



DEPARTMENT OF MECHATRONICS ENGINEERING

News letter October 2024 – April 2025



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

TABLE OF CONTENTS

5	Workshop on Industrial Communication Protocol
6	Entrepreneur Talk With Mr. Surya
7	Alumni Meet 2025
8	Industry Academic Conclave
10	LinkedIn Mastery
11	ROBO Soccer
12	Mastering IOT
13	ROBO Clash
14	Investure Ceremony 2025
15	Workshops Organized by Students
16	Workshops Organized by Faculty
17	Awards Received by Faculty
18	Book Chapters Publication
19	Patent Submitted by faculty
20	Wroxai – Our Journey of Innovation

The Department Association of Mechatronics successfully organized a two-day workshop on Industrial Communication Protocols on 15th and 16th October 2024 at the PLC Lab, E&I Department, Kumaraguru College of Technology. The workshop aimed to provide students with practical knowledge of industrial communication standards such as Profibus, Profinet, and MODBUS. Guided by resource persons Dr. T. Rajesh and Dr. V. Gunaseela Manikandan from Innovate Engineering Products, participants gained hands-on experience in configuring and integrating these protocols. The session concluded with a mini-project, enabling students to simulate real-time industrial environments and apply their learning effectively.



ENTREPRENEURSHIP TALK WITH MR. SURYA PRAKKASH – INSIGHTS FOR FUTURE INNOVATORS.

On 27th December 2024, the Department of Mechatronics successfully organized a guest lecture on entrepreneurship and startup fundamentals. The session was delivered by Mr. Surya Prakash, founder of Seanavix and a proud alumnus of the department. He shared valuable insights into the startup ecosystem, covering topics like startup basics, incubation support, funding strategies, investment readiness, and networking techniques. The event provided a practical understanding of how startups grow, secure funding, and build strong financial foundations, leaving aspiring student entrepreneurs inspired and informed.



Alumni Meet 2025 – Reconnecting Roots, Inspiring Futures

The Department Association of Mechatronics proudly organized the Alumni Meet 2025 on 4th January 2025, bringing together former students for a day of reflection, networking, and inspiration. The event featured keynote speeches, a panel discussion on career and industry trends, and an interactive Q&A session, creating a valuable exchange between alumni and current students. The meet fostered professional connections, provided mentorship opportunities, and renewed a sense of belonging. It was a memorable occasion celebrating the achievements of our alumni while motivating the next generation of engineers.



INDUSTRY– ACADEMIA CONCLAVE – BRIDGING INNOVATION AND INSIGHT

On 21 February 2025, as part of the Industry-Academia Conclave hosted by Kumaraguru College of Technology, the Department of Mechatronics organized a dynamic panel discussion featuring five distinguished industry professionals. Centered on the theme "Advances in Mobility, Automation, and Aviation," the session provided deep insights into cutting-edge technologies, current industry needs, and future opportunities in these rapidly evolving sectors. The discussion promoted meaningful interaction between students and industry experts, encouraging collaboration, knowledge sharing, and career readiness. It marked an important step toward strengthening industry-academic partnerships.



“ HONORING
DISTINGUISHED GUESTS FOR THEIR
VALUABLE
CONTRIBUTIONS TO THE CONCLAVE .”



LINKEDIN MASTERY – PEER LEARNING FOR CAREER GROWTH

A priceless peer learning session titled “LinkedIn Mastery: Build, Connect & Grow” was organized by the Department Association of Mechatronics on February 14, 2025, specifically for second-year students. The goal of the session was to provide students with useful information on utilizing LinkedIn for networking, career exploration, and personal branding. Topics Discussed included connecting with industry professionals, optimizing one's profile, job search tactics, and skill endorsements. Students were able to improve their online presence, create professional networks, and take confident steps toward career readiness thanks to this interactive session.



ROBO SOCCER – CLASH OF BOTS AT YUGAM 2025

The Department of Mechatronics gladly hosted the thrilling robo soccer match on March 7, 2025, as part of Yugam 2025. Teams demonstrated their tactical gameplay and technical prowess in an action-packed arena consisting of powerful 8-kilogram bots. The audience cheered enthusiastically as the bots engaged in a precise, quick, and inventive battle. The event was one of Yugam's most crowd-drawing highlights and featured an exciting demonstration of technical skill, teamwork, and creative design. Robo Soccer 2025 was a brilliant illustration of the department's dedication to experiential learning and student-driven creativity.



EDGE TO CLOUD – MASTERING IOT IN 48 HOURS @ YUGAM 2025

The Department Association of Mechatronics organized a two-day hands-on workshop titled "Edge to Cloud – Mastering IOT in 48 Hours" on March 4 and 5, 2025, as part of Yugam 2025. Mr. Vimala Adhitya, director of Krish Tec, oversaw the workshop and gave advanced insights on IoT, edge computing, and cloud integration. In addition to working with IOT protocols and creating real-world applications, more than fifty participants gained practical experience connecting edge devices to cloud platforms. With team-based mini projects showcasing creative IOT solutions, the event came to a close. Through this workshop, students gained practical exposure to one of the most impactful technologies of our time, as well as future-ready skills.



The Mechatronics Department hosted **Robo Clash 2024** on March 26, 2024, featuring three thrilling competitions—Robot Sumo, Line Follower, and Maze Solver—with a prize pool of ₹15,000. The event saw vibrant participation and showcased remarkable student innovation in robotics.

Mr. Saravana Mani, a proud alumnus and current professional at Bosch Electronics, graced the occasion as Chief Guest, inspiring participants with valuable industry insights. The event concluded on an energetic note, reflecting the department's strong technical culture and passion for robotics.



INVESTITURE CEREMONY 2025 – CELEBRATING NEW LEADERSHIP

The Department Association of Mechanical Engineering held its Investiture Ceremony at Sir C. V. Raman Hall on Tuesday, January 21, 2025, to induct the newly elected office bearers. Chief Guest and emcee **Mr. Kartik Soundhararajan**, Managing Partner at ADNA Automation, delivered an inspiring address on innovation, leadership, and the future of mechanical engineering. The event featured the unveiling of the vision and mission, the swearing-in of office bearers, and a group photograph, igniting enthusiasm and responsibility among students for the year ahead.



WORKSHOPS ORGANIZED BY STUDENTS

S/NO	DATES	EVENT TITLE	NO.OF. DAYS	FACULTY COORDINATOR	RESOURCE PERSON
1	3/25/2024	Enhancement program on embedded system using ARM cortex M4	8	Dr. K. AKILA	
2	3/25/2024	Enhancement program on embedded system using ARM cortex M4	1	Mr. R. Saravanan	
3	8/21/2024	Kinematics and Dynamics of Fluid flow	1	Mr. J. Sivaguru	
4	1/29/2025	3 Days Hands on Training On STM EDGE AIOT	2	Dr. K. AKILA	
5	1/29/2025	3 Days Hands on Training On STM EDGE AIOT	3	Mr. R. Saravanan	
6	1/29/2025	3 Days Hands on Training On STM EDGE AIOT	3	Mr. K. Murugesan	
7	2/3/2025	3 Days Hands on Training on PCB Building using ORCAD	3	Dr.B.Sabitha	

WORKSHOPS ORGANIZED BY FACULTY

S/NO	DATES	DATES	NO.OF. DAYS	FACULTY COORDINATOR	RESOURCE PERSON
1	8/27/24 to 8/31/24	Fusion - Autodesk	5	Mr. J. Sivaguru	
2	1/27/25	Workshop	1	MR. A. Ramkumar	
3	7/29/24 to 2/8/24	Edge course on 3D printing	2	Mr.K.Murugesan	
4	21/02/25	Industry, Academia & Research Conclave 2025	1		
5	04/03/25 and 05/03/25	IEEE International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA 2025)	2		
6	02/03/25 to 02/05/25	Hands On Training On PCB Building	2	Dr. B. Sabitha	
7	01/29/25 to 01/31/25	3 Days Hands On Training On STM Edge Aiot	2	Dr. K. Akila	
8	3/27/25	1C1C : Microcontroller And Embedded Systems	1	Mr. R. Saravanan	

WORKSHOPS ORGANIZED BY FACULTY

S/NO	DATES	DATES	NO.OF. DAYS	FACULTY COORDINATOR	RESOURCE PERSON
9	01/21/25	Mechatronics Department Association Inauguration	1	Mr. R. Raffik	
10	3/27/25 to 3/28/25	1C1C : Hydraulics & Pneumatics	2	Mr. R. Raffik	
11	3/26/25	Roboclash – Line Follower, Tug of Robo War, Robo Sumo	1	Mr. R. Raffik	
12	1/27/25	Empowering Students To Transform Ideas Into Impactful Research Paper	1	Mr. A . Ramkumar	
13	23/6/25 to 30/6/25	UHV	7	Mr. J. Sivaguru	

AWARDS RECEIVED BY FACULTY

Date	Department	Faculty Name	Award_Receiving_Date	Award_Title	Agency_Offering_Award	Agency Type
10/28/2024	Mechatronics Engineering	Mr. R. RAFFIK	9/27/2024	Tech Integration Excellence award	KCT	Private
10/26/2024	Mechatronics Engineering	Mr. K. MURUGESAN	9/27/2024	Impactful Educator Award	KCT	Private

BOOK CHAPTER PUBLICATIONS

S/NO	DATES	FACULTY_NAME	BOOK_TITLE	CHAPTER TITLE
1	June-24	Dr. K. Akila	Recent Advances in Mechanical Engineering, Volume 2 Select Proceedings of ICMech-REC 23	Experimental Analysis on FDM–3D Printing Process Parameters Optimization to Enhance Tensile Strength with PLA Material
2	June-25	Dr. K. Akila	Design of Brain-Computer Interface System to Develop Humanoid Robot	Design of Brain-Computer Interface System to Develop Humanoid Robot
3	June-25	Dr. K. Akila	Design of Brain-Computer Interface System to Develop Humanoid Robot	<i>Integrating Neurocomputing with Artificial Intelligence</i>

PATENT SUBMITTED BY FACULTY

DATE	APPLICANT NAME	TITLE	DESIGN STATUS
10/19/2024	Mr. R. Raffik	ROBOTICS SYSTEM FOR THE DETECTION OF LEAD ELEMENT ABSORPTION IN AGRICULTURAL SOIL THROUGH INTERNET O	Registered
10/19/2024	Mr. A. Ramkumar	APPARATUS AND METHOD OF FLUID ABSORPTION AND WET BACK TESTER FOR ABSORBENT PADS	Issued certificate
5/23/2025	Dr. K. AKILA	INTELLIGENT BATTERY MANAGEMENT SYSTEM USING MACHINE LEARNING FOR PREDICTIVE MAINTENANCE AND PERFORMANCE OPTIMIZATION IN ELECTRIC VEHICLES	Registered

STAREUP INTERVIEW



STAREUP INTERVIEW

Wroxai – Our Journey of Innovation

By Kailash Saravanan, Founder of Wroxai

Our journey began in 2019 at Kumaraguru College of Technology, where I pursued Mechatronics Engineering with big dreams but little idea of how far they would take me. The turning point came during the COVID-19 pandemic, when my friends and I developed the **ADTB Robot**, designed to monitor patients and assist doctors. The recognition it received revealed the true potential of student innovation. Though our team eventually split, three of us — myself as Founder, Shankar Raj as Co-Founder, and Prem Kumar as CEO — chose to carry the vision forward. In our second year, we built the **S-Vision Robot**, which pushed our technical limits. By the third year, we dared to take on bigger projects with an **Autonomous Travel Robot**, which the President of Bosch described as a “billion-dollar idea.” That moment made us realize we weren’t just creating projects; we were shaping the future. Over the years, our work earned accolades such as the **Make in India Awards**, **CII Industrial Innovation Award**, and the **TIE Global Pitching Award**, among many others. Through it all, the mentorship of Dr. Saravana Mohan and our faculty stood as our backbone. Today, Wroxai is proof that with resilience, teamwork, and vision, student dreams can grow into innovations that impact the world.