DEPARTMENT OF MECHANICAL ENGINEERING

NEWS LETTER & MAGAZINE

FEBRUARY -2026

Workshop Event -1 :

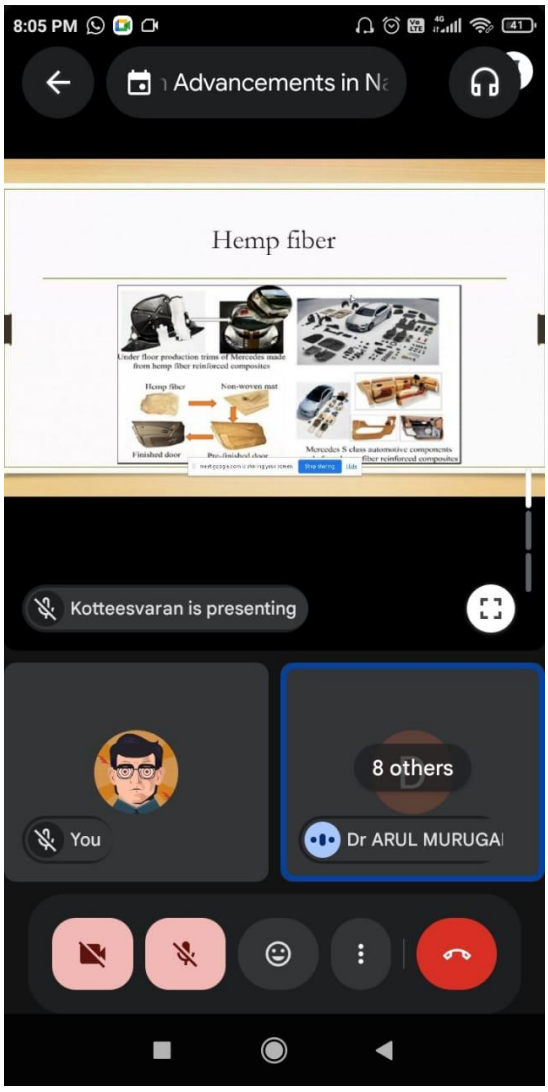
The Department of Mechanical Engineering organizes A Workshop event on CO_2 Laser cutting and Engraving operations with Hands on Training – an Innovative approach on 28.01.2026. The workshop focused on emerging technologies, modern manufacturing methods, and interdisciplinary innovations shaping the future of mechanical engineering. The event provided a valuable platform for participants to enhance their technical knowledge and gain insights

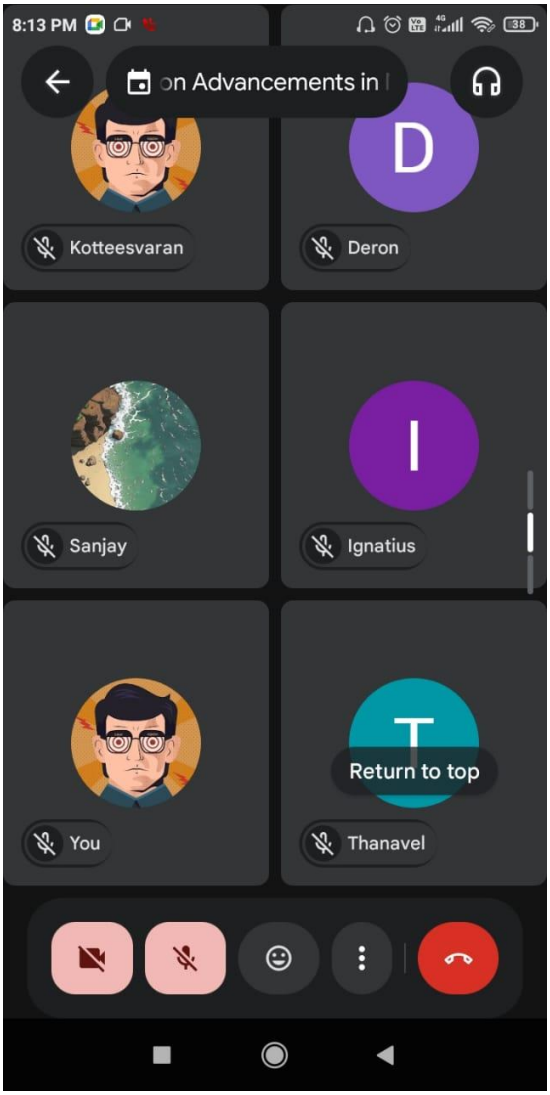
Event Photos

Workshop Event -2 :

The Department of Mechanical Engineering organizes A Workshop event on Advancements in natural fibres in polymer composites – An innovative approach in online on 09.02.2026. This workshop focuses on the recent advancements in natural fiber–reinforced polymer composites and their innovative engineering applications. It highlights sustainable materials, improved mechanical performance, and eco-friendly alternatives to synthetic composites. The session also discusses processing techniques, challenges, and future research opportunities in natural fiber composite technology.

EVENT PHOTO'S





IEE RAS Event -1 : AI-Based Robotics & Automation for Sustainable Future

This program focuses on the role of Artificial Intelligence in advancing robotics and automation technologies. It highlights how AI-driven systems can improve efficiency, productivity, and sustainability in industries. The session discusses smart manufacturing, intelligent machines, and automation trends. Participants gain insights into real-world applications of AI in robotics. The program encourages students to explore innovative solutions for a sustainable technological future

IEE RAS Event -2 : IEEE Student Success Talk – Journey of Innovation and Achievements

This session shares the inspiring journey of a successful student professional in the engineering field. It highlights the importance of innovation, perseverance, and continuous learning. The speaker discusses opportunities available through IEEE activities and scholarships. Students gain guidance on career development, research, and technical achievements. The program motivates young engineers to pursue excellence and innovation.

EVENT PHOTO'S

IEE RAS Event -3 : Robotic Surgery: Algorithms Powering Innovation

This program explores the advanced technologies used in robotic-assisted surgical systems. It explains how algorithms and control systems improve precision and efficiency in medical procedures. The session highlights the integration of robotics, AI, and biomedical engineering. Participants learn about real-world applications of robotics in healthcare. The talk encourages students to explore interdisciplinary research in medical robotics.

IEE RAS Event -4 : Wings of Innovation: Future of Drones

This session focuses on the emerging role of drones in modern technology and industry. It discusses drone design, automation, and autonomous flight systems. The speaker shares insights into drone applications such as surveillance, agriculture, delivery, and disaster management. Participants learn about the latest innovations and career opportunities in drone technology. The program inspires students to develop innovative solutions in unmanned aerial systems.

Recent Innovations in Mechanical Engineering

R.TAMILINIYA

II Year Mechanical Engineering

Drone Technology:

Drone technology, also known as Unmanned Aerial Vehicle (UAV) technology, has emerged as one of the most rapidly growing innovations in modern engineering. Drones are aircraft that operate without a human pilot on board and are controlled either remotely or through autonomous systems using advanced sensors, GPS, and onboard computers. Initially developed for military applications, drones are now widely used in several civilian sectors such as agriculture, surveillance, disaster management, environmental monitoring, and logistics. In agriculture, drones help farmers monitor crop health, assess soil conditions, and optimize irrigation using aerial imaging and data analysis. In disaster management, drones can quickly survey affected areas, locate victims, and deliver emergency supplies, thereby reducing response time and risk to human rescuers. Additionally, industries use drones for infrastructure

inspection, including bridges, pipelines, power lines, and construction sites, improving safety and efficiency. The integration of artificial intelligence, computer vision, and machine learning has further enhanced drone capabilities, enabling autonomous navigation, obstacle avoidance, and real-time data processing. With continuous advancements in battery technology, lightweight materials, and communication systems, drones are becoming more efficient, reliable, and cost-effective. As a result, drone technology is transforming many industries and creating new opportunities for research, innovation, and technological development.

MONISHA

III Year Mechanical Engineering

Optimization Tool Technology:

Optimization tool technology plays a crucial role in modern engineering design, manufacturing, and decision-making processes. Optimization tools are computational techniques used to identify the best possible solution from a set of alternatives while satisfying certain constraints and objectives. These tools are widely used in various engineering fields such as mechanical design, robotics, aerospace, manufacturing systems, and supply chain

management. In engineering design, optimization techniques help engineers improve product performance, reduce material consumption, and minimize production costs while maintaining required quality standards. Popular optimization methods include genetic algorithms, particle swarm optimization, simulated annealing, and gradient-based algorithms. These techniques are often integrated into advanced software tools such as MATLAB, ANSYS, and other simulation platforms to analyze complex engineering problems. In manufacturing industries, optimization tools are used to determine optimal process parameters, production schedules, and resource allocation to increase productivity and efficiency. In robotics and automation, optimization algorithms help in motion planning, path optimization, and energy-efficient operation of robotic systems. Furthermore, optimization technology supports data-driven decision-making by analyzing large datasets and predicting the most efficient outcomes. With the increasing use of artificial intelligence and machine learning, modern optimization tools are becoming more powerful and capable of solving complex real-world problems. Therefore, optimization technology has become an essential component in improving performance, innovation, and sustainability in engineering and industrial applications.