MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY
Kalitheerthalkuppam, Madagadipet, Puducherry - 605 107

DEPARTMENT OF ROBOTICS AND AUTOMATION

NEWSLETTER- JULY- 2022

About the Department:

The Department was started in the year 2020, our department is one of the newest departments to our college. Robotics and Automation is the new program for Engineering, Robotics and Automation is a multi - disciplinary program, it involves electrical, electronics, mechanical, computer science and AI techniques of robotics .Robotics and Automation Engineering is one of the emerging multi - disciplinary areas transforming conventional practices in industry to digitalization which plays a crucial role in the Prime Minister's Call 'MAKE IN INDIA', 'DIGITAL INDIA' and INDUSTRY 4.0. Robotics and Automation plays a major role in manufacturing units, medical science, space, etc., with the rapidly advancing process of inclusion of robots from Industry to the Social Arena, the functional requirement of the robots and corresponding human expectations has increased tremendously. However, in order to fully comprehend the complexities of such robot design, one needs to possess an over-all idea of the field.

Vision

To be a centre of excellence in the field of Robotics and Automation by providing excellent education, training, research and inculcating human values to cater the needs of the industries and society.

Mission

- **Higher Order Thinking**: To equip the students with higher order thinking and technical skills in Robotics and Automation through effective teaching learning methodologies.
- **Competency**: To educate and train the students with state of art technologies, industry institute interaction and promote research in the field of Robotics and Automation.
- **Continuous learning**: To provide an ambience that facilitate self learning, collaborative learning and acquire multidisciplinary knowledge.
- **Entrepreneurship:** To encourage the students by nurturing creativity and innovation to launch start-ups and promote entrepreneurship.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- PEO1: **Employability:** Our Graduates shall be suitably employed with professional competency and knowledge of modern tools.

- PEO2: **Higher Education:** Our Graduates shall be capable to pursue higher studies/research in the field of engineering and management.
- PEO3: **Entrepreneurship:** Our Graduates shall be prepared for a successful career by meeting ever increasing demands required by Robotics and Automation profession and enable them to become an entrepreneur.
- PEO4: **Professional and Ethical values:** Our Graduates cultivate professional and ethical attitudes with effective communication skills, team work and multidisciplinary approach related to engineering issues.

Program outcomes (POs)

POs	DESCRIPTION
PO1	**Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member

	and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcome (PSO)

PSO1: Process Automation: Create and apply simulation tools for modern engineering and real time Automation process.

PSO2: Products Development: Design, analysis and to develop a Robotics and Automation products in health care, security, defense, space research, banking, entertainment applications.

Staff Activities

- Dr.G.Renuka Devi, Prof/RA, "**Neuro-Fuzzy Controller based Standalone PV-Battery System",** 2nd International Conference on Innovation in Energy Management and Renewable Resources(IEMRE 2022).
- Dr.G.Renuka Devi, Prof/RA has successfully participated in "**IP Awareness/Training program",** under National Intellectual Property Awareness Mission on January 18,2022 organized by Intellectual Property Office, India
- Dr.G.Renuka Devi, Prof/RA has completed and received NPTEL –AICTE certification with ELITE on **"Outcome Based Pedagogic Principles for Effective Teaching"** on 24.04.2022.
- Dr.G.Renuka Devi, Prof/R & A has completed and received NPTEL certification course on **"Mechatronics"** on 27.03.2022.

Dr.G.Renuka Devi, Prof/RA and Ms.S.Geethaprabha,AP/RA has received award of appreciation on 18.06.2022 for 100% results in EMD and S & I subjects.

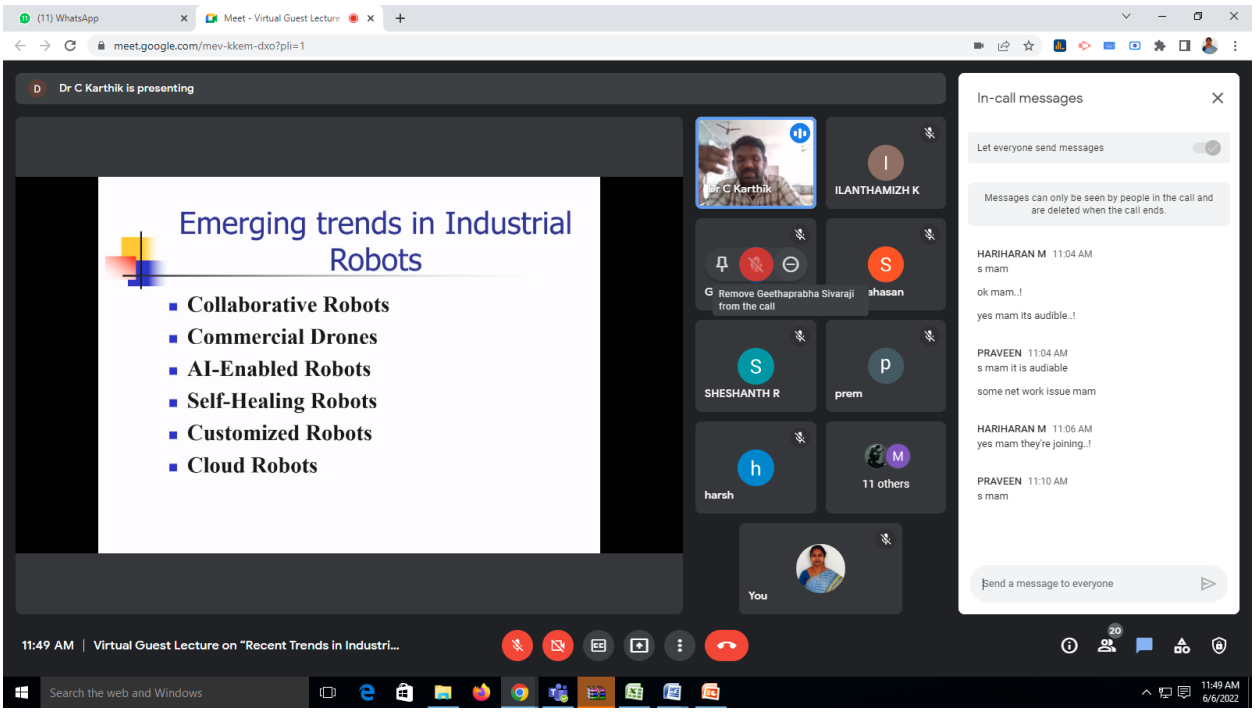
Faculty Members of MIT has participated the **"IIC regional Meet"** held on 21st July 2022 at Sathyabama Institute of Science and Technology, Chennai.

Faculty Members of RA & ECE has visited the industry "**Autobots, West Shenoy Nagar Chennai**", on 29.07.2022(FN)

Faculty Members of RA & ECE has visited SRM-Chennai **"Centre of Excellence in Automation",** on 29.07.2022(AN)

Department Activities:

Department of Robotics and Automation has organized **"Mothers Day"** for all the interested students on 18.05.2022.



Department of Robotics and Automation has organized a Virtual Guest Lecture on **"Recent Trends in Industrial Automation"** for II year Robotics and Automation students on 06-06-2022. The session was delivered by Dr. C.Karthik, Professor/HoD, Department of Robotics and Automation, Jyothi Engineering College, Thrissur, Kerala.

- Dr.G.Renuka Devi,HoD/R & A, has delivered special lecture on **"Mechatronics"** on 28.05.2022.

- Ms.S.Geethaprabha, AP/R & A has delivered special lecture on **"Machine Learning"** on 14.05.2022.

Department of Robotics and Automation has organized Industrial Visit on 01.07.2022 at **Polyhose India (Rubber) Pvt.Ltd**, Sipcot Industrial Park, Chennai.

Student Participation: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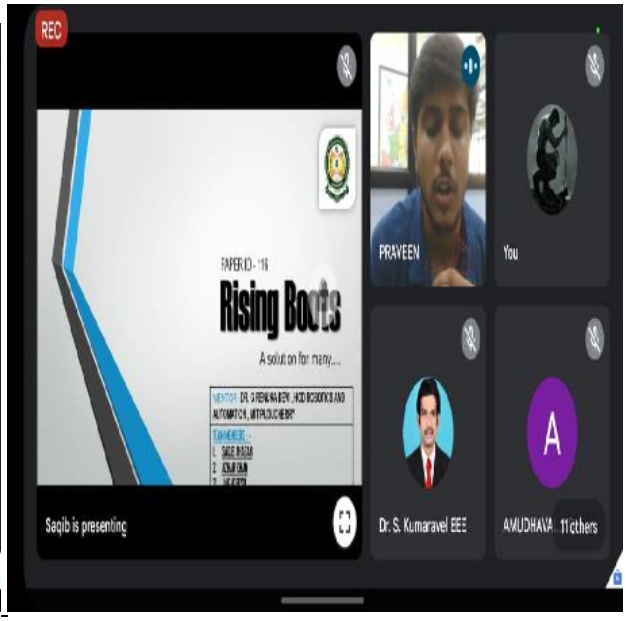
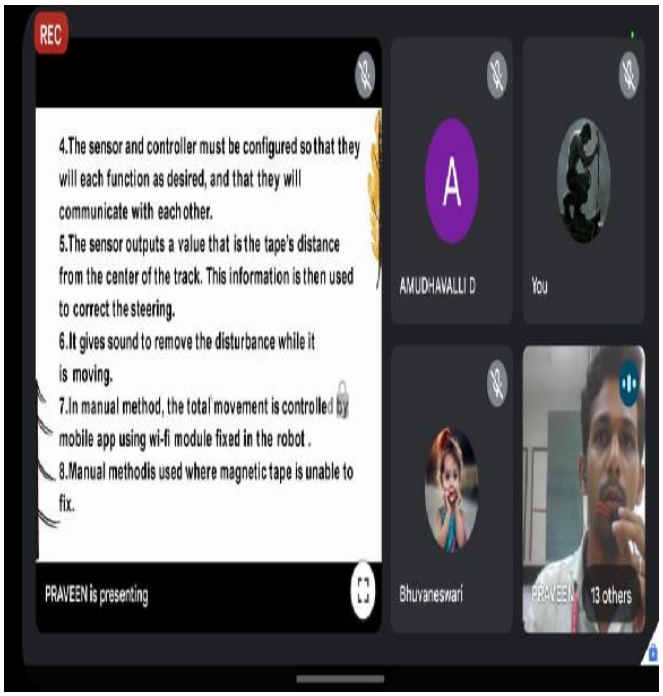
MVIT INNOVATION CLUB
PROJECT EXPO Based on IoT
Certificate of winner

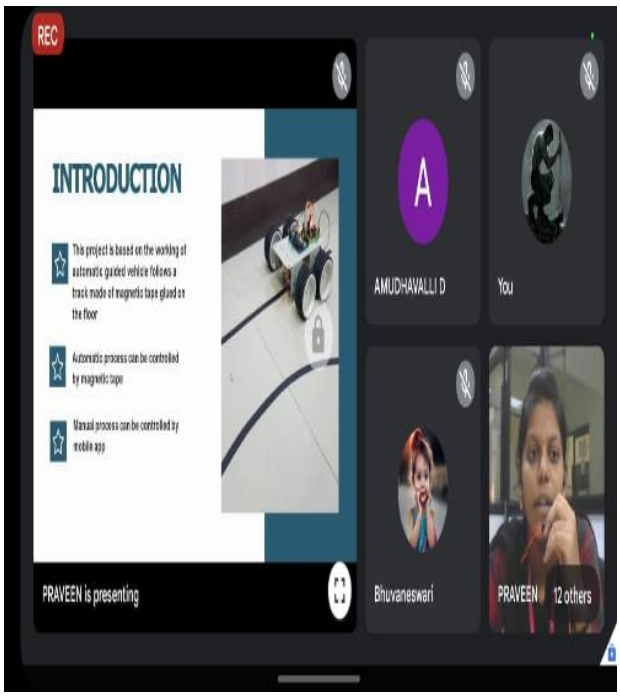
This certificate is awarded to Mr/Ms PRAVEEN.D for securing 1st place for the title MAGNETIC TAPE FOLLOWING ROBOT in the PROJECT EXPO Based on IoT conducted by MVIT Innovation Club on 5th January 2022.

Organizer Coordinator (Innovation club) Principal

D.Praveen, B.Bhuvaneshwari and N.Nithiya Sre, II year/RA has won I prize in the **project expo** held at MIT on 05.01.2022.







Department of Robotics and Automation students has **presented the papers online mode in the national conference on NCAEEE-2022**, held on 27th & 28th May 2022 at SVCE, Chennai.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

World Telecommunication and Information society Day 2022

Participation Certificate

Presented to A. JAGADESH for getting SECOND PRIZE in MEME / POSTER competition in World Telecommunication and Information society Day 2022 Organized by Department of Computer Science and Engineering on 17.05.2022

HOD/CSE PRINCIPAL

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

World Telecommunication and Information society Day 2022

Participation Certificate

Presented to A. JAGADESH for getting SECOND PRIZE in DEBATE competition in World Telecommunication and Information society Day 2022 Organized by Department of Computer Science and Engineering on 17.05.2022

HOD/CSE PRINCIPAL

A.Jagadesh, II Year RA, has bagged **second prize in MEME/POSTER and DEBATE**, held on 17.05.2022 at MIT.