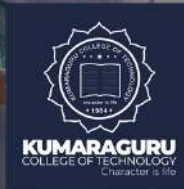


# MECHATRONICS ENGINEERING

Newsletter  
June 2024 - November 2024



MECHATRONICS  
ENGINEERING  
ASSOCIATION



Edition #1  
da.mce@kct.ac.in



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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.

# 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.



# 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:

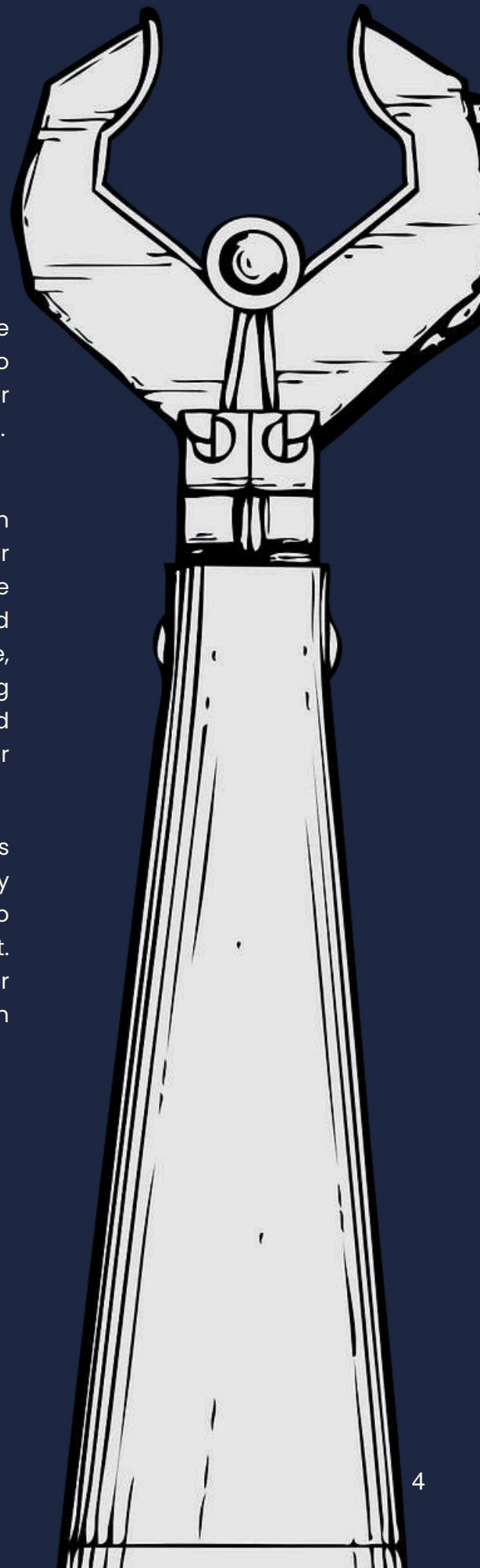
- PSO1. Design and develop Mechatronics systems to solve the complex engineering problem by integrating electronics, mechanical and control systems.
- PSO2. Apply the engineering knowledge to conduct investigations of complex engineering problem related to instrumentation, control, automation, robotics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

# NOTE TO READERS

We are delighted to promulgate the Newsletter of the Department of Mechatronics Engineering. It is our privilege to share this newsletter with all because you are one of our impetuous factors and the one who extends constant support.

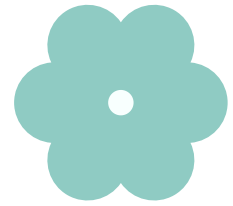
Within few weeks after declaring lockdown, we have put n place our curriculum and have continued to adapt it to our student's needs and capabilities. We have abide by all the orders and procedures necessary for the efficient and effective operation of the college. From a staff's perspective, we are establishing a sustainable professional learning community to incessantly look for improvements and innovative teaching strategies to support students reach their full potential.

This magazine covers the events, webinars and conferences organized and participated by the students and faculty members. We are sure this will inspire many of our students to reach greater heights in professional development. congratulate the entire team for bringing out the newsletter successfully which will be a great tool of communication among the students.

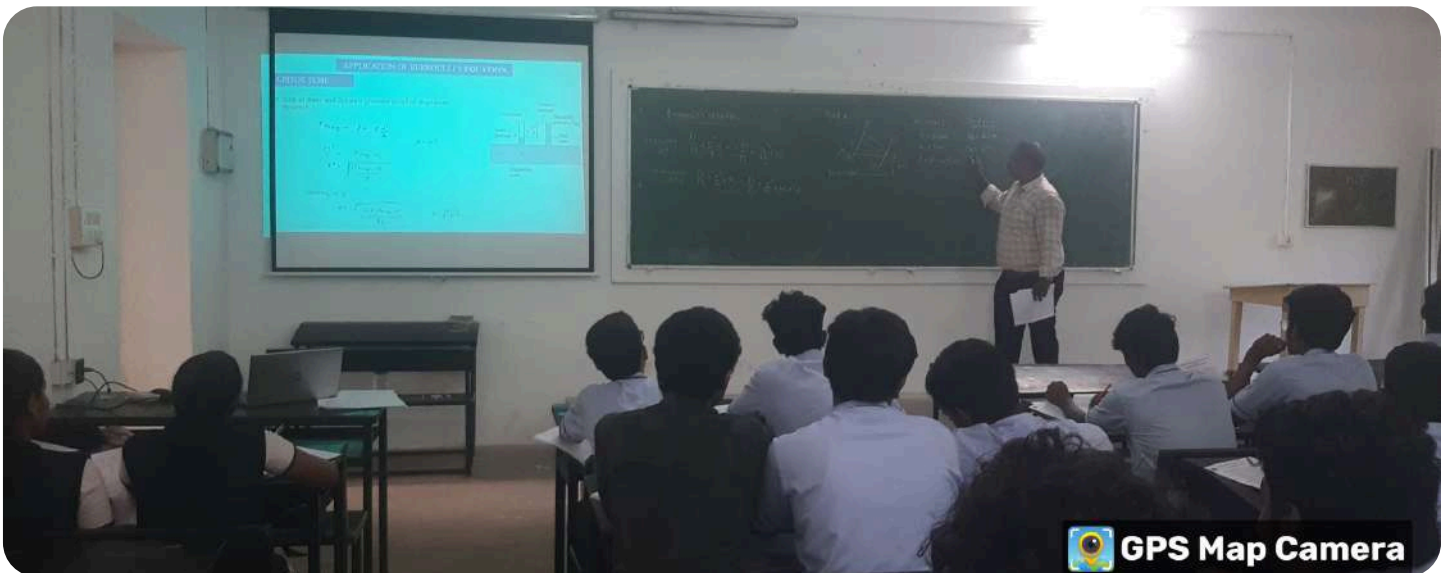




# DEPARTMENT ACTIVITIES



## Guest Lecture: Kinematics and Dynamics of Fluid Flow



On September 2, 2024, the Mechatronics department hosted a guest lecture by Dr. Dinesh, Assistant Professor at Bannari Amman Institute of Technology. The event was coordinated by Mr. J. Sivaguru and focused on the intricate concepts of Kinematics and Dynamics of Fluid Flow.

Dr. Dinesh explored fluid behavior, emphasizing key principles such as Bernoulli's theorem and the Navier-Stokes equations. He connected theoretical concepts to real-world applications, ranging from aircraft design to hydraulic systems, providing students with valuable insights into fluid mechanics. The lecture was interactive, with students actively participating in discussions, making it a highly educational experience.

# Teacher's Day Celebration

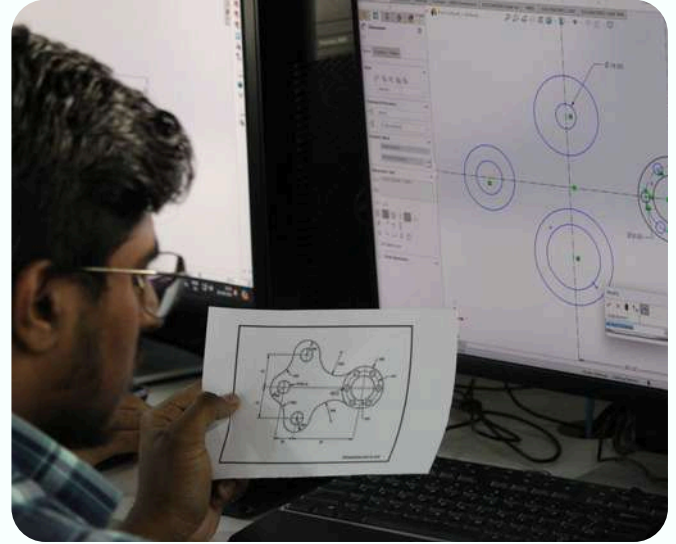


The Department Association of Mechatronics celebrated Teacher's Day on 5th September 2024 to honor our dedicated faculty. The event included fun activities and speeches from students, expressing their gratitude for the support and guidance of their teachers.

Faculty members were presented with tokens of appreciation as a gesture of gratitude. The celebration strengthened the bond between students and teachers, recognizing the important role they play in shaping our futures.

We thank all our teachers for their continuous dedication and inspiration.

# Design Challenge



On July 18, 2024, the Department Association of Mechatronics successfully hosted the Design Challenge, an event aimed at enhancing participants' CAD skills through real-world design tasks. Competitors utilized industry-standard software, such as Fusion 360 and SolidWorks, to tackle precision-driven challenges. This competition provided an excellent platform for students to apply their theoretical knowledge, foster creativity, and develop innovative design solutions.

Top performers were recognized for their exceptional skills, receiving awards that will support their academic and professional growth. The Design Challenge was a resounding success, showcasing the impressive talent and creativity of our students in the field of CAD design. It not only enriched their learning experience but also opened doors to new opportunities in engineering design.

# Mock Aptitude Test



On July 19, 2024, the Mechatronics Department Association conducted its first-ever Mock Aptitude Test, exclusively for third-year students. Our department was the only one to organize such a test, aiming to enhance students' aptitude skills. The test comprised 10 multiple-choice questions (MCQs), focusing on logical reasoning, problem-solving, and quantitative analysis.

This initiative provided students with an opportunity to assess their strengths, gain a better understanding of their aptitude, and acquire valuable insights to prepare for future competitive exams and job opportunities. The event was a great success, empowering students to sharpen their skills and prepare for their professional careers.



# Collaborative activity:

## ISS International Conference Participation

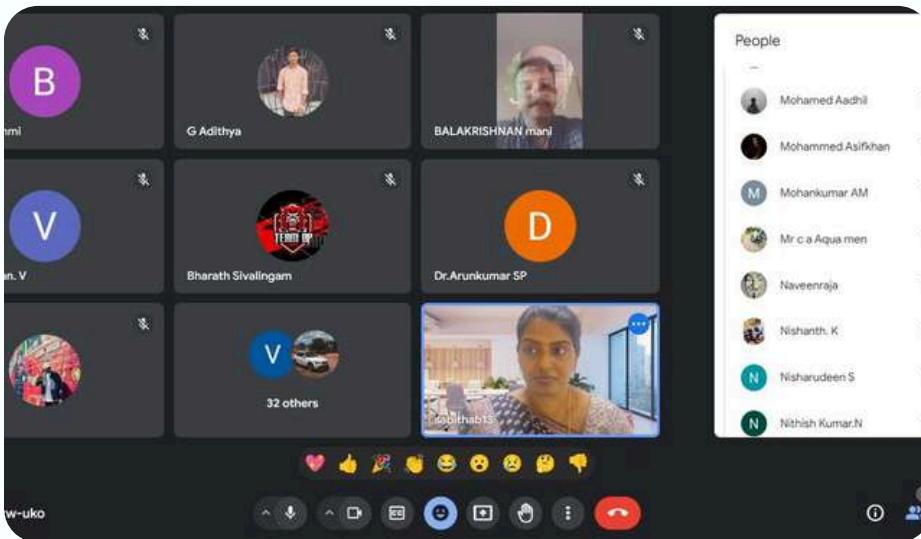


On July 9, 2024, Dr. B. Sabitha represented the Mechatronics Department at the ISS International Conference on Micro, Nano, and Smart Systems held at CMTI, Bangalore. The conference showcased advancements in micro and nano technologies and smart systems, facilitating knowledge exchange among researchers and industry experts.

Dr. B. Sabitha engaged with leading professionals, discussing innovative approaches and potential collaborations for future research. Her participation not only enhanced the department's visibility but also served as an inspiration for both students and faculty, enriching our academic environment.

# Collaborative activity:

## Guest Lecture: Sensors and Their Applications



On August 31, 2024, Mechatronics Department hosted a guest lecture organized by Dr. Sabitha, featuring a speaker from the Nehru Institute of Engineering and Technology. The lecture, titled "Sensors and Their Applications," covered various types of sensors, their principles of operation, and real-world applications in industries such as robotics and IoT.

Students actively participated, discussing the practical implications of sensor technologies and exploring future trends. This informative session enriched their understanding and sparked interest in innovative applications for their projects.

# Collaborative activity:

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.



**Sri Darshan V (Roll No: 23BMC052)** actively participated in multiple hackathons and idea competitions. On 11.09.2024, he joined the Ideathon – IEEE & Antennas and Propagation Society, KCT, where he won the 2nd Prize.

Earlier, on 12.07.2024 to 13.07.2024, he took part in the EcoEquify Hackathon, IBM Skills Build and IMIB conducted at B.N.M. Institute of Technology, where he was a Finalist.

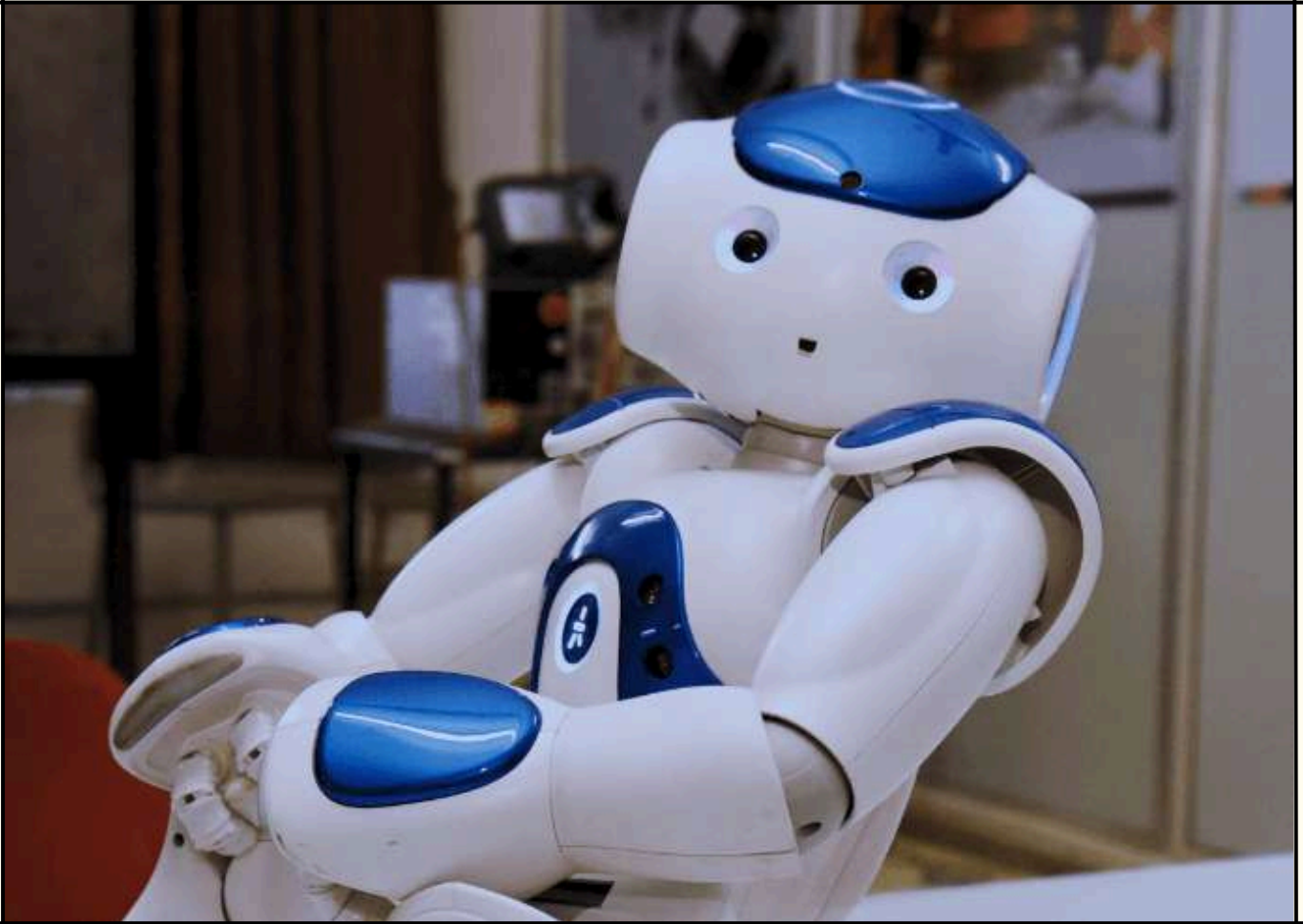
Later, on 11.09.2024, he again participated in the Ideathon – IEEE & Antennas and Propagation Society, KCT, and secured the 2nd Prize.

**Navin Raghav G S (Roll No: 23BMC038)** has also showcased his talent in various competitions. On 04.10.2024, he took part in Insight X, Elements 2K24 at Sri Ramakrishna Engineering College, Coimbatore, and won the 1st Prize. He later competed in Project Horizon, Kanam'25 held on 08.02.2025 to 09.02.2025 at Dr. NGP College of Technology, Coimbatore, where he earned the 3rd Prize.

**Suryakumar K (Roll No: 23BMC057)** participated in the Formula Kart Design Challenge conducted from 19.10.2024 to 23.10.2024 by the Fraternity of Mechanical and Automotive Engineers, KART Motorsports, Coimbatore, and secured the 2nd Prize.

**Harishankar S (Roll No: 22BMC012)** excelled in athletics at multiple events. On 05.11.2024, he took part in the Athletics, Anna University Zonal Tournament and secured the 2nd Prize.





STUDENTS

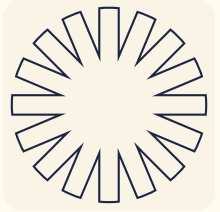
# ACHIEVEMENTS AND PARTICIPATIONS

If you want to be happy, set a goal that commands your thoughts, liberates your energy and inspires your hopes.”

— Andrew Carnegie

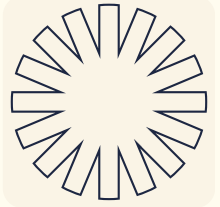


# CO-CURRICULAR



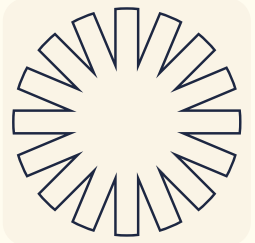
S.no	Name	Event	Date
1.	Vasanth S 22BMC059	TECHNOXIAN WRC -Bots Combat	24.08.2024
		Student Partner (ISP) program! LetsUpgrade's Student Ambassador Program	01.08.2024
2.	Sanjay S 22BMC040	DD ROBOCON 24	13.07.2024
3.	Sandhya S 22BMC039	TECHNOXIAN WRC -Bots Combat	24.08.2024
4.	Deepakraj C 22BMC005	TECHNOXIAN WRC -ROBO Hockey	24.08.2024
5.	Kavineshwaran V P 23BMC025	TECHNOXIAN WRC	28.08.2024
6.	Sreejhaa B 22BMC309	TECHNOXIAN WRC -Bots Combat Infosys Springboard Ideathon 2024	24.08.2024
		Infosys springboard ideathon 2024	17.07.2024
7.	Krishi Ram R 23BMC028	TECHNOXIAN WRC	23.08.2024
8.	Gopinath Pandian N 23BMC016	TECHNOXIAN WRC	24.08.2024
9.	HARINI S 22BMC011	KART DESIGN CHALLENGE	19.08.2024
10.	Thasnim Rihana S 22BMC055	TECHNOXIAN WRC -ROBO Hockey	24.08.2024
11.	Jagan N 22BMC014	TECHNOXIAN WRC -Bots Combat	24.08.2024
12.	Vishali S 22BMC062	TECHNOXIAN WRC -ROBO Hockey	24.08.2024
13.	Praveen Kumar B	Project or Design compettion	18.09.2024

# CO-CURRICULAR



S.no	Name	Event	Date
14.	Parthibanraj P 23BMC070	Aerathon	22.06.2024
15.	Jothiprakasam B L 22BMC018	Kart racing championship	19.08.2024
16.	Balraj T 21BMC201	TECHNOXIAN WRC	24.08.2024
17.	Jayavelu R 22BMC017	DD ROBOCON 24	13.07.2024
18.	Navin Raghav G S 23BMC038	Project Presentation 2.0 Techcon by IEEE KCT	11.09.2024
19.	Jairish R 21BMC016	Monaco Energy Boat Challenge 2024	01.07.2024
20.	Yugabharathi M 21BMC055	Monaco Energy Boat Challenge 2024	01.07.2024
21.	Harisankar S 22BMC012	96" Tamilnadu State Senior Athletic Championships	08.06.2024
22.	Sachita R 22BMC038	TECHNOXIAN WRC -ROBO Hockey	24.08.2024
23.	Ajayaditya L 23BMC005	Project or Design Competition	25.07.2024
24.	Sachin R 23BMC046	TECHNOXIAN WRC	26.08.2024
25.	Daeswa MS 23BMC011	KRC(KART RACING CHAMPIONSHIP)	22.08.2024
26.	Rhith Bala S 21BMC035	Techventure	18.08.2024
27.	Arjun Shiv Shankar 21BMC008	NIT Festember ( Tarangini Eastern Battle of bands)	29.09.2024
28.	Selvaeshwar M 22BMC043	Kavitha Yogalaya and fitness Centre	26.08.2024
		Varahi's Mystic Yoga	25.08.2024

# CO-CURRICULAR

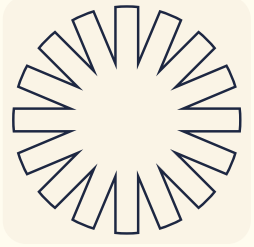


## Jairish and Yuga bharathi Shine at the Monaco Energy Boat Challenge





# CO-CURRICULAR



At the prestigious 11th edition of the Monaco Energy Boat Challenge, held from July 2 to 5, 2024, two of our final-year Mechatronics students, Jairish and Yuga Bharathi, made their mark on the global stage as part of Team Seasakthi. Competing for the third consecutive year, the team garnered an impressive four accolades:

- 1.Design Prize
- 2.Innovation Prize
- 3.Townhall Cup (second consecutive year)
- 4.Communication Prize (third consecutive year)

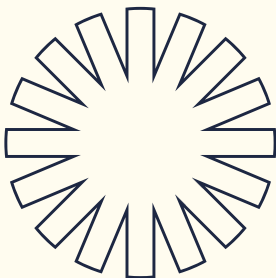
Yuga Bharathi led the team as Team Captain, showcasing exceptional leadership, while Jairish took on the crucial role of Pilot, guiding their energy-efficient boat to success. Their dedication and skills were instrumental in achieving these awards, bringing pride to both the department and the college.

# CO-CURRICULAR

## Student Internship at National Institute of Ocean Technology (31/8/2024)



We are proud to announce that two of our department's bright students, Pragadeeshwaran (final year) and Praveen (pre-final year), have secured prestigious internships at the National Institute of Ocean Technology (NIOT), Chennai. This incredible opportunity will allow them to gain practical experience and explore advanced technologies in the field of ocean research and engineering. We are confident this will help them grow in their careers and bring new insights to our department.



# EXTRA CURRICULAR



## Third Year Students Shine at Senior Tamil Nadu Wushu State Championship



On June 22 and 23, 2024, our second-year students—Obuli, Sri Adithya, Rajagopal, and Ragunandan—made us proud by winning multiple awards at the Senior Tamil Nadu Wushu State Championship, held at Sri Dharmachand Jain School in Tindivanam. Their outstanding performances are a testament to their dedication and skill, bringing honor to our institution and inspiring others to excel in both academics and sports.

# EXTRA CURRICULAR



## Second-Year Student Excels at AGKF Asian Gojuryu Karate Championship





# EXTRA CURRICULAR



Mr. Nandhakumar V M 23BMC035 , II Year Mechatronics Engineering student won the bronze medal in World Goju-Ryu Karate at 7th WGKF Championship 4-8, 2024, Austria .

The IMGKA Coimbatore team was congratulated by Smt. Nirmala Sitharaman, Finance Minister at Coimbatore Airport when our team members arrived from Austria, after completion of the 7th WGKF Championship.



# ALUMNI CORNER

Success is not final, failure is not fatal:  
it is the courage to continue that  
counts.

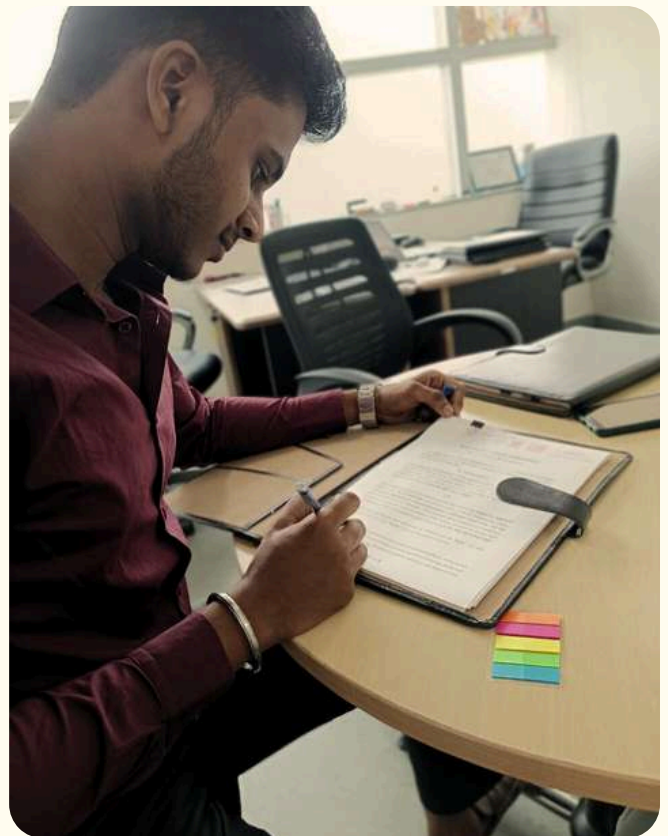
# WELCOME TO STARTUP INTERVIEW



## Surya's Journey: From College Projects to Underwater Innovation (BATCH 2019-2023)

Surya Prakash's journey in Mechatronics at Kumaraguru College of Technology started with a passion for innovation. After winning ₹30,000 at the Smart India Hackathon for their clinical AI robot, Surya formed a diverse team with members from various departments: Sree Ezhil V. R., Jothikrishna K., Nishaanth S., and Paramasivam R.

A turning point came when their team was selected for incubation at ITIC, IIT Hyderabad. During this phase, an investor offered them seed funding of ₹10-lakhs, marking a significant milestone in their journey. However, it wasn't without challenges. Harsh feedback during the incubation period forced the team to reconsider and refine their approach, pushing them to improve their underwater surveillance robot.





# STARTUP INTERVIEW



The team faced 4 to 5 major setbacks, including technical failures, but with strong support from their college, particularly Dr. M. Saravana Mohan, they successfully developed a robot capable of diving 100 meters, addressing critical issues in defense and oil leak detection.

After recognizing the global potential of their product, the team launched a startup. Today, their underwater robot is used by the defense sector, transforming a college project into a real-world solution.

Surya's journey is a testament to resilience, teamwork, and the ability to adapt and innovate under pressure.





# Student engagement in **CLUBS AND FORUMS**

S.No	Name	Club	Position
1	Harishkumar A 21BMC014	Qubate of Kumaraguru	Secretary
		IEEE KCT Student Branch	Control Systems Society Secretary
2	Uthith Naraayanan G 21BMC049	Garage Team ReNew	Member
3	Siddharth 21BMC211	Animal Welfare Forum	Member
4	Bhairav Shakthi U E 22BMC004	Robotics and Automation Club	ROS Team Member
5	Deepakraj C 22BMC005	Iqube	Robotics - Level 2 Member
6	Dharshan V 22BMC007	Pixel'D	Executive Member
		Robotics and Automation Club	ROS Team Lead
7	Dhinakar 22BMC008	Robotics and Automation Club	ROS Team Member
8	Jagan N 22BMC014	Band Agratha	Keyboardist
9	Jothiprakasam BL 22BMC018	Garage E-Blitz	Member
10	Nithin P 22BMC029	Robotics and Automation Club	Technical Team Lead



# Student engagement in CLUBS AND FORUMS

S.No	Name	Club	Position
11	Paramasivan T 22BMC031	Robotics and Automation Club	Programming Team Lead
12	Praveen Kumar B 22BMC032	NCC	Sergeant Vice President
		Robotics and Automation Club	Mechanical Team Member
		Team KRONUS	
13	Sanjay S 22BMC040	iQube	Robotics Domain Lead
		Qbotix	ROS Domain Lead
		Robotics and Automation Club	Embedded Domain Member
14	Thaliravan V S 22BMC054	Team KRONUS	Design and Fabrication Team Member
15	Thilagan P 22BMC056	Pixel'D	Vice President
		Robotics and Automation Club	ROS Team Lead
16	Vasanth S 22BMC059	Department Association of Mechatronics Engineering	Treasurer
		Blue Cross (Mountain Range Force)	Managing Member
		DSK Food Products	Administrative Manager
17	Vasanthkumar N 22BMC060	Kumaraguru Cricket Team	Vice Captain
18	Abinanth N B 23BMC002	Kumaraguru Cricket Team	Player
19	Aiswarya M 23BMC004	Aeromodelling Club of Kumaraguru	Secretary
20	Barath Nirvis V 23BMC010	Kumaraguru Cricket Team	Player



# Student engagement in **CLUBS AND FORUMS**

S.No	Name	Club	Position
21	Daeswa MS 23BMC011	Garage Zeall Racing	Steering Team Lead
22	Gopinath Pandian N 23BMC016	Aeromodelling Club of Kumaraguru	Joint Secretary
		Robotics and Automation Club	ROS Team Member
23	Kavineshwaran V P 23BMC025	Robotics and Automation Club	ROS Team Member
24	Muralidharan D 23BMC033	Aeromodelling Club of Kumaraguru	Visual Design Team Lead
25	Praveen Kumar R 23BMC041	Nigal	Script Writer Cinematographer
26	Sibikarthikeyan R 23BMC051	iQube	Robotics - Level I Member
		LEED	Member
27	Srinath S 23BMC054	Garage E-Blitz	Member
28	Suryakumar K 23BMC057	Garage Zeall Racing	Steering Analyst



# Mahatma Gandhi Merit Scholarship Awardees



We are delighted to share that 38 students from our Mechatronics department have been awarded the prestigious Mahatma Gandhi Merit Scholarship for their exceptional academic achievements. This scholarship, which comes with a cash prize of Rs. 10,000, recognizes their dedication, hard work, and excellence in academics.

2nd Year: 12 students have demonstrated outstanding performance and secured this honor.

3rd & 4th Year: 13 students from the senior years have also earned this recognition for their consistent academic success.

We are incredibly proud of these students for setting a high standard of excellence in our department and wish them continued success in their academic journeys!





# MG awardees



S.No	2nd Year	3rd Year	4th Year
1.	Aakash babu naventran 23BMC001	Balamurali R 22BMC003	Sanjay MS 21BMC205
2.	Abinanth N B 23BMC002	Bhairav Shakthi U E 22BMC004	Aagasha maria W 21BMC001
3.	Ajayaditya L 23BMC005	Dharshan V 22BMC007	Abinеш P 21BMC002
4.	Jayesh S 23BMC020	Harini S 22BMC011	Anusha D K 21BMC007
5.	Krishiram R 23BMC028	Jagan N 22BMC014	Aswath Easwar L 21BMC011
6.	Paarthasaarathi V 23BMC039	Jayavarthani A 22BMC016	Kavibala K 21BMC021
7.	Poonen Paul 23BMC040	Kousika M 22BMC022	Mageshwaran K 21BMC026
8.	Praveen Kumar R 23BMC041	Meenapriya V S 22BMC025	Manoj Kumar V 21BMC027
9.	Sachin R 23BMC046	Paramasivan T 22BMC031	Pragadeeswaran T 21BMC031
10.	Sibikarthikeyan R 23BMC051	Praveen Kumar B 22BMC032	Sanjeev K B 21BMC039
11.	Yadhavika S 23BMC068	Vanishree J 23BMC058	Sriram B 21BMC043
12.	Parthibanraj P 23BMC071	Vasanthkumar N 22BMC060	Ramsubash R 21BMC210
13.	-	Vishali S 22BMC062	Sri Ram Nathan S 21BMC212

# DEPARTMENT ASSOCIATION

## MEMBERS



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FACULTY  
CO-ORDINATOR



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PRESIDENT



**Thilagan P**  
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**Vasanth S**  
TREASURER



**Koushika M**  
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**SobithRaja R**  
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**Mythili KK**  
MEDIA



**Jagan N**  
COMMUNICATION  
COORDINATOR



**Aiswarya M**  
EXECUTIVE



**Gopinath Pandian N**  
EXECUTIVE



**Juvairiya Begam M**  
EXECUTIVE



**Muralidharan D**  
EXECUTIVE



**Navin Raghav G S**  
EXECUTIVE



**Sanjay Karthikeyan**  
EXECUTIVE

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