

# MECHATRONICS ENGINEERING

Newsletter  
November 2022 - April 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.



# Guest Lecture on UHV 1 Training for Mentors

November 5, 2022

Mr. J. Sivaguru delivered a guest lecture as part of the UHV-1 Training Program for Mentors, conducted by KCT-School of Foundational Sciences. The session provided faculty with in-depth knowledge about Universal Human Values (UHV) systems, focusing on applications in electrical systems and safety protocols. This program aimed at preparing faculty mentors to guide students through advanced electrical engineering concepts.



# Guest Lecture on "Life of Choice"

November 8, 2022

Mr. J. Sivaguru conducted a seminar titled "Life of Choice", organized by the YRC at Kumaraguru College of Technology. The session explored how the choices individuals make can shape their personal and professional lives, emphasizing responsibility and proactive decision-making. It encouraged students to reflect on their own life decisions and take ownership of their future paths.

**KUMARAGURU**  
Institutions

**LIFE OF CHOICE**

To ensure the basic knowledge of kindness and helping tendency to all in an equal way in society.

**SPEAKER :**

**Mr. Sivaguru**

Assistant professor  
Mechatronics department  
Kumaraguru College of Technology

**NOV 08 | 3:40pm to 4:40pm**

**Contact**  
HARIHARASUDHAN: +91 70109 01951  
SHANTHINI: +91 88254 11747

**VENUE**  
1ST YEAR BLOCK  
GANDHI STUDY CENTRE

The poster features a circular portrait of Mr. J. Sivaguru, an assistant professor in the Mechatronics department at Kumaraguru College of Technology. The background is a deep blue with abstract, glowing white and yellow circular patterns. In the top right corner, there is a circular logo for the Youth Red Cross (YRC) at Kumaraguru Institutions, which includes a red cross symbol. The text is primarily in white and yellow, providing a high-contrast, professional look.



# Guest Lecture on "Opportunities for Startups: An Entrepreneurial Perspective"

November 10, 2022

Mr. R. Saravanan, Mr. K. Murugesan, and Mr. E. Anandh organized a guest lecture by Mr. T. Tamil Inian, Manager at Indian Overseas Bank, Vijayawada. The lecture discussed the prospects and challenges of launching a startup in India, offering insights into the process of securing funding, navigating market risks, and developing a sustainable business model. Students were encouraged to consider entrepreneurship as a viable career option.



# **Industry Interaction with Schmalz India Pvt. Ltd.**

November 17, 2022

Dr. M. Saravana Mohan and Mr. R. Raffik met with Mr. N. Sakthivel, Regional Assistant Manager at Schmalz India Pvt. Ltd. The interaction focused on robotics research, specifically vacuum-based automation systems. Schmalz is a global leader in automation and handling technology, and the meeting explored potential collaboration in applying robotics for industrial applications, offering opportunities for research projects and student internships.



# Seminar on Higher Study Opportunities in the UK

November 20, 2022

Mr. J. Sivaguru and Mr. K. Murugesan organized a seminar on “Higher Study Opportunities at UK” in collaboration with Ms. Sandhya N, Assistant Branch Manager of SI-UK, Coimbatore. The session provided detailed information on studying in the UK, focusing on application processes, visa requirements, and scholarship opportunities for Mechatronics students. The seminar aimed to guide students interested in pursuing higher education abroad and explore career prospects in the UK.





## **Visit to BRD5, Coimbatore for IAF Indigenization Initiatives**

November 22, 2022

Dr. M. Saravana Mohan and the KCT-KCIRI team visited BRD5, Coimbatore, to engage with IAF officials about joint initiatives for indigenization. The meeting centered around developing solutions for indigenizing military technologies, with a focus on internships for students and skill development programs. The partnership also explored conducting outreach programs with industry delegates and academic professionals to foster collaboration.

## **Interaction on EV Compliance for Exports**

November 22, 2022

Dr. M. Saravana Mohan participated in a meeting organized by SSEM KCT Institution Chapter with Mr. Rajendra K. Bandal, Vice President Mobility India at TUV Rheinland, Germany. The meeting focused on compliance requirements for the type approval of electric vehicles (EVs) for export markets. Discussions centered around the regulatory standards for EVs and the importance of ensuring compliance for international markets, which is crucial for the future of the EV industry in India.

# KCT Faculty Awards at K-Honors 2022

November 23, 2022

Mr. R. Raffik and Dr. B. Sabitha were honored at K-Honors 2022, an event recognizing faculty achievements at Kumaraguru College of Technology. Mr. R. Raffik received an award for his exceptional contributions to extra-curricular and co-curricular activities, while Dr. B. Sabitha was acknowledged with the “Engal Aasan” award for her outstanding role in mentoring and guiding students. These awards highlighted their dedication to both academic excellence and student development.



## Additional Highlights

- Ms. R. Nandhitha (19BMC026) achieved a Bronze Medal at the 31st Senior National Wushu Championship 2022 held from October 28 to November 2, 2022, showcasing her dedication and skill in martial arts.
- Ms. Shinny Shalom (21BMC041) earned a Trophy at the Anna University Zone-XI Basketball Women's Championship on November 14, 2022.
- Mr. M. Abhishek (19BMC048) presented his paper on "Comparative Empirical Analysis of Biomimetic Curvy Knee Linked Bipedal Robot" at the Manipal Academy of Higher Education (MAHE) from November 24–26, 2022.
- Several students, including Cibi Aravinthan (19BMC027), Muhsin Al Ramadan (19BMC036), Surya R (19BMC016), continued internships at renowned organizations such as ZOHO, Hirotec India Pvt. Ltd., and IIT Hyderabad.





## **Publications and Patent**

- Dr. M. Saravana Mohan submitted a paper on “Investigation on Joint Dynamic Properties of Nanoclay-Based Redundant SCARA Robot” for publication in a Scopus-indexed journal.
- Mr. R. Raffik published a paper titled “Performance Analysis of Modified Shuttle Mechanism in Polymerized Bag Weaving Circular Loom” in AIP Conference Proceedings.
- Mr. R. Raffik filed a design patent for a “Surveillance Mobile Robot for Hazardous Situations” under application number 202241065131, contributing to the department’s innovative research in robotics.

# **National FDP on Automation and Smart Manufacturing**

April 25 - 29, 2022

Faculty members Mr. T. Suresh and Mr. R. Raffik attended a five-day National Faculty Development Program on "Automation and Smart Manufacturing." The program, organized by IIT Delhi, Automation Industry Association, Anna University Chennai, and Janatics India Pvt. Ltd., provided an in-depth understanding of the latest advancements in industrial automation and smart manufacturing systems, including their practical applications in modern industries.

# **FDP on Hyperspectral Remote Sensing by ISRO**

April 25 - 29, 2022

Dr. A. Vasuki attended a five-day National FDP on "Hyperspectral Remote Sensing," conducted by the National Remote Sensing Centre, ISRO, Hyderabad. The program covered cutting-edge technologies in remote sensing, equipping participants with advanced skills to analyze hyperspectral data for diverse applications in environmental and resource management.

# 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.

## 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

