

Jul-Dec 2024



**MANGALAM
COLLEGE OF ENGINEERING**



DEPARTMENT NEWSLETTER

Momentum

DEPARTMENT OF MECHANICAL ENGINEERING

From HoD's Desk

VISION

To be a center of excellence in Mechanical Engineering by creating innovative and socially responsible technocrats to meet the global challenges.

MISSION

1. To provide qualitative technical knowledge in the domain of Mechanical Engineering to compete in the global scenario.
2. To nurture socially committed Mechanical Engineers through value based education.
3. To enhance the research ability of knowledge seekers for the changing needs of society.

Dear Students and Esteemed Colleagues,

*It gives me immense pleasure to present the Department of Mechanical Engineering Newsletter for the period **July to December 2024**. The beginning of the academic year is always a time of renewed energy and high expectations, and this semester has truly set a strong foundation.*

Our primary focus over these past six months has been on strengthening core engineering competencies and embracing modern methodologies like design thinking and product development. It has been inspiring to see our students actively engaging in rigorous academic coursework and bringing theoretical concepts to life within our laboratories.



The semester witnessed enthusiastic participation of our students and faculty in various academic, technical, and co-curricular activities. The department continued to promote experiential learning through expert talks, seminars, technical sessions, competitions, and exposure to emerging technologies.

Our students actively participated in quiz competitions, design competitions, and innovation-oriented programmes at various levels, while our faculty members strengthened their professional knowledge through FDPs, NPTEL courses, research publications, and other academic engagements.

I appreciate the sincere efforts of our faculty members and students in contributing to the academic growth and vibrant activities of the department. I am confident that these initiatives will continue to inspire innovation, professional excellence, and holistic development among our students.

Dr. Arun Jose

Department Activities

- IDC Quiz Competition conducted on 22 August 2024. Resource Person: Ms. Jeena.
- Seminar on Creep Deformation and Testing Methods conducted on 05 September 2024. Resource Person: Mr. Nikhil Suman.
- Expert Talk on Harnessing the Future: Emerging Trends in Renewable Energy conducted on 06 September 2024. Resource Person: Mr. Sumit Pandey.
- Expert Talk on Industry 4.0 and Smart Manufacturing conducted on 26 September 2024. Resource Persons: Ms. Georgina Binoy Joseph and Mr. Aswin Santhosh.
- Expert Talk on Introduction to FEA and its Application in Engineering Design conducted on 07 October 2024. Resource Persons: Mr. Aswin Santhosh and Mr. Ananthakumar.
- Technical Talk on Introduction to Real Time Working of Machines conducted on 08 October 2024. Resource Person: Mr. Cherry A, Assistant Professor, RIT Kottayam.
- Technical Talk on Introduction to Gas Turbine conducted on 09 October 2024. Resource Person: Mr. Arunkumar G.
- Expert Talk on World of Small Things: An Introduction to Nanotechnology conducted on 05 November 2024. Resource Person: Mr. Sreekumar C R, Assistant Professor, Department of Mechanical Engineering, Government Engineering College.

PROGRAM EDUCATIONAL OBJECTIVES

Domain knowledge: Graduates will be able to solve the contemporary issues and challenges in mechanical engineering by applying their strong base in Mathematics, Science and Engineering.

Lifelong learning: Graduates shall have a passion to engage in lifelong learning process through self study, continuing education and professional studies in engineering.

Creative skillset: Graduates will become an effective innovator, to address social, technical and business challenges by enhancing their technical competencies, communication skill and team spirit.

PROGRAM SPECIFIC OBJECTIVES

PSO 1: Able to identify, formulate design and analyze the contemporary challenges and engineering problems in the realm of Design, Industrial and Thermal sciences, utilizing latest technology.

PSO 2: Able to provide solutions by incorporating innovative ideas on product design and development to conquer the challenges in core Mechanical sectors, business and other related fields.

Faculty Corner

- Mr. Santhu Varghese – Completed NPTEL course on The Joy of Computing Using Python – July to October 2024.
- Dr. Manikandan H – Completed NPTEL course on Aircraft Propulsion – August to October 2024.
- Dr. Manikandan H – Completed NPTEL course on Fire Dynamics – August to November 2024.
- Mr. Ajithkumar K T – Completed NPTEL course on Thermal Process in Food Processing: Theory and Applications – August to November 2024.
- Mr. Amal R – Attended ATAL FDP on Industry 4.0/5.0 – 30 September to 05 October 2024.
- Mr. Navish Kumar – Attended ATAL FDP on Industry 4.0/5.0 – 30 September to 05 October 2024.
- Mr. Santhu Varghese – Attended ATAL FDP on Industry 4.0/5.0 – 30 September to 05 October 2024.
- Mr. Rahul Krishnan – Attended Harnessing AI Tools: A Step towards Strategic Teaching Approach – 2024.
- Mr. Rahul Krishnan – Attended ATAL FDP on Innovations in Electric Vehicle Engineering: Battery Thermal Management and Generative Design Perspectives – 02 to 07 December 2024.
- Mr. Navish Kumar – Attended ATAL FDP on Innovations in Electric Vehicle Engineering: Battery Thermal Management and Generative Design Perspectives – 02 to 07 December 2024.
- Dr. Bibin K S. -Research publication: Analysis of Free Liquid Surface Deformation and Thermal Destratification in Liquid Storage Tanks using OpenFOAM, *Journal of Energy Storage*.
- Dr. Manuel George- Research publication: Mechanical, Tribological and Modal Characteristics of Eco-Friendly Coir/Sugarcane Fillers Reinforced Polymer Composites, *Materials Research Express*.

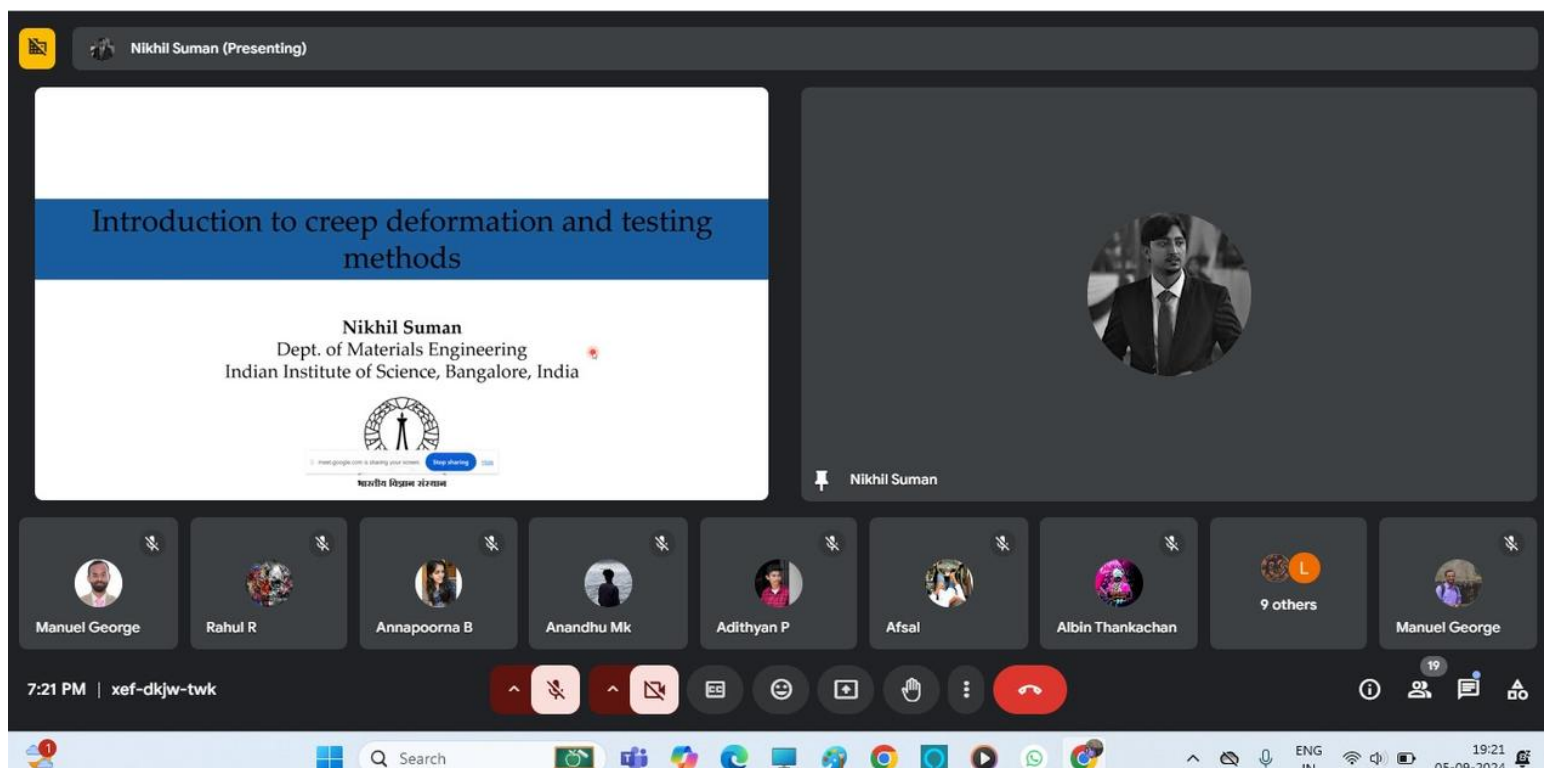
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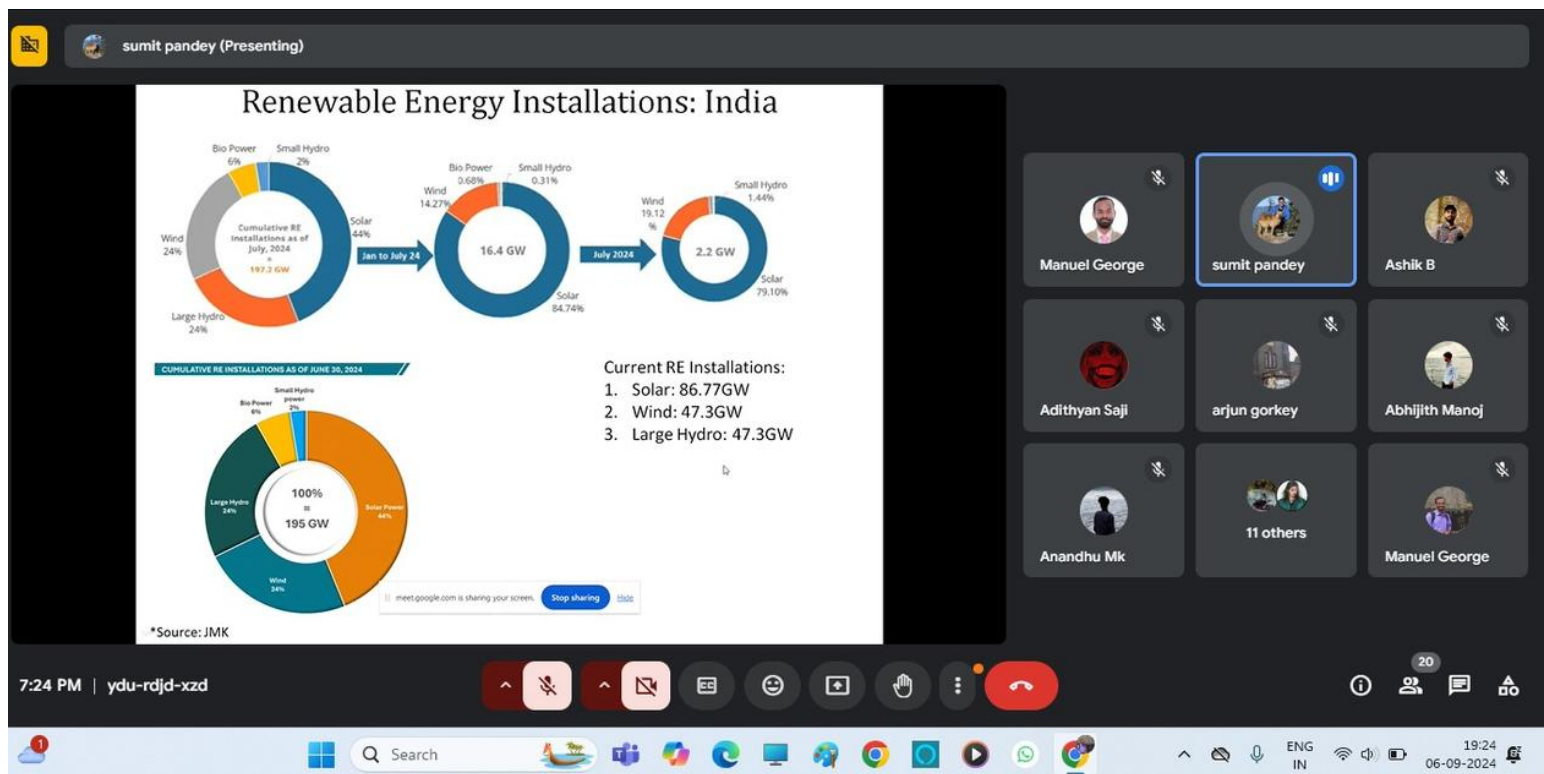
IDC Quiz Competition



Expert Talk on Industry 4.0 and Smart Manufacturing



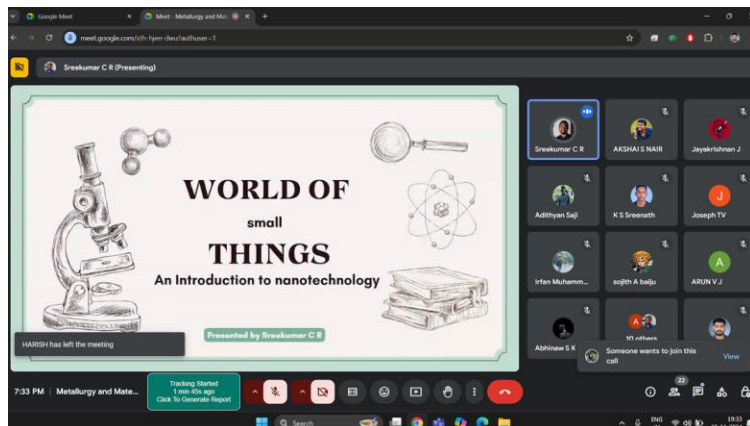
Seminar on Creep Deformation and Testing Methods



Expert Talk on Harnessing the Future: Emerging Trends in Renewable Energy



Technical Talk on Introduction to Real Time Working of Machines



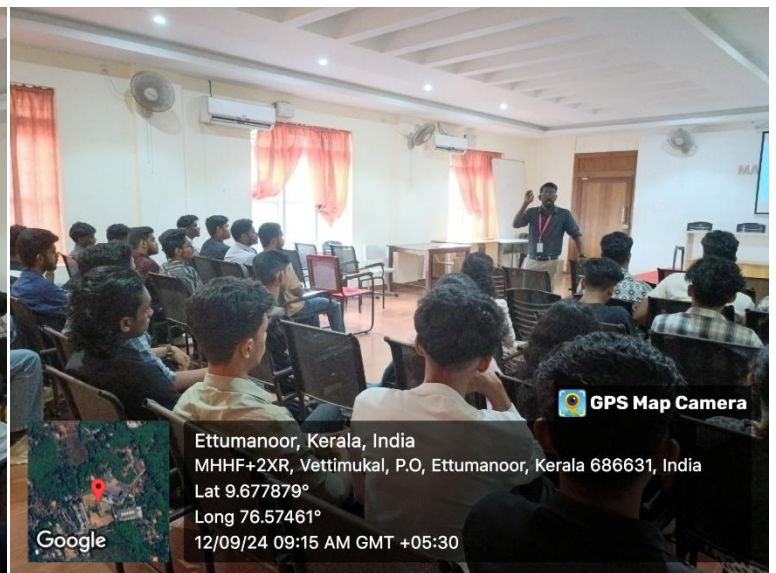
Expert Talk on World of Small Things: An Introduction to Nanotechnology



Introduction to FEA and its Application in Engineering Design

Students 'Corner

- G S Arjun – participated in Quiz – 19 July 2024
- Don Mathew – participated in Quiz – 18 July 2024.
- Vipul Vinod – participated in Quiz – 30 July 2024
- Amal Jacob – participated in Design Competition – 06 November 2024
- Annapoorna B participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC)
- Abhinav S K participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- Sreenath K S participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- Yashwanth Rao N participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- Akash S Nair participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- A Aravind participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- Anandu V Pradeep participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- Ananthakrishnan R participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- Abin Joseph participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- Arun Santhosh participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).
- Bibin John participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC) .
- Y P Meenakshy participated in Young Innovators Programme (YIP) by Kerala Development and Innovation Strategic Council (K-DISC).



INDUCTION PROGRAMME 2024 BATCH

III International Conference on Advances in Mechanical Engineering: Transcending Boundaries ICAMET-2024



ICAMET-2024



Editorial

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