




MECHATROMA

Department of Mechanical Engineering



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Jan-Mar 2025

VOLUME XX, ISSUE I
NEWSLETTER

From Chief Editor's Desk



Dr. Nitin Kumar Waghmare
HOD, Mechanical Engineering

Dear Readers,

I am delighted to welcome you to the latest edition of our quarterly newsletter. This publication is a testament to our collective achievements, ongoing projects, and the vibrant spirit that drives our Department forward. We strive to bring you the most relevant and inspiring stories each quarter, highlighting our team's incredible work and dedication.

During the last quarter (Oct-Dec 2024), the department has made significant contributions in various domains such as teaching and research, product development, sponsored projects, outreach activities and students' achievements. I am sure this issue will give a glimpse of the above.

We are marching with 'Team Spirit and Synergy'. I wish to quote William Shakespeare, who said, "You know what you are, but you also know what you can be". The Team Spirit and Synergistic approach can help us evolve. Synergy is not only the answer to human conflicts; it transcends the conflicts and creates something new and rewarding. Synergy is based on combining the individuals' strengths, producing results far greater than anyone could achieve alone. For example, a chord comprising several notes creates music that a single note cannot. The individual notes do not lose their identity; together, they produce music. Like musical notes, synergistic people do not lose their identity; together, they can create something new and fulfilling. This needs internal strength to think about us, which is a key to transforming the situation. Synergy leads to mutual understanding and growth. New ideas breathe best in an atmosphere of mutual understanding.

Lack of synergy is one of the greatest tragedies since so much potential remains unexplored and unused. Egoism is the greatest barrier to synergy, which prevents the creative blending of human energies, puts walls around and stops them from moving forward.

Let us march forward with Team Spirit and Synergistic approach, leading to excellence.

Thank you and best wishes

Dr. Nitin Kumar Waghmare
Chief Editor & HOD
Dept. of Mechanical Engineering

The only way to
do great work is to
love what you do
~ Steve Jobs

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RESEARCH PUBLICATIONS

Dr. Suresh Pratap, Assistant Professor of Mechanical Engineering, has published an 3 SCI Research Articles in the reputed journals like Materials Letters, Experimental Techniques and Results in Engineering. Department of Mechanical Engineering Congratulates him for his contribution in the field of Advanced Material composites and Artificial Intelligence.



Materials Letters

Volume 387, 15 May 2025, 138288



Effect of temperature on the wear properties of the novel hybrid aluminum composite reinforced with ZrB_2 and fly ash

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Experimental Exploration of Specific Wear Rate in Linear Reciprocating Motion Using Dimensional Analysis

Research paper | Published: 18 March 2025

(2025) [Cite this article](#)

P. Kumar , B. Kumar & S. Pratap 



Results in Engineering

Volume 26, June 2025, 104612



Research paper

Synthesis and predictive modelling of wear behaviour in hybrid aluminum composites

Prakash Kumar ^a, Binay Kumar ^b, Suresh Pratap ^c  , S.M. Mozammil Hasnain ^d,
Basem A. Alkhaleel ^e

Jan-Mar 2025

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AWARDS/ RECOGNITION/ PARTICIPATIONS

- **Dr. Suresh Pratap**, Assistant Professor, ME of IIMT College of Engineering has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on **Importance of Artificial Intelligence in Robotics** at Indian Institute of Information Technology Design and Manufacturing Kurnool from 20/01/2025 to 25/01/2025.
- **Dr. Suresh Pratap**, Assistant Professor, ME of IIMT College of Engineering has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on **Advancements in Artificial Intelligence and Machine Learning for Modern Engineering Solutions** at UNIVERSITY COLLEGE OF ENGINEERING from 27/01/2025 to 01/02/2025.
- **Dr. Suresh Pratap**, Assistant Professor, ME of IIMT College of Engineering got recognition as a potential reviewer from the Journal **Materials Performance and Characterization** for reviewing the research article.
- **Dr. Suresh Pratap**, Assistant Professor, ME of IIMT College of Engineering got recognition as a potential reviewer from the Journal **Journal of Physics D: Applied Physics** for reviewing the research article.

EXPERT TALK

on

FRUGAL INNOVATIONS AND SOCIAL ENTREPRENEURSHIP

On dated 20-02-2025, Department of ME has organized expert talk on “Frugal Innovations and Social Entrepreneurship”. Mr. Naresh Bhagat has presented excellent examples to our students that how various products have been invented and how they ease human lives. Explained Frugal innovations and social entrepreneurship are transformative concepts that emphasize creating impactful solutions with limited resources. An expert talk on this topic would likely explore how innovative approaches can address societal challenges, foster sustainable development, and empower communities. It might also highlight success stories, ethical considerations, and strategies for building ecosystems that support social entrepreneurs. Such discussions inspire individuals to think creatively and contribute to meaningful change. Students learn how to develop impactful solutions using limited resources, fostering creativity and sustainability in problem-solving. They gain knowledge of how social enterprises address societal challenges while balancing economic, social, and environmental goals. The talk motivates students to explore ways to contribute positively to their communities and develop entrepreneurial mindsets that drive meaningful change.



Facilitation to guest speaker



Speaker Brief about Frugal Innovations

WORKSHOP

on

EFFECTIVE SALES AND MARKETING STRATEGIES FOR ENTREPRENEURS/START-UPS

On dated 24-02-2025, Department of ME has organized workshop on “**Effective Sales and Marketing Strategies for Entrepreneurs/Start-ups**”. Dr. Ankit Gupta has presented excellent examples to our students that how various products have been invented and how they ease human lives. Also explained Effective sales and marketing strategies are vital for the success of entrepreneurs and start-ups. A workshop on this topic would likely focus on equipping participants with practical tools and techniques to understand customer needs, building brand identity, and driving sales growth. It might delve into market research, digital marketing strategies, relationship building, and innovative approaches to positioning products or services. By fostering these skills, the workshop empowers entrepreneurs to navigate competitive markets and achieve sustainable business growth. Students were acquire practical knowledge on designing effective sales pitches, building customer relationships, and implementing strategies to boost revenue. Learn practical knowledge on designing effective sales pitches, building customer relationships, and implementing strategies to boost revenue. Also the workshop fosters skills to analyze market trends, create data-driven strategies, and adapt to competitive business environments.



Interactive session with students



Facilitation to guest speaker



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WORKSHOP

on

INDUSTRIAL AUTOMATION IN INDIA

On 25th February 2025, The Mechanical Engineering Department under ASHRAE India Chapter successfully organized a workshop on "Industrial Automation in India" on 25th February 2025 at Sarabhai Hall. The event witnessed a remarkable presence of students, faculty members, and industry experts. The workshop commenced with an inaugural address by the Head of the Mechanical Engineering Department, followed by a welcome speech by Mr. Satyaveer Singh who is student branch advisor of the ASHRAE from IIMT College of Engineering, Greater Noida. The chief guest, Mr. Mayank Rawat, a seasoned professional with over a decade of experience in providing technical solutions and marketing services in the HVAC and IoT industry, delivered a keynote address on "Industrial Automation in India: Trends, Challenges, and Opportunities." Mr. Rawat shared his expertise on commercial and industrial spaces, highlighting applications like dehumidification, chiller water, fire pumps, HVAC, and ventilation controls. He also emphasized the importance of energy-saving solutions and field devices in enhancing plant room efficiency.



Lecture on Industrial Automation in India

QUIZ COMPETITION

on

RECENT TRENDS “HYBRID VEHICLE, ELECTRIC VEHICLES, MECHATRONICS, AUTOMATION AND ROBOTICS”

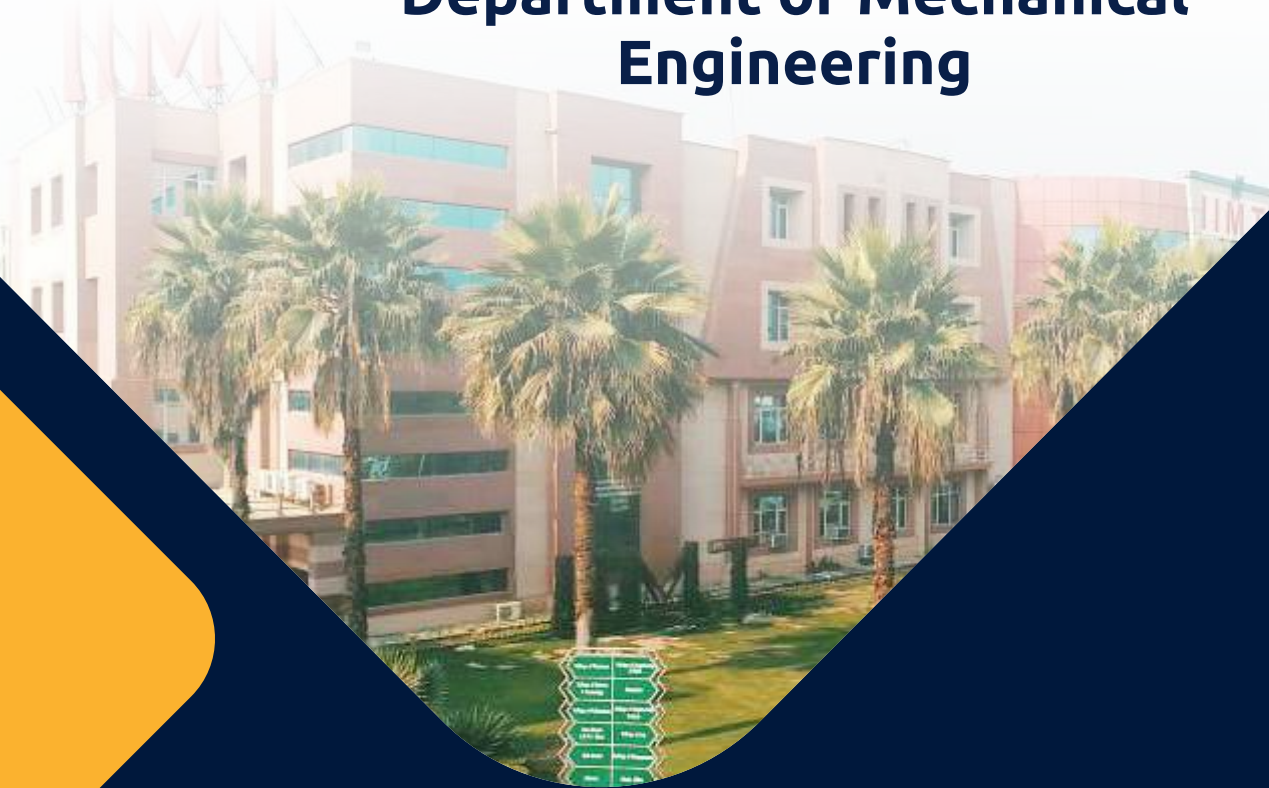
On Dated 05-03-2025, The Department of ME organized a quiz competition. In regular course curriculum students are not too much aware about multiple choice based question. Pattern of the question paper focused on recent trends in field of Electric Vehicles (EVs), Mechatronics, and Robotics is to assess and enhance knowledge, understanding, and awareness of these interdisciplinary fields.

The objective of program was to evaluate knowledge about the design, functioning, and technologies used in electric vehicles. To test understanding of the integration of mechanical, electrical, and computer engineering principles. And assess knowledge of robotics principles, design, and applications. This create awareness about the importance of EVs, mechatronics, and robotics in sustainable development and technological advancement. 17 Students were participated in this quiz competition and Satyam kumar (2202160400028), Sujal Bajaj (2202160400028) and Samar Pratap (2202160400024) were the winner of this quiz competition.



Students participate in quiz competition

Department of Mechanical Engineering



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