A NAAC Accredited Institution

KINGS COLLEGE OF ENGINEERING

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

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2021-22 / ODD SEMESTER

INTERNAL SEMINAR REPORT

09.12.2021

Department of EEE has organized internal seminar on "Introduction to Fuzzy Logic Control" for second, third and final year EEE students on 3.12.21.

Objective:

- To impart knowledge to students on the basics of Fuzzy Logic Control(FLC)
- To provide adequate knowledge on methodologies involved in FLC and its applications in different domains of Engineering.
- To facilitate the use of FLC in their final year projects and seminar presentations.

Beneficiaries: Total: 50 (II, III & IV Year EEE Students)
Time: 6.00 P.M to 7.00 P.M
Venue: Online (Google meet) http://meet.google.com/fme-wuqf-ysv
Resource Person (Internal): Dr.R.Arulraj, Assistant Professor/EEE

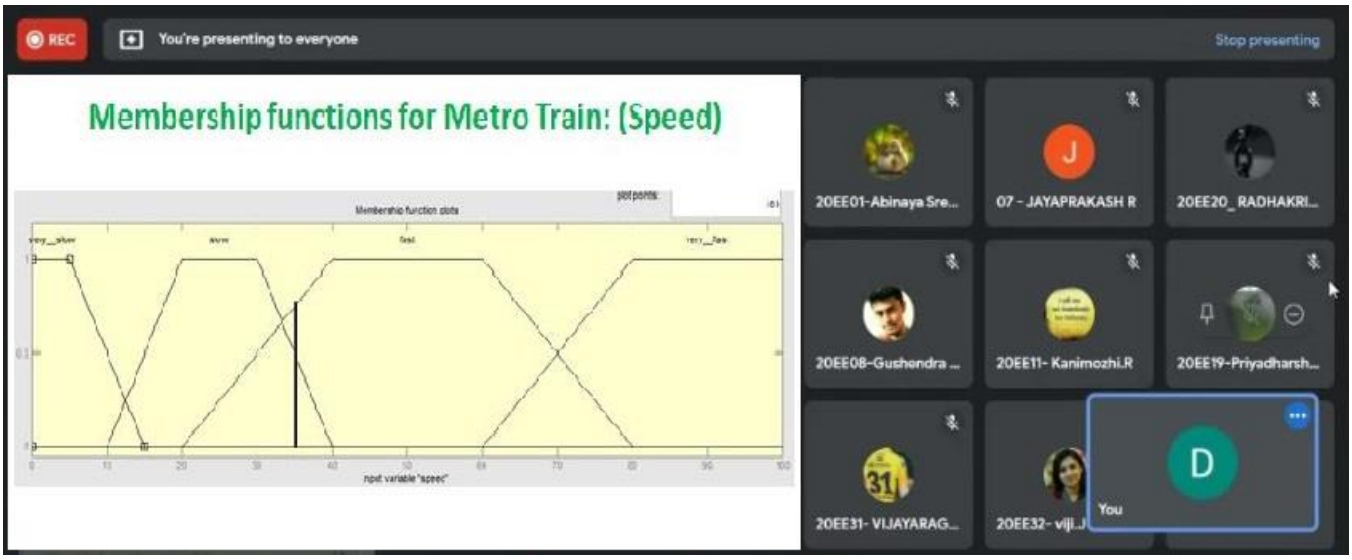
Dr.R.Arulraj, AP/EEE started his session with an introduction to Fuzzy logic and how human intelligence is required in implementation of FLC. Then, he introduced the basic concepts of Fuzzy Logic and how it can be applied to solve any problem. He demonstrated how Fuzzy Logic is a problem-solving control system methodology that lends itself to implementation in systems ranging from simple, small, embedded micro-controllers to large, networked, multi-channel PC or workstation-based data acquisition and control systems. He gave examples of different real world applications which involve FLC. He also explained how Fuzzy Logic can be implemented in hardware, software, or a combination of both and how it provides a simple way to arrive at a definite conclusion based upon vague, ambiguous, imprecise, noisy, or missing input information.

He explained FLC with the help of one practical application which demonstrates automated metro train operation. First, he pointed out the various steps involved in the design of FLC system and then he explained how to identify inputs and outputs using linguistic variables in the Fuzzification process. After the demonstration of Fuzzification process, he explained how to frame rules based on human thinking and achieve desired results using defuzzification process. Finally he showed the simulation results of automated metro train operation using FLC attained via Matlab Fuzzy logic Toolbox. At the end of the session, students interacted and asked questions about the usage of FLC in doing projects.

Outcome:

- Enhance the knowledge on FLC
- Students are able to understand the concepts and operation of FLC, their advantages over conventional techniques and their applications
- Students shall select FLC for their Project work, Paper Publication, Conference presentation and PCE activities.

Snapshots:



Dr.R.Arulraj AP/EEE delivering lecture (online mode) during Internal Seminar

Faculty In-Charge **HoD/EEE** **Principal**