



Department of Mechanical Engineering
NEWSLETTER

2022

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**Excel
Engineering
College**



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ENGINEERING COLLEGE

DEPARTMENT OF
MECHANICAL ENGINEERING

NEWS LETTER

2022-23-Volume-1: Issue-3-MARCH

VISION OF THE DEPARTMENT

To create competitive manpower in the field of Mechanical engineering for the advantage of mankind

MISSION OF THE DEPARTMENT

- To create a conducive learning environment to make student as competent engineers.
- To nurture the entrepreneurial ability among students
- To maintain sustainable development for creative learning to serve the engineering society
- To inculcate human values and sensitivity

PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

PEO 1: Graduate will have the ability to handle industrial challenges through advanced engineering technologies.

PEO 2: Graduate will have the capability to become socially, intellectually, and ethically responsible Mechanical engineers.

PEO 3: Graduate expertises with essential technical, managerial and soft skills that make them to be professionally competent.

PROGRAMME SPECIFIC OUTCOMES (PSOS)

On completion of the B.E (Mech) degree the Mechanical graduates will be able to:

PSO1: Ability to apply their knowledge to design and analyze by using software tools.

PSO 2: Engage them professionally in industries or as entrepreneurs in the field of manufacturing and design.

PSO 3: Apply CAD/CAE tools to design and analyze the mechanical components.

KEY FINDINGS IN MECHNICAL ENGINEERING

Topological Metamaterials

Researchers developed 3D topological metamaterials that enable control over elastic (mechanical) waves at low frequencies, with multiple distinct frequency bands. These allow for polarization-, frequency-, and layer-dependent wave control. arXiv

There was also work on *multi-stable/reconfigurable mechanical metamaterials* that support topological edge states. These structures can change their configuration and thereby switch the mechanical/wave propagation properties. arXiv

Mechano-intelligence / Phononic Metastructures

Studies have been exploring “mechano-intelligence” where the mechanical structure itself (e.g. phononic metastructures) embodies aspects of sensing, decision-making, and actuation/command, not relying only on external electronics. For instance, physical reservoir computing implemented in phononic metastructures allowing self-tuning wave control and wave-based logic.

ACADEMIC ACTIVITIES



Collaborate with Society of Automotive Engineers conducted a “**Design Contest on Bi-cycles**” **Mr.K.Aruikumar**, Assistant Professor, Dept. of Mechanical Engineering, Excel Engineering College, Komarapalayam .

Collaborate with Society of Automotive Engineers ARHAKRZ association conducted “**Opportunities for Quality Control Engineers for Industries**” **Mr. K. Jayaseelan** Quality Lead-Process ware, Bangalore.



Collaborate with Society of Automotive Engineers conducted a “**Product Presentation on Two Wheeler Vehicle**” **Dr. A. Karthikeyan** Associate Professor Dept. of Aeronautical Engineering, Excel Engineering College, Komarapalayam.

Collaborate with Society of Automotive Engineers conducted a “**Vehicle Health Monitoring and Maintenance**” **Mr. M.Sampathkumar** Assistant Professor, Excel Engineering College, Komarapalayam



Collaborate with ISTE conducted a “**SAE Inauguration & Recent Advances in Automotive Engineering**” **Dr.V.S.Saravanan** Chairman SAEISS Erode Division, Junior Vice President, Indoshell Casting Pvt. Ltd, Coimbatore

Collaborate with Engineers “**Electric Vehicles**” Chairman SAEISS, Pvt. Ltd, Chennai



Society of Automotive conducted a Seminar on **Mr.S.Sanmugam** Farmer Director, Design Teck India

STUDENTS ACHIVEMENTS



Anish Kumar R, a student from **fouth-year**, won on **second prize** at a **paper presentation** competition held on **January 13, 2022**.The event took place at **Bannari Amman Institute of Technology**.



Nivas K. S., a fourth-year student, won **first prize** in the **Sheet Metal**competition held at **SAE L**.



Deepan Raj M., a **third-year** student, won **second prize** in the **Paper Presentation** competition held at **Bannari Amman Institute of Technology** on **March 22, 2022**

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