



MECHATRONICS  
ENGINEERING  
ASSOCIATION



# MECHATRONICS ENGINEERING

NEWSLETTER  
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# **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 excel 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.

# Department Activities

- Dr. S. A. Pasupathy was granted a patent for the "Mineral Board Composition and Preparation Method Thereof." The patent was officially issued on 15th November 2023, recognizing the innovative method for preparing a mineral-based board composition. This technology offers enhanced materials for construction and other industrial applications, demonstrating Dr. Pasupathy's contributions to advancing material sciences.
- Sahan, A. M., Kathiravan, S., Lokesh, M., & Raffik, R. (2023, June). Role of Cobots over Industrial Robots in Industry 5.0: A Review. In 2023 2nd International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA) (pp. 1-5). IEEE
- R. A. Ramkumar was granted a patent for the "Apparatus and Method of Fluid Absorption and Wet Back Tester for Absorbent Pads." The patent was officially issued on 3rd December 2023. This invention is designed to test the fluid absorption and wet-back characteristics of absorbent pads, a key component in products like diapers, sanitary pads, and medical absorbents, contributing to improvements in product testing and quality control in the hygiene industry
- 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.
- Dr. K. Akila contributed her expertise as a member of the Technical Review Committee for the National Conference held at KCT, December 28-29, 2023. Her insights were pivotal in evaluating research papers and ensuring the quality of presentations.

- Dr. B. Sabitha and Dr. K. Akila played significant roles in the ISSS National Conference at KCT, Chinnavedampatti, held from December 14 to 16, 2023. They led discussions that highlighted advancements in engineering and technology
- Dr. B. Sabitha was invited to serve as a judge for the Project Expo held on February 17, 2024, at KCT, Chinnavedampatti. The event showcased innovative projects by students, encouraging creativity and hands-on learning in engineering disciplines.
- On March 6, 2024, Dr. B. Sabitha from the Mechatronics Engineering Department participated as a conference chair at the National Conference held at SNS College of Technology, Saravanampatti. This event served as a platform for academic discussions and innovative ideas, fostering collaboration among researchers and practitioners.
- On March 16, 2024, Dr. B. Sabitha chaired a session at the Yugam Conference organized by KCT, Chinnavedampatti. The session emphasized emerging trends and advancements in engineering, inspiring students and faculty alike.
- Dr. K. Akila also served as a conference chair for the Yugam event on March 16, 2024, at KCT, Chinnavedampatti. The discussions focused on bridging gaps between theoretical knowledge and industry applications.
- Paper Title: "Latest Technologies in Stock Checking Robots"  
Details: Published in the Third International Conference on Advancements in Automation, Robotics, & Sensing. The paper discusses advancements in robotics for stock-checking applications, integrating automation and AI for enhanced efficiency, March 5, 2024

Paper Title: "Technical Review on Sustainable Low-Cost Laser-Based Weeder for Autonomous and Non-Autonomous Agricultural Offroad Vehicles"

Details: Published in the Third International Conference on Advancements in Automation, Robotics, & Sensing.

This research focuses on low-cost laser technologies for sustainable agriculture, emphasizing autonomous solutions.

Paper Title: "A Review on Medical Drone for Tribal Locations"

Details: Published in the Third International Conference on Advancements in Automation, Robotics, & Sensing, March 6, 2024. This review explores the potential of medical drones in addressing healthcare challenges in remote tribal regions.

Patent : Patent Title: Personal AI-Based Assistant Robot

Inventors:

1. Pon Bharathi A
2. Dr. S. Veluchamy
3. Dr. N. A. Natraj
4. T. Vignesh
5. Dr. Pankaj Pathak
6. Dr. K. Akila
7. Dr. K. M. Senthilkumar
8. Ms. N. Pooranam

This patent involves the design and development of an AI-powered assistant robot tailored for personal applications. The invention is expected to integrate advanced AI functionalities to assist in daily activities, improving convenience and efficiency.

# **Fourth International Conference on Innovation in IoT, Robotics and Automation**

March 16, 2024

On March 16, 2024, Subash C represented our department at the Fourth International Conference on Innovation in IoT, Robotics, and Automation. This international event brought together experts from around the globe to discuss the latest innovations and breakthroughs in IoT and robotics. Subash participated in discussions that focused on the future of automation technologies and their application across various industries.

## **TN Skills - Robot Integration**

March 14-16, 2024

From March 14 to 16, 2024, Pragadeeswaran T and Sriram B attended the TN Skills event on Robot Integration held at PSG College of Technology. This state-level competition offered hands-on experience in integrating robots into real-world applications, helping participants improve their problem-solving and engineering skills. It was a great opportunity for the attendees to network with professionals and learn the latest trends in robotics and automation.

On March 4, 2024, a group of students from our department participated in the SAE - eBaja competition at BV Raju University in Secunderabad. The event provided a platform for students to showcase their skills in automotive engineering, with a focus on designing and building off-road vehicles. This national-level competition allowed participants to engage with industry experts and enhance their practical knowledge.

A Review on Medical Drone for Tribal Locations.

Authors: Gokul Kumarasamy, Magudapathi Periyasamy, Balasubramanian S. Guide: Mr. P. Magudapathy. Conference: AIP Conference Proceedings (Vol. 3035, No. 1), March 2024. Affiliation: Mechatronics Engineering, Kumaraguru College of Technology, Coimbatore, India.

Title: Latest Technologies in Stock Checking Robot. Authors: Saravanamani Chennimalai Subramani, Pradeep Manohar, Balasubramanian S., Rasheed R. Guide: Mr. R. Raffik. Conference: AIP Conference Proceedings (Vol. 3035, No. 1), March 2024. Affiliation: Mechatronics Engineering, Kumaraguru College of Technology, Coimbatore, India.

Title: Technical Review on Sustainable Low-Cost Laser-Based Weeder for Autonomous and Non-Autonomous Agriculture Offroad Vehicles. Authors: Nithin Jarralde Jegal, Magudapathi Periyasamy, Balasubramanian S. Guide: Mr. P. Magudapathy. Conference: AIP Conference Proceedings, March 2024. Affiliation: Mechatronics Engineering, Kumaraguru College of Technology, Coimbatore, India



# One-Day Skill Enhancement Program on Embedded Systems

March 25, 2024

On March 25, 2024, the Mechatronics Engineering department hosted a one-day skill enhancement program on embedded systems using Arm Cortex M4. This workshop was designed to provide students with hands-on experience and practical knowledge in embedded systems design and development



# **Student Internships**

## **Internship at Cameron Manufacturing India Pvt. Ltd.**

November 7, 2023 - January 9, 2024

We are pleased to announce that Mohmad Sahan A S, a student from our department (Roll No. 20BMC026), has secured an internship at Cameron Manufacturing India Pvt. Ltd. from November 7, 2023, to January 9, 2024. During this internship, Sahan will gain valuable hands-on experience in manufacturing processes. We congratulate him on this achievement and wish him continued success during this internship.

## **Internship at Craftsman Automation Limited**

September 28, 2023 - October 16, 2023

We are pleased to announce that Nitish R S, a student from our department (Roll No. 20BMC031), has completed an internship at Craftsman Automation Limited from September 28, 2023, to October 16, 2023. During this internship, Nitish gained valuable industry experience in automation and manufacturing processes. We congratulate him on this achievement and look forward to his continued growth in the field.

## **Internship at Bommasandra Industrial Area**

July 8, 2023 - July 31, 2023

We are happy to announce that Kavyashree T, a student from our department (Roll No. 20BMC019), completed an internship at Bommasanda Industrial Area from July 8, 2023, to July 31, 2023. During her internship, Kavyashree gained practical experience in industrial processes and was awarded a stipend of ₹10,000. We congratulate her on this achievement and wish her continued success in her career.

## **Internship at Titan Engineering & Automation Ltd.**

September 18, 2023 - September 23, 2023

We are pleased to announce that Pragadeeswaran T, a student from our department (Roll No. 21BMC031), completed an internship at Titan Engineering & Automation Ltd. from September 18, 2023, to September 23, 2023. During this short-term internship, Pragadeeswaran gained hands-on experience in engineering and automation, contributing to his academic and professional growth. We congratulate him on this achievement and wish him continued success in his career.

# **Internship at Alstom Transport India Limited**

October 7, 2023 - October 8, 2023

We are pleased to announce that Rohith Bala S, a student from our department (Roll No. 21BMC035), completed an internship at Alstom Transport India Limited from October 7, 2023, to October 8, 2023. During this short-term internship, Rohith gained valuable insights into the transportation and engineering sectors. We congratulate him on this accomplishment and look forward to his continued success in the field.

