, Mathematics	Number Theory
Mrs. S. Geetha, Mathematics	Fuzzy Graphs
Mrs. S. Revathy, Mathematics	Fuzzy Graphs
Mrs. N. Latha, Mathematics	Mathematical Models in Genetics
Mrs. T. Gnanajeya, Mathematics	Mathematical Models
Mr. K.Sudhakar, Training & Placement	Finance
Mr. B. Barankumar, Training & Placement	Marketing
Mr. B. Suresh Babu, Training & Placement	Marketing

Students Participation in Smart India Hackathon-2019

Team Name	Team Head
CHOLA KINGDOM	V. Vijay
BLOSSOM	J. Indhuja
V6 CREATORS	K. Priyadharshini
EVERGREEN	C. Ranjitha
TECHNO TROOPS	L. Mowli
PHOENIX PATRIOTS	M. Nithish Kumar
CREATOR_RAG	J. Vikram
INNOVATORS_BHARATH	R. Ragul Kanna
KALAM SIRAGUGAL	K. Gayathry
SSTRACKERS	S. Sarankumar
SPARROW SIX	J. Joseph Manvel Raja
TECHIE ARDENTS	JD Festus Devapriyan
FRACEM	R. Santhosh Sami
TECH RETRIEVER	P Nithish Kumar

Programmes Organized

A Seminar on “Aero Engines and Air Frames” was organized on 28th September, 2018. Sergeant **B. Rajesh**, Indian Air Force, 3TN Air Sqn (Tech), National Cadet Corps, Tiruchirappalli, was the resource person. In his lecture, he briefed the types of various engines and their applications in aircrafts. Also he shared his experience in assembling, testing of aircrafts and challenges faced during the work. 178 participants participated and got benefitted.



Sergeant B. Rajesh during the lecture



Organizing committee – AEF'18

A Seminar on “**Industrial Automation**” was organized on 02nd January, 2019. Mr. I. Karthic Subramaniyan, Assistant Professor, Department of Aerospace Engineering, Periyar Maniammai Institute of Science and Technology, Thanjavur, and Mr. R. Rakesh, Assistant Professor, Department of Electronics and Communication Engineering, Periyar Maniammai Institute of Science and Technology, Thanjavur, were the resource persons. In their lecture, they briefed various kinds of automation technologies including hydraulics, pneumatics, PLC and sensors. As a part of the seminar, students visited the Centre of Excellence for Training and Research in Automation Technologies (CETAT) at PMIST, Thanjavur, and learned the real time automation process with necessary tools. 125 students participated and got benefitted.



Mr. I. Karthic Subramaniyan during the lecture



Mr. R. Rakesh during the lecture



Students CETAT, PMIST, Thanjavur



“Learning gives creativity, Creativity leads to thinking, Thinking provides knowledge, Knowledge makes you great.”
Dr.A.P.J. Abdul Kalam

To get practical knowledge in designing a product and to give an insight about the way things work, a group of 78 students from CSE, ECE, EEE and Mech, visited to Siemens Centre of Excellence in Manufacturing, National Institute of Technology, Tiruchirappalli on 29th January, 2019 accompanied by four faculty Members, Mr. T.Pasupathi, AP/ECE, Mr.J.Arockiaraj, AP/EEE, Mr.R.Shankar, AP/Mech and Mrs.Chandraprabha, AP/CSE. Dr.M.Duraiselvam, Head of the CoE, gave an overview about the Siemens Centre of Excellence in Manufacturing lab. During the visit, students visited all the 12 Laboratories at SCEIM, NIT, Tiruchirappalli.



Students at SCEIM, NIT, Trichy

A workshop on “**Embedded Systems and Internet of Things**” was jointly organized by MHRD’s IIC and R&D Section on 21st February, 2019. Mr. A. Jeevanantham, Assistant Professor/Information Technology, Kongu Engineering College, Perundurai, was the resource person. In his lecture, he gave an overview of Embedded Systems & IoT and Introduction of Raspberry Pi. Later, he demonstrated simple Arduino programs like LED control, sensor control and relay control with hands-on-session.



Mr. A. Jeevanantham during the lecture



Mr. A. Jeevanantham during the session

Guest Lecture on “**Biomedical Image Processing**” was organized on 01.02.2019. Prof. Eric A. Hoffman, Ms. Emma Stapleton and Dr. Abilash from The University of IOWA, IOWA, USA, were the resource persons. Ms. Emma Stapleton, delivered a lecture on “**Air Pollution in India**”. Her lecture was focused on the effects caused by cooking without ventilation by using wood. Using case studies, she stated that in Tamil Nadu the toxic level is low compared to other states particularly in North India.



Ms. Prof. Emma Stapleton during the lecture



Prof. Eric A. Hoffman during the lecture

Prof. Eric A. Hoffman, delivered a lecture on “**Evaluation of Pulmonary Effects of Cooking Indoors with Solid Biofuels and Poor Ventilation**”. In his lecture, he stated that smoking causes severe chronic obstructive lung diseases and other ailments. Besides, the smoke emitted by solid biofuels is equivalent to the side effects of smoking. While concluding his lecture, Dr. Hoffman briefed on the facilities available at his laboratory, a research dedicated state-of-the-art multi-spectral, multi-detector row spiral CT (MDCT) scanner and an in vivo micro CT scanner. Through a relationship with Siemens Medical, the MDCT scanner is the state-of-the-art scanner to promote novel new lung imaging.

Expert Lecture on “**Research Opportunities**” was organized on 02.02.2019 under AICTE - MARGDHARSAN scheme of NIT-T. Prof. Dr. Rominus Valsalam, Deputy Director, CDAC, Thiruvananthapuram, was the resource person. In his lecture, he described on the opportunities for students to carry out their project work at various government organizations and institutions. In addition, he briefed that solutions for problems that are not solvable can be found by working at industries. Also he insisted the students to carry out their projects on their own or through industrial support rather than purchasing from centers. Before, summarizing the lecture, he covered the applications of IoT and IIoT. On concluding his lecture, he insisted the students to publish their findings either in Journal or Conferences.



Prof. Rominus during the lecture



Student interacting with Prof. Rominus

A two day National Workshop on **Biomedical Interventions** was organized on 27th & 28th February, 2019. Dr. K. Damodaran, Senior Consultant & Interventional Cardiologist, Apollo Hospital, Chennai, inaugurated the workshop. **Dr. K. Damodaran**, in his lecture, stated coronary artery disease develops when the major blood vessels that supply blood to heart, oxygen and nutrients (coronary arteries) become damaged or diseased. Cholesterol-containing deposits (plaque) in the arteries and inflammation are usually the cause for coronary artery disease. The damage may be caused by various factors, including: Smoking, High blood pressure, High cholesterol, Diabetes or insulin resistance and sedentary lifestyle.



Dr. K. Damodaran, during invited lecture session



Dr. Kiran George during invited lecture session

Dr. S. Baskaran, Biomedical Engineer, Gentech Marketing Pvt. Ltd., New Delhi, started his lecture with the major instruments used in acquiring bio-signals from human beings. **Dr. Kiran George**, Assoc. Professor, Electronics and Instrumentation Engineering, Annamalai University, Chidambaram, delivered lecture. In his lecture he briefed about multiscale physiological model of organ system which provides an opportunity for the researcher and clinician in the field of mathematical oncology.

Dr. G. Shanthi, Scientist, Manager Preclinical, Microtherapeutics Research Labs, Chennai, delivered a lecture on synthetic biomaterials and its applications, Biocompatibility Regulatory Testing and its biological effects.



Dr. S. Baskaran during demonstration session



Dr. G. Shanthi during invited lecture session



Dr. S. Shanthi during invited lecture session



Participants receiving certificates from dignitaries

Dr. S. Shanthi, Professor & Head/ECE, Adithya Institute of Technology, Coimbatore, delivered a lecture. In her lecture, she briefed that Machine Intelligence (MI) plays various roles in scientific research. Artificial Intelligence (AI) provides promising solutions in solving complex problems in many applications, particularly in areas with huge amounts of data but very little theory. A total of 63 participants from various institutions situated at U.T of Pondicherry, Karnataka and Andhra Pradesh, Tamil Nadu, participated in the programme and got benefitted.

R&D section and ISTE Staff Chapter jointly organized a special lecture "Dos & Don'ts in drafting Proposals" on 16.03.2019. Dr. S. Krishna Kumar, Senior Technical Officer, DRDO, Avadi, Chennai, was the resource person. In his lecture, he insisted the staff members to prepare proposals according to the guidelines of the funding agency. In addition, he briefed on the smart technologies and innovations that are deployed for the surveillance. While concluding, he insisted the staff to advise the students to contribute their technical knowledge in an effective way for the betterment of our Nation.



Dr. S. Krishnakumar, interacting with staff members

Staff Participation in ICT Mode STTPs conducted by NITTTR, Kolkatta

- STTP on “**Problem Solving and Decision Making (ICT10)**” during 31/12/2018 to 04/01/2019. 21 staff members participated and got benefitted.
- STTP on “**Advanced Process Control and Instrumentation System (ICT11)**” during 07/01/2019 to 11/01/2019. 10 staff members participated and got benefitted.
- STTP on “**Development of Laboratory Instruction and Manual (ICT12)**” during 04/02/2019 to 08/02/2019. 14 staff members participated and got benefitted.
- STTP on “**Modern Manufacturing Systems (ICT13)**” during 18/02/2019 to 22/02/2019. 17 staff members participated and got benefitted.
- STTP on “**Evaluating Students Performance & Designing Question Papers (ICT14)**” during 28/02/2019 to 01/03/2019. 15 staff members participated and got benefitted.



AICTE – PMKVY-TI

Classes under PMKVY scheme for the first batch of students was inaugurated on 02nd January, 2019. Traditionally the programme was inaugurated by lighting the holy lamp by Shri. G. Raveendran, General Manager, District Industries Centre, Thanjavur. In his address, he listed the services offered by DIC under NSDC and stated that on completion of training, technical support will be provided to the trainees to become a successful entrepreneur. Under, PMKVY-TI nine courses are being conducted and 175 participants got benefitted.



Dr. R. Rajendran delivering presidential address



Dr. J. Arputha Vijaya Selvi delivering inaugural address



Shri. G. Raveendran delivering keynote address



A view of the participants