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**LEARN BEYOND**  
**KPR INSTITUTE**  
of  
**ENGINEERING AND TECHNOLOGY**  
(Autonomous)  
Avinashi Road, Arasur, Coimbatore - 641 407

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## CONTENTS

1. Department Events
2. Faculty Publications
3. Students Achievements



**DEPARTMENT OF**  
**MECHANICAL ENGINEERING**

# SPARK

### VISION

To produce globally competent mechanical engineers to meet the changing needs of industries through innovative academic processes, research and value based education.

### 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
- ❖ Collaborate with reputed industries, professional bodies and research laboratories for establishing Centre of Excellence
- ❖ Imbibe ethical behavior and morality for social upliftment to uphold human values.

### PROGRAM EDUCATION OBJECTIVES (PEO)

- ❖ **PEO1:** The graduates of mechanical engineering will have a successful professional career in their related field of engineering to meet the changing needs of various stakeholders.
- ❖ **PEO2:** The graduates of mechanical engineering will involve in technology advancements through continuing education.
- ❖ **PEO3:** The graduates of mechanical engineering will practice their profession with good leadership skills and ethical values.

### PROGRAM SPECIFIC OUTCOMES (PSO)

A graduate of Mechanical Engineering should:

- ❖ **PSO 1:** Apply mechanical engineering principles to design, develop and implement advanced machine/mechanical systems or process for better performance and less human effort.
- ❖ **PSO 2:** Ensure quality by applying quality tools, maintenance principles and managerial skills to comprehend the mechanical engineering processes, products and services.

DEPARTMENT NEWSPROGRAMS ORGANIZED

1. The Department of Mechanical Engineering organized a “**12 Hour Hackathon**” for I Year Mechanical Engineering Students on 29.06.2022 at Project lab. Totally 123 students of first year Mechanical attended this program. Mr. Thirumurugan, Managing Director, T PEP, Coimbatore and Mr.Aadithya Sathya, CEO- Digital Manufacturing, USAM CADSoft, Coimbatore was the guest speaker.

FACULTY PUBLICATIONS**INTERNATIONAL JOURNALS:**

1. **N. Udhayakumar**, M. Mani, S. Ramesh Babu, G. Karthikeyan, K. Peace John Samuel, V. Karna, An experimental investigation on emission characteristics in CI engine with zinc and vanadium coated catalytic converter, Materials Today: Proceedings, Volume 62, Part 4, 2022, Pages 2250-2255, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.03.492>. (<https://www.sciencedirect.com/science/article/pii/S2214785322018430>)

2. **N. Vigneshkumar**, N. Harikannan, S Selvakumar, P. Manoj Kumar, Ram Subbiah and P.T. Saravanakumar, Investigating Mechanical Properties of Hybrid Polymer Composite Reinforced with S-Glass and Luffa Fibres, Journal of Physics: Conference Series, 2272 012024, <https://iopscience.iop.org/article/10.1088/1742-6596/2272/1/012024>
3. **S Deepan**, S Santhosh Raj, T S Ponselvan, R Praveenkumar and J. Alex, Integration of Lean Principles with Fuzzy FMEA in a Small Scale Casting Industry, Journal of Physics: Conference Series, 2272 012029, <https://iopscience.iop.org/article/10.1088/1742-6596/2272/1/012029>
4. S. Ramesh Babu, C. Senthil Kumar, P. Maria Raj Manoj, S. Manokaran and R. Rooban Kumar, Performance Assessment of Electrically Converted Diesel Fuel Driven Commercial Vehicle, Journal of Physics: Conference Series, 2272 012006, <https://iopscience.iop.org/article/10.1088/1742-6596/2272/1/012006>
5. **Ramesh Babu S**, Subbarayan M.R, Radha Krishnan Beemaraj, Emmanuel Nicholas P, Nagaraj T, Rajkumar M, Investigate the performance analysis of karanja biodiesel in diesel engine Materials Today: Proceedings, Volume 60, Part 3, 2022, Pages 1456-1458, <https://doi.org/10.1016/j.matpr.2021.11.364>.  
(<https://www.sciencedirect.com/science/article/pii/S2214785321073879>)
6. S Dharani Kumar, U Magarajan, Saurabh S Kumar, Investigation on ballistic behaviour of friction stir welded rolled AZ31B magnesium alloy, Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications <https://doi.org/10.1177/14644207221095209>,
7. Raghul. K. S; Boopathiraja. K. P; Sudarvannan. V; Sowndharya S; Karthi N; Dhiyaneswaran J "Design of Control Mechanisms for Electrical Groups based on IoT Technology, for Monitoring Operating Parameters," 2022 *International Conference on Electronics and Renewable Systems (ICEARS)*, 2022, pp. 575-579, doi: 10.1109/ICEARS53579.2022.9751915.

8. C. Sasikumar, R. Kannan, C. Senthilkumar, R. Sarweswaran, M. Nagaraja, R. Sundaresan, Pyrolysis of plastic waste for a better environmental system, *Materials Today: Proceedings*, 2022, ISSN 2214-7852 <https://doi.org/10.1016/j.matpr.2022.05.388>. (<https://www.sciencedirect.com/science/article/pii/S2214785322036896>)
9. R. Ranga Raj, S. Sathish, T. L. D. Mansadevi, R. Supriya, S. Sekar, Pravin P. Patil, Mahtab Mashuq Tonmoy, "Effect of Graphene Fillers on the Water Absorption and Mechanical Properties of NaOH-Treated Kenaf Fiber-Reinforced Epoxy Composites", *Journal of Nanomaterials*, vol. 2022, Article ID 1748121, 8 pages, 2022. <https://doi.org/10.1155/2022/1748121> SCI, IF = 2.98
10. D. Balaji, S. Sivalingam, V. Bhuvaneshwari, V. Amarnath, J. Adithya, V. Balavignesh, R. Ganesh surya, Aerogels as alternatives for thermal insulation in buildings – A comparative teeny review, *Materials Today: Proceedings*, Volume 62, Part 8, 2022, Pages 5371-5377, <https://doi.org/10.1016/j.matpr.2022.03.541>.
11. Ramesh, Manickam, Lakshminarasimhan Rajeshkumar, Ganesan Sasikala, Devarajan Balaji, Arunachalam Saravanakumar, Venkateswaran Bhuvaneshwari, and Ramasamy Bhoopathi. 2022. "A Critical Review on Wood-Based Polymer Composites: Processing, Properties, and Prospects" *Polymers* 14, no. 3: 589. <https://doi.org/10.3390/polym14030589>, SCI, IF=4.35
12. Manickaraj K, Ramamoorthi R, Sathish S, Makesh Kumar M, Effect of hybridization of novel African teff and snake grass fibers reinforced epoxy composites with bio castor seed shell filler: Experimental investigation, *Polymers and Polymer Composites*, <https://doi.org/10.1177/09673911221102288>, SCI, IF=1.84
13. S Selvakumar , V S Sreebalaji , K Ravi Kumar and V Ramakrishnan, Optimizing Micro-Turning Parameters during Step Turning Process on Titanium Alloy with RSM, *Journal of Scientific & Industrial Research* Vol. 81, June 2022, pp. 584-593, SCI IF=0555

14. Stalin, P.M.J., Arjunan, T.V., Almeshaal, M. **.Manoj Kumar**. Utilization of zinc-ferrite/water hybrid nanofluids on thermal performance of a flat plate solar collector—a thermal modeling approach. *Environ Sci Pollut Res* (2022). <https://doi.org/10.1007/s11356-022-21261-3>, Springer, IF = 4.223
15. Ankit, Rajneesh Sharma, Dinesh Kumar Sharma, Rajeev Agarwal, Moti Lal Rinawa, Ram Subbiah, **P.Manoj Kumar**, Investigating the effect of nanoclay content on the mechanical characteristics of natural fiber epoxy composite, *Materials Today: Proceedings*, 2022, Scopus <https://doi.org/10.1016/j.matpr.2022.05.139>.

### STUDENTS ACHIEVEMENTS

#### STUDENT PLACEMENT

Placement achievement of the final year students of Department of Mechanical Engineering in various reputed company is shown below.

S.NO	NAME OF THE STUDENT	COMPANY NAME	SALARY
1.	ASWATH .N	BSH CORE	4.5 LPA
2.	DHINAKARAN .K	BSH CORE	4.5 LPA
3.	GIRISHKUMAR .G	BSH CORE	4.5 LPA
4.	SRI SIVASANKAR M	BSH CORE	4.5 LPA
5.	AKASH M K	BSH CORE	4.5 LPA
6.	KARTHIGEYAN S	BSH CORE	4.5 LPA
7.	SIVAGANESH C	BSH CORE	4.5 LPA
8.	SRI DEEPAN V	BSH CORE	4.5 LPA
9.	VARADHARAJ K	BSH CORE	4.5 LPA
10.	ARAVINTH PRANAV .R	KONE	3.5 LPA
11.	ARUNTHATHI .S	KONE	3.5 LPA
12.	HARINI .S.V	KONE	3.5 LPA
13.	NIVETHA R S	KONE	3.5 LPA
14.	SETHU P	KONE	3.5 LPA
15.	SUJITH S	KONE	3.5 LPA
16.	ARAVINDH S R	KONE	3.5 LPA
17.	BHARATHWAJ P	KONE	3.5 LPA

18.	GOKILAVARSHINI K	KONE	3.5 LPA
19.	IMAYA GANESH S	KONE	3.5 LPA
20.	RITHICK S	KONE	3.5 LPA
21.	STEWIN S	KONE	3.5 LPA
22.	SASIKUMAR M	BSH - IT	4.5 LPA
23.	DINESH KUMAR .S	BSH CORE	4.5 LPA
24.	HARI PRASANNA .K.S	BSH CORE	4.5 LPA
25.	KANNAN A	BSH CORE	4.5 LPA