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Learn Beyond

**KPR Institute of
Engineering and
Technology**

(Autonomous, NAAC "A")

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SPARK



VISION

To be recognized as a premier centre in the field of mechanical engineering education, research and development to meet the changing needs of industry and society.

MISSION

The Department of Mechanical Engineering is committed to,

- Provide fundamental and skill-based education in mechanical engineering through innovative practices in teaching and learning.
- Establish centers of excellence in collaboration with reputed industries, professional bodies and research laboratories.
- Promote entrepreneurship with leadership qualities, ethics, and human values for the society at large.

PROGRAM EDUCATION OBJECTIVES (PEO)

Graduates of BE Mechanical Engineering four years after graduation will:

- **PEO1:** Excel in their professional career with competencies in the field of mechanical and allied engineering.
- **PEO2:** Apply modern research and simulation tools to solve industrial and societal needs.
- **PEO3:** Practice professional and ethical values in respective organizations and society.

PROGRAM SPECIFIC OUTCOMES (PSO)

Graduates of Mechanical Engineering should:

- **PSO 1:** Design, develop and implement advanced mechanical systems by applying engineering principles for improved performance and less human effort.
- **PSO 2:** Apply quality tools to ensure quality, articulate maintenance principles and demonstrate managerial skills to comprehend the mechanical engineering processes, products and services.

DEPARTMENT EVENTS

PROGRAMS ORGANIZED

- The 'Introduction to Robotic Welding' course was successfully conducted over two days, from May 13 to May 14, 2024. This one-credit course aimed to equip participants with essential knowledge and skills in robotic welding technology. The event was marked by enthusiastic participation from students and industry professionals alike. Day 1: May 13, 2024 The event commenced with an inaugural session graced by the chief guest, Mr. S. Ramanathan, Technical Product Manager at Kavin Inc., Coimbatore. In his keynote address, Mr. Ramanathan emphasized the significance of robotic welding in modern manufacturing and shared insights from his extensive industry experience. His speech highlighted the advancements in robotic welding technologies and the growing demand for skilled professionals in this field. Following the inaugural session, the course kicked off with theoretical lessons covering the basics of robotic welding, including an introduction to various robotic systems, programming fundamentals, and safety protocols. The sessions were interactive, with students engaging actively in discussions and Q&A segments. Day 2: May 14, 2024 The second day focused on practical training, where participants received hands-on experience with robotic welding equipment. Under the guidance of expert instructors, students practiced setting up robotic welders, programming welding tasks, and troubleshooting common issues. This practical approach helped reinforce the theoretical knowledge gained on the first day. The course concluded with a demonstration of advanced robotic welding techniques and their applications in different industries. Participants showcased their newly acquired skills through a series of welding tasks, demonstrating their ability to operate and manage robotic welding systems effectively. The course achieved its objective of preparing participants to meet the growing demand for skilled professionals in the robotic welding industry.

FACULTY PUBLICATIONS

INTERNATIONAL JOURNALS:

- ✿ Michael Joseph Stalin, P., Rao, P.N., Palaniappan, M., **Kumar, P.M.** and Udhayakumar, K., 2025. Effective thermal performance assessment for prismatic triangular solar air heater integrated with fins and turbulators. *Numerical Heat Transfer, Part A: Applications*, 86(22), pp.8129-8145.
- ✿ Saravanakumar, S., Prakash, K.B., Dinesh, D., **Kumar, P.M.**, Fouad, Y., Soudagar, M.E.M., Ali, M.M. and Bashir, M.N., 2024. Optimizing friction stir processing parameters for aluminium alloy 2024 reinforced with SiC particles: A taguchi approach of investigation. *Journal of Materials Research and Technology*, 30, pp.4847-4855.
- ✿ Almeshaal, M., K Babu, P., Chinnasamy, S., **P, M.K.** and Subramanian, S., 2025. Influence of different melting points of phase change material on photovoltaic phase change materials system performance: an energy, exergy, and environmental point of view. *Energy Technology*, 13(7), p.2400286.
- ✿ **Sathish, S., Makesh Kumar, M.** and Bharathi, M., 2025. Improvement of physical, chemical, mechanical, and morphological properties of Luffa cylindrica fiber reinforcement composites using Java seed filler. *Biomass Conversion and Biorefinery*, 15(6), pp.9679-9689.
- ✿ Raj, N.M., **Kumar, N.M.**, Nagaraja, S. and Paulsingarayar, S., 2024. An Investigation about Microstructures, Mechanical Properties and Corrosion Behaviour of the TIG-MIG Hybrid Welded Dissimilar UNS 2205 and is 2062 Steels. *Key Engineering Materials*, 979, pp.93-102.
- ✿ **Sivanantham, G.**, Sivaraj Vijaya, G., Murugan, A., Selvaraj, S., Thangavelu, K., Mani, S.K., Marappan, S.S., Elango Sunitha, S.S. and Purushothaman Geetha, V., 2024. *Characterization and physicochemical properties of lignocellulosic fibers from Fishtail Palm (Caryota mitis) Leaf Stalks. Compos Adv Mater* 33: 26349833241256968.

STUDENTS ACHIEVEMENTS

The achievements of students from the Department of Mechanical Engineering in various events are displayed below.



Awarded in AQUA SHOWDOWN at IIT Madras



Awarded in "ROBO SOCCER" at Coimbatore Institute of Technology



Awarded for the event "PRO GRAMMI" at Janson institute of technology