

MECHATRONICS ENGINEERING

Newsletter
December 2022 - May 2023



Kumaraguru College of Technology

Vision

The vision of the college is to become a technical university of International Standards through continuous improvement.

Mission

Kumaraguru College of Technology (KCT) is committed to providing quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path to leadership.

Department of Mechatronics Engineering

Vision

To achieve excellence in academic and industrial automation research and innovative product development driven by mechatronics systems.

Mission

- Impart the right blend of knowledge and skills to students and enable them to apply it in real life situations.
- Motivate the students towards interdisciplinary research to cater to the local and global needs.
- Achieve innovation in developing industrial products with social responsibility.

PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)

The Program Educational Objectives of Mechatronics Engineering Undergraduate Program are to prepare the students:

- To develop innovative and sustainable products with multidisciplinary Engineering expertise.
- To solve complex engineering problems by applying mechanical, electrical and computer knowledge and engage in lifelong learning in their profession
- To work or pursue higher education in multicultural, multilingual and multinational environment with competent oral and written communication.
- To lead and contribute in a team entrusted with professional, social and ethical responsibilities.

PROGRAMME OUTCOMES (PO'S)

PO. No	Programme Outcomes	Mapped Skills
PO1	Engineering Knowledge	Core Technical Proficiency
PO2	Problem Analysis	Analytical & Critical Thinking
PO3	Design/ Development of Solutions	Design Thinking & Creative Problem Solving
PO4	Conduct Investigations of Complex Problems	Research & Inquiry Skills
PO5	Modern Tool Usage	Technological Proficiency
PO6	The Engineer and Society	Societal Awareness
PO7	Environment and Sustainability	Sustainability and Environmental Consciousness
PO8	Ethics	Ethical Integrity and Professional Conduct
PO9	Individual and Teamwork	Collaboration and Leadership
PO10	Communication	Communication Mastery
PO11	Project Management and Finance	Strategic and Project Management
PO12	Lifelong Learning	Adaptive Learning and Self-Development

PROGRAM SPECIFIC OUTCOMES (PSO'S)

Graduates of the Mechatronics Engineering Undergraduate Program will have the ability to:

- PSO1. Design and develop Mechatronics systems to solve the complex engineering problem by integrating electronics, mechanical and control systems.
- PSO2. Apply the engineering knowledge to conduct investigations of complex engineering problem related to instrumentation, control, automation, robotics and provide solutions.

International Conference on Sustainable Design

April 5-6, 2023

Dr. K. Akila attended the international-level conference on “Sustainable Design, Materials, and Manufacturing in Engineering (ISDMME 2023)” organized by Dr. N.G.P. Institute of Technology, Coimbatore. The conference covered cutting-edge practices in sustainable engineering, design optimization, and the application of green materials in manufacturing.

Dinamalar Education Expo in Madurai

April 8, 2023

Dr. M. Saravana Mohan represented Kumaraguru College of Technology at the Dinamalar Education Expo in Madurai. The event provided a platform for KCT to showcase its academic programs, especially in Mechatronics, and interact with prospective students and industry representatives.



Guest Lecture on Career Development & Placement Interview Preparation

April 10, 2023

Mr. R. Raffik organized a guest lecture titled "Career Development & Placement Interview Preparation" by Mr. S. Manu Maharaj, Management Executive at IIFL, Mumbai. The session offered valuable insights into the recruitment process, helping students prepare for placement interviews, and providing guidance on developing skills required for career success.



Special Lecture on Psychology & Robots

April 19, 2023

A special lecture on “Psychology & Robots” was organized for KCLAS students at the Mechatronics Department. The session included a demo and was conducted in the presence of Dr. Vijila Kennedy, Principal of KCLAS. The lecture explored the intersection of human psychology and robotic systems, discussing the implications of robots in human environments.



Guest Lecture on "5S: Industrial Engineering Tool"

April 20, 2023

Mr. K. Murugesan organized a guest lecture on "5S: Industrial Engineering Tool" by Mr. A. Paramasivan, MD of Augment 3Di, Coimbatore. The session introduced students to the 5S methodology, a crucial tool in lean manufacturing, aimed at improving productivity, workplace organization, and quality in industrial settings.

Webinar on Placement Talk Series: How to Crack Soliton

April 22, 2023

Mr. R. Raffik organized a webinar on "How to Crack Soliton" as part of the Placement Talk Series. The session was designed to help students understand the recruitment process at Soliton Technologies, providing key tips and techniques for successful placement interviews.

FDP on Robotic Process Automation

April 24 - 28, 2023

Mr. R. Raffik attended a state-level Faculty Development Program (FDP) on "Robotic Process Automation (RPA) Associate (UiPath)" organized by ICT Academy and Periyar Maniammai Institute of Science & Technology. The program offered deep insights into the implementation of RPA technologies, preparing faculty members to train students in automation and its real-world applications.

Faculty Internship at Shanthi Gears Limited

April 26, 2023

Mr. J. Sivaguru underwent a faculty internship at Shanthi Gears Limited, Coimbatore, from April 26 to June 16, 2023. This internship provided Mr. Sivaguru with hands-on experience in mechanical systems and automation, enabling him to bring valuable industry insights to the classroom.

Publications and Research

Dr. M. Saravana Mohan submitted a research paper in collaboration with P. M. Mashinini from the University of Johannesburg, focusing on control engineering applications.

Robotics Summer Camp

May 1-6, 2023

Mr. A. Ramkumar organized a “Robotics Summer Camp” at Kumaraguru College of Technology, designed to provide students with hands-on experience in robotics. The camp included practical sessions on robot building, programming, and automation systems, offering students an opportunity to enhance their technical skills in a fun, engaging environment.

Guest Lecture on "Career Development & Placement Interview Preparation"

May 10, 2023

Mr. R. Raffik organized a guest lecture on “Career Development & Placement Interview Preparation” by Mr. S. Manu Maharaj, Management Executive at IIFL, Mumbai. This session focused on strategies for effective career planning and how students can improve their chances of success in placement interviews, with insights into the skills employers look for in candidates.

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Industry-Academia Interaction with EOS Electro Optical Systems

May 11, 2023

Dr. M. Saravana Mohan, HOD/MCE, along with faculty members, met with Mr. Joe Ajay, Business Development Manager of EOS Electro Optical Systems India Pvt. Ltd. The meeting focused on exploring collaborative opportunities between the industry and academia in the fields of optics, robotics, and automation. Discussions included potential research projects and the integration of new optical systems in robotic applications.



Seminar on Accelerating Defence & Aerospace Industry in TN Defence Corridor

May 18, 2023

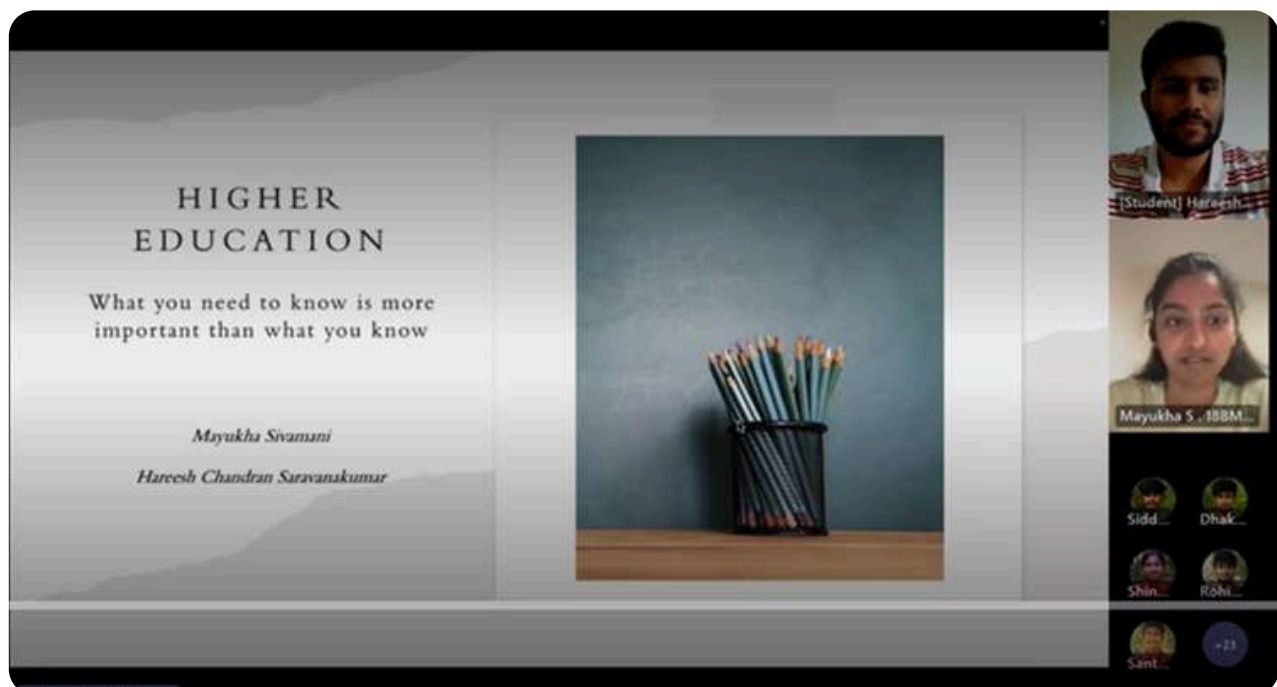
Dr. M. Saravana Mohan participated in a seminar on “Accelerating Defence & Aerospace Industry in TN Defence Corridor” held at Kumaraguru College of Technology. The event, attended by key industry leaders, including Mr. B. Krishnamoorthy from TIDCO, focused on fostering growth and collaboration in the aerospace and defence sectors in Tamil Nadu. Discussions included indigenization initiatives and the development of cutting-edge technologies for defence applications.



Guest Lecture on Higher Education - "What You Need to Know"

May 11, 2023

Dr. B. Sabitha organized a guest lecture on "Higher Education - What You Need to Know", featuring Hareesh Chandhran and Mayukha S, M.Sc. Automotive Mechatronics from the UK. The session addressed global higher education opportunities, focusing on automotive mechatronics and the various pathways available for students wishing to pursue advanced degrees abroad.



Seminar on “Capture the World with Drones & Robotics”

May 22-27, 2023

Mr. A. Ramkumar organized a week-long seminar on “Capture the World with Drones & Robotics”, providing insights into the integration of drones and robotics for various applications such as surveillance, mapping, and autonomous systems. The seminar featured practical demonstrations and interactive sessions, offering students a comprehensive understanding of these technologies.

Seminar on "Startups - Our Journey"

May 25, 2023

Mr. A. Ramkumar organized a seminar on “Startups - Our Journey”, featuring successful entrepreneurs sharing their startup experiences. The session provided valuable lessons on entrepreneurship, from initial concept development to scaling businesses, with a focus on challenges and opportunities in the startup ecosystem.



Workshop on Inclusive and Sustainable Industrial Development

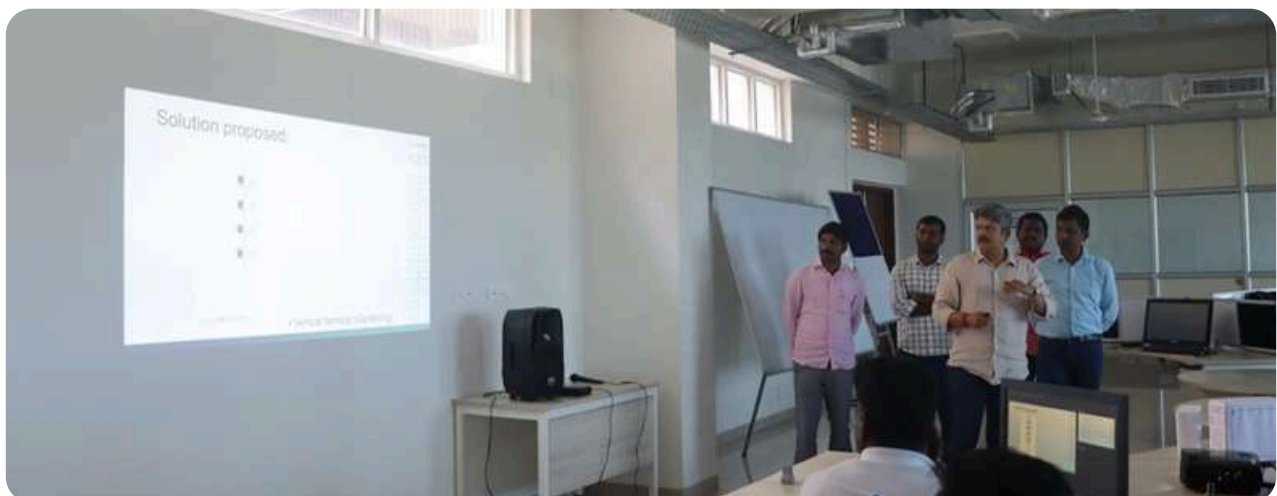
May 31, 2023

Mr. J. Sivaguru attended a national-level workshop on “Best Practices and Techniques for Inclusive and Sustainable Industrial Development in Tamil Nadu” organized by the Tamil Nadu Industrial Investment Corporation (TIIC) and the United Nations Industrial Development Organization (UNIDO). The workshop focused on sustainable practices in industrial development, emphasizing social inclusion, environmental sustainability, and economic growth.

FDP program on state level “COVIDYA - Startup Sandbox”

May 15 - 27, 2023

·Mr. K. Murugesan, AP-II & Mr. R. Saravanan, AP-II attended the FDP program on state level “COVIDYA - Startup Sandbox”, organized by Indian Institute of Information Technology, Design and Manufacturing - Kancheepuram held on 15th May 2023 to 27th May 2023



Additional Highlights

- Vijay Anand R (21BMC051) participated in a workshop on Mobile Application Development, organized by the International Society for Automation and the E&I Department of Kumaraguru College of Technology on March 20, 2023.
- Dhiran K S (20BMC012) participated in the Innovation Challenge at Coimbatore Institute of Technology, winning the CIT Trophy in Handball from April 7-8, 2023
- Pradeep S (19BMC008) continued his internship at Soliton Technologies, Coimbatore, from November 2022 to May 2023.
- Rochin Antony S (19BMC044) worked at Hydrill, Ondipudur, Coimbatore, from November 2022 to April 2023.
- Dr. B. Sabitha served as a jury member for the Safteython organized by Uyir Club and Coimbatore City Police on April 19, 2023. The event aimed to raise awareness about road safety and introduce new innovations in safety technologies.
- Mr. R. Raffik received the NPTEL Course Certification - Elite + Gold + Topper recognition in a national-level award ceremony held on April 4, 2023, by IISc Bangalore

Additional Highlights

- Ms. Kavyashree T (20BMC019) completed an online course on “Deep Learning for Visual Computing” from January 1 to April 29, 2023.
- Ms. Mahima Swetha M (20BMC025) completed an online course on “Computational Fluid Dynamics for Incompressible Flows” from January 1 to April 29, 2023.
- Mr. Sanjay C M (20BMC037) completed an online course on “Surface Engineering for Nanomaterials” from January 1 to April 29, 2023.
- Pradeep S (19BMC008) continued his internship at Soliton Technologies, Coimbatore, from November 2022 to May 2023.
- Dakshesh G (19BMC015) undertook an internship at Siruvani Yarns from January 2023 to June 2023.
- Logeshwaran R (19BMC033) continued his internship at ZOHO, Coimbatore, until May 2023.
- Mr. R. Raffik received the NPTEL Course Topper Award for his exceptional performance in an online course, awarded by IIT Madras and the Central Government on May 11, 2023.

Research Paper and Patents

- Mr. R. Raffik submitted three research papers to Scopus and WoS-indexed journals, showcasing ongoing academic contributions.
- Dr. A. Vasuki published a paper titled “Deep Remote Fusion: Development of Improved Deep CNN with Atrous Convolution-Based Remote Sensing Image Fusion” in The Imaging Science Journal.
- Dr. M. Saravana Mohan filed a design patent for “Electromechanical Crawler” under application number 202341032613 on May 9, 2023.

STUDENT AWARDS

Name of the student	Date	Event	Institution or Organization	Achievement
Hemanath A Yogalakshmi Yazhini A Vasanth S	16.12.2022 to 17.12.2022	Best Paper Award	VIT Bhopal University	1st Prize
Nandhitha R	06.08.2022 to 07.08.2022	19th Tamilnadu State Wushu Championship	Wushu Association of Tamilnadu	1st Prize
Kishora S	15.11.2022	Zonal Tournament	Aditya Institute of Technology	2nd Prize
Vijay Anand	23.12.2023	Aprix - KCT	Kumaraguru Institutions	2nd Prize
Arjun Shiv Shankar R	15.04.2023	Euphoria 2023	PSG college of Arts and Science	2nd Prize
Arjun Shiv Shankar R	09.03.2023 to 11.03.2023	Instincts 2023	SSN College of Engineering & Shiva Nadar University	2nd Prize
Arjun Shiv Shankar R	07.04.2023	Sonix - Battle of the Bands	Amrita Vishwa Vidyapeetha m, Coimbatore	1st Prize

STUDENT AWARDS

Name of the student	Date	Event	Institution or Organization	Achievement
HarishKumar A	12.02.2023 to 18.02.2023	Productivity Week Celebration	Coimbatore Productivity Council, Coimbatore	2nd Prize
HarishKumar A	28.03.2023	Econscpire'23	PSG college of Arts and Science, Coimbatore	2nd Prize
HarishKumar A	04.03.2023	Yugam 2023	Kumaraguru Institutions, Coimbatore	2nd Prize
HarishKumar A	09.02.2023	E-Week - Inter Collegiate Competition	G R Damodaran Academy of Management, Coimbatore	1st Prize
Rithish Ramamoorthy Sathya	24.02.2023 to 25.02.2023	Paper Presentation	Amrita Vishwa Vidyapeetham, Coimbatore	1st Prize
Vijay Anand	08.03.2023	Code Debugging	VSB college of engineering and Technical Campus	1st Prize

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Name of the student	Date	Event	Institution or Organization	Achievements
HarishKumar A	20.03.2023	Phoenix'23	PSG college of Arts and Science, Coimbatore	2nd Prize
Arjun Shiv Shankar R	17.02.2023 to 18.02.2023	Battle of Band Singing, Dhruva 2023	Karpagam College of Engineering, Coimbatore.	2nd Prize
Nandhitha R	30.07.2022	12th Coimbatore District Wushu Championship	YMCA Campus, Coimbatore	2nd Prize
Ragunandan M	16.04.2023	13th Coimbatore District Wushu Championship	YMCA Campus, Coimbatore	2nd Prize
Sachita R	11.05.2023 to 12.05.2023	Ideathon - Clean and Green Tech.	Kumaraguru Institutions, Coimbatore	1st Prize
Jairish R	23.12.2023	Apatrix - KCT	Kumaraguru Institutions, Coimbatore	2nd Prize
Jairish R	15.02.2023 to 18.02.2023	SAE MBAJA Overall Static Award	Natrax National Automotive Teat Track, SAE India, Pithampur	3rd Prize

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Name of the student	Date	Event	Institution or Organization	Achievements
Jairish R	15.02.2023 to 18.02.2023	SAE MBAJA Sales & Marketing Award	Natrax National Automotive Teat Track, SAE India, Pithampur	3rd Prize
Arjun Shiv Shankar R	17.02.2023 to 18.02.2023	Battle of Band Singing, Dhruva 2023	Karpagam College of Engineering, Coimbatore.	1st Prize
Yugabharathi M Jairish R	04.02.2023 to 06.02.2023	FMAE Moto Student India - Endurance	YMCA Campus, Coimbatore	2nd Prize
Yugabharathi M Jairish R	04.02.2023 to 06.02.2023	FMAE Moto Student India - Cost Evaluation	YMCA Campus, Coimbatore	1st Prize
Yugabharathi M Jairish R	04.02.2023 to 06.02.2023	FMAE Moto Student India - Design Evaluation	Kumaraguru Institutions, Coimbatore	2nd Prize
Yugabharathi M	04.02.2023 to 06.02.2023	FMAE Moto Student India - Overall	Kumaraguru Institutions, Coimbatore	1st Prize
Dhiran K S	17.02.2023 to 18.02.2023	Handball Tournament, 12th Centies Xhampionship 2023	Kongu Engineering College, Perundurai.	2nd Prize

STUDENT AWARDS

Name of the student	Date	Event	Institution or Organization	Achievements
Ajay Abishek B	23.02.2023 to 24.02.2023	Badminton Tournament, 12th Centies Championship 2023	SNS College of Technology, Coimbatore.	1st Prize
J. Shiny Shalom	09.12.2022 to 11.12.2022	Athletics - Long Jump, Anna University Sports Board	Kumaraguru Institutions, Anna University, Chennai.	1st Prize
J. Shiny Shalom	09.12.2022 to 11.12.2022	Athletics - 100 Metres, Anna University Sports Board	Kumaraguru Institutions, Anna University, Chennai.	1st Prize
J. Shiny Shalom	09.12.2022 to 11.12.2022	Athletics - 4 X 100 M Relay, Anna University Sports Board	Kumaraguru Institutions, Anna University, Chennai.	2nd Prize
J. Shiny Shalom	01.03.2023	Athletics - 100 Metres, 12th Centies	Bannari Amman Institute of Technology, Sathyamangalam.	4th Price
J. Shiny Shalom	01.03.2023	Athletics - 4 X 100 Metres Relay, 12th Centies Championship 2023	Bannari Amman Institute of Technology, Sathyamangalam.	3rd Price

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Name of the student	Date	Event	Institution or Organization	Achievements
J. Shiny Shalom	01.03.2023	Athletics, Long Jump 12th Centies Championship 2023	Bannari Amman Institute of Technology, Sathyamangalam	3rd Price
J. Shiny Shalom	05.03.2023 to 06.03.2023	Basketball Tournament, 12th Centies Championship 2023	Nehru Institute of Technology, Coimbatore	1st Prize
J. Shiny Shalom	25.02.2023 to 03.03.2023	4th CIT COVAI TIES 2023	Coimbatore Institute of Technology, Coimbatore	1st Prize
Harisankar S	09.12.2022 to 11.12.2022	Athletics, Anna University Zonal Tournament	Anna University, Chennai	2nd Prize

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