GMR Institute of Technology
An Autonomous Institute Affiliated to JNTU-GV

GMRIT Training Tomorrow's Engineers Today

stepone 2024

TECHNICAL PAPER PRESENTATION - 2024

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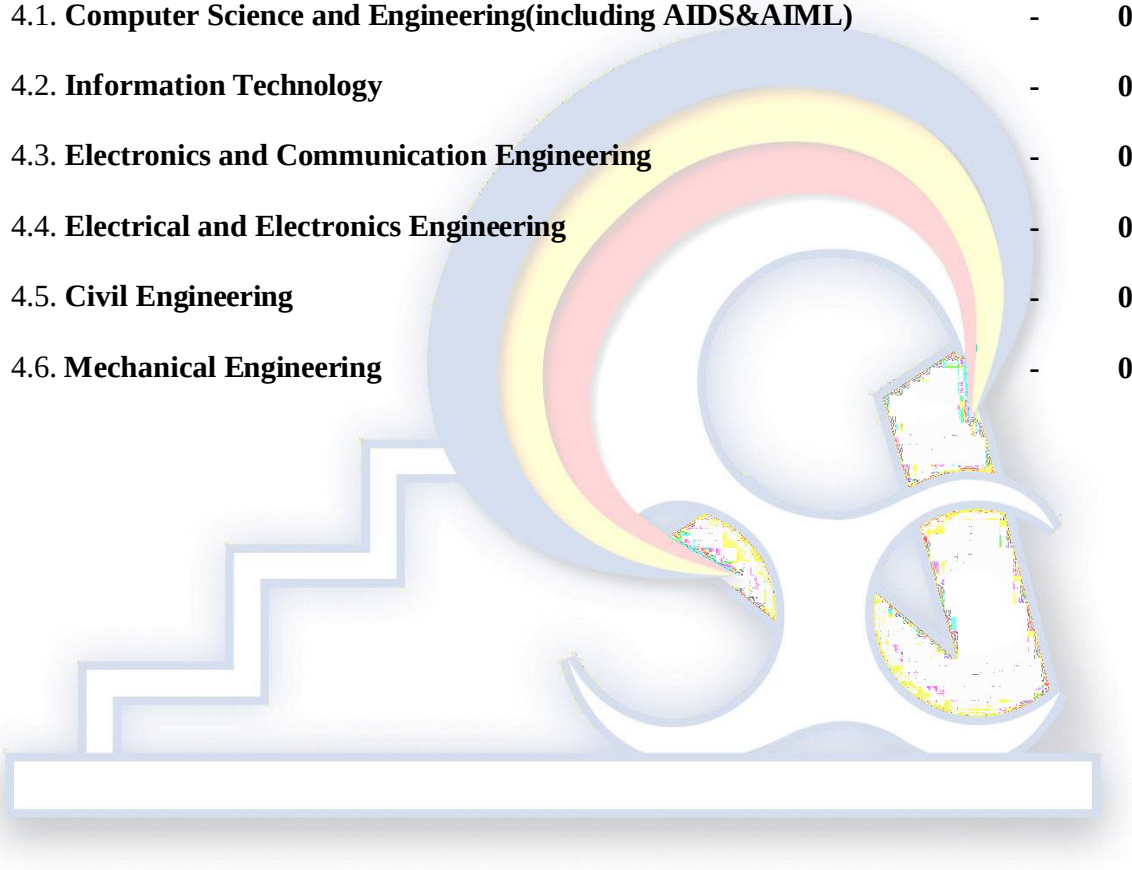

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The STEPCONE platform aims to showcase empirical research outcomes across diverse engineering domains, emphasizing the identification of research gaps and advancements in emerging areas of engineering and technology. The platform also encourages the examination of current scientific contributions relevant to engineering research. Research communication, encompassing both novel perspectives on traditional domains and cutting-edge technologies, is highly encouraged.

We invite full papers in the prescribed format from enthusiastic student researchers. Submissions are accepted either as a single-author contribution or as a collaborative effort with a maximum of two authors..

We look forward to receiving innovative research contributions that contribute to the dialogue on engineering advancements and further enrich the STEPCONE platform with valuable insights.

1. DETAILS

Registration fee per head: Rs.200/-

Basic Registration Fee for External Participants (i.e. students who are from institutes other than GMRIT) is Rs 500 (Stepcone Kit + Lunch) and if accommodation needed its Rs 900 (Stepcone KIT + Lunch + Accomodation + Breakfast + Dinner). This registration enables them for Technical Paper Presentation Event @ Stepcone 2023. No Basic Registration Fee for GMRIT Students but they have to pay event registration fee.

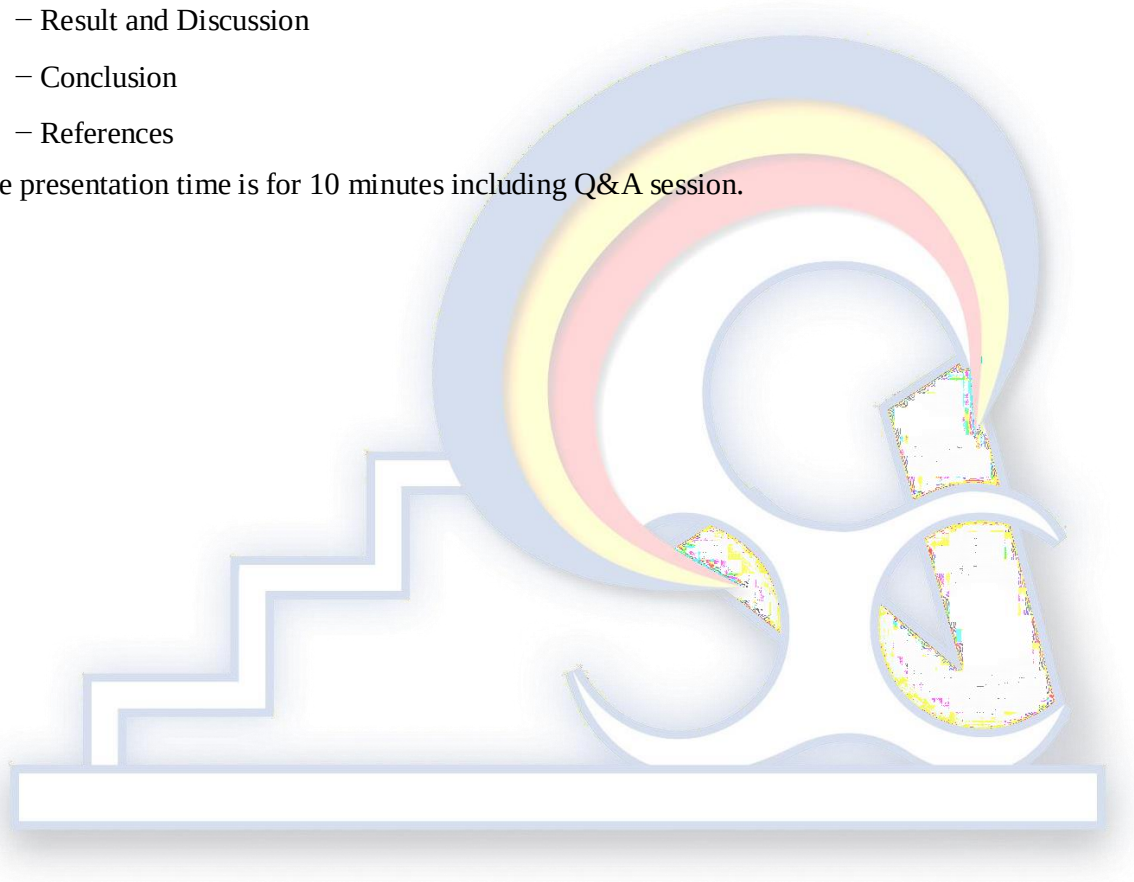
2. PRIZE MONEY

3. GUIDELINES FOR PAPER PRESENTATION & SUBMISSION

Paper contents should be arranged in the following order but can be modified if discipline/nature of work demands:

- Title
- Abstract
- Keywords
- Introduction
- Materials & Methods
- Result and Discussion
- Conclusion
- References

The presentation time is for 10 minutes including Q&A session.



4. TECHNICAL PAPER PRESENTATION THEMES

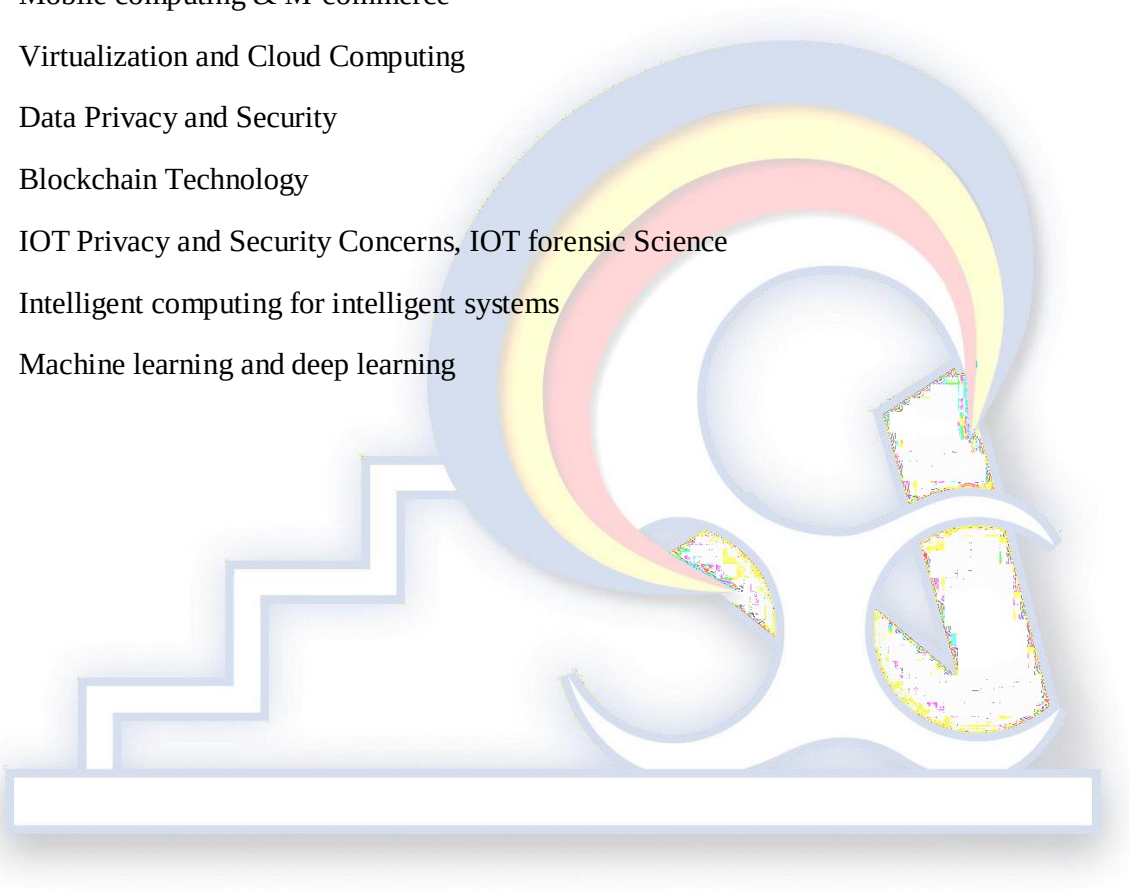
4.1. Computer Science and Engineering, Artificial intelligence and machine learning, Artificial intelligence and Data Science.

1. Cyber Security
2. Blockchain
3. AI & ML – Recent Trends and Applications
4. DevOps in Software Engineering
5. AI in Data Science
6. Wireless Sensor Networks
7. Metaverse
8. Quantum computing
9. Natural Language Processing(NLP)
10. IOT
11. Cloud Computing-Ensuring Data Security
12. Simulation and modeling
13. 5G Technology and Its Implications
14. Exoskeletons in Rehabilitation and Industry
15. Web Technologies
16. Latest trends in Cyber Security

Ms.K. Jyothsna	Dr. M. Satish	Mr.CH.Sekhar	Dr. A. V. Ramana	Dr.K. Srividya
Student I/C	**Faculty SPOC-CSE**	**Faculty SPOC-AI&DS/ML**	**HOD-CSE**	**HOD-AI&DS/ML**

Information Technology

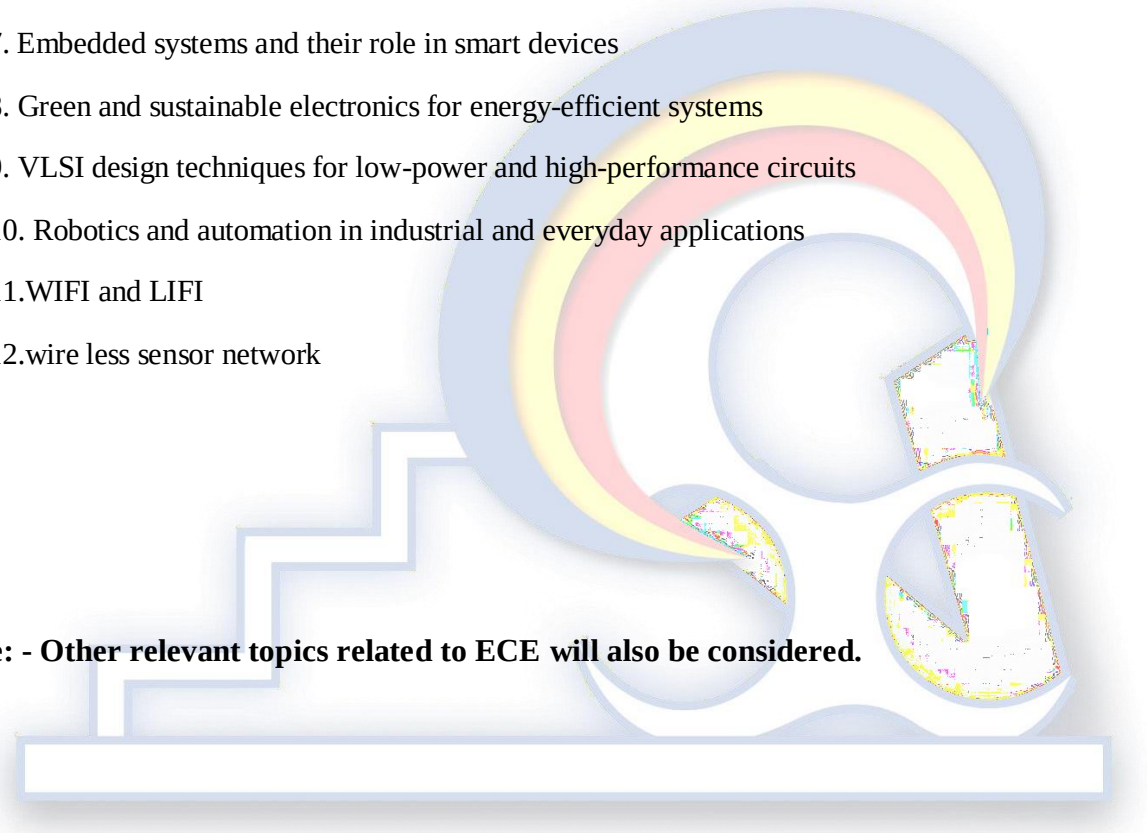
1. Machine learning algorithms
2. Predictive modelling
3. Computational complexity and optimization
4. Next-Generation Communication Technologies
5. Wireless Sensor Networks
6. Mobile computing & M-commerce
7. Virtualization and Cloud Computing
8. Data Privacy and Security
9. Blockchain Technology
10. IOT Privacy and Security Concerns, IOT forensic Science
11. Intelligent computing for intelligent systems
12. Machine learning and deep learning



Mr. K.Siva Sai Charan	Mr. Ch. Anil Kumar	Dr.V.Vasudha Rani
Student I/C	**Faculty SPOC**	**HOD - IT**

Electronics and Communication Engineering

1. Internet of Things (IoT) and its applications in various fields
2. 2. Artificial Intelligence (AI) and Machine Learning (ML) in signal processing, agriculture and other applications
3. 3. 6G and 5G technology its impact on communication systems
4. 4. Advanced antenna systems for wireless communication
5. 5. Image and video processing techniques for computer vision applications
6. 6. Biomedical signal processing and its applications in healthcare
7. 7. Embedded systems and their role in smart devices
8. 8. Green and sustainable electronics for energy-efficient systems
9. 9. VLSI design techniques for low-power and high-performance circuits
10. 10. Robotics and automation in industrial and everyday applications
11. 11.WIFI and LIFI
12. 12.wire less sensor network

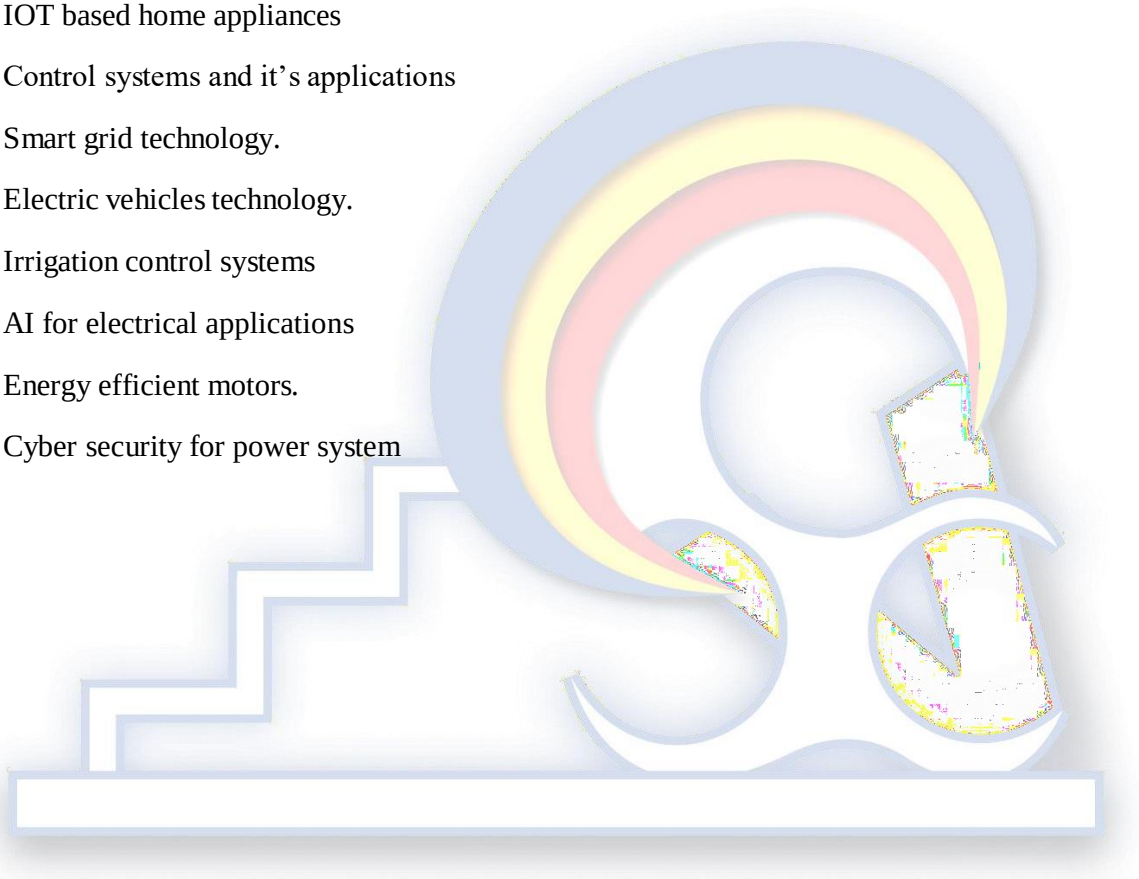


Note: - Other relevant topics related to ECE will also be considered.

Mr.S.Venu	Dr.A.Siva Sangari	Dr.V.Jagan Naveen
Student I/C	**Faculty SPOC**	**HOD - ECE**

Electrical and Electronics Engineering

1. Renewable energy sources.
2. Battery management systems
3. Power electronics and it's applications
4. Power systems and it's applications
5. Wireless electricity
6. Health monitoring devices
7. IOT based home appliances
8. Control systems and it's applications
9. Smart grid technology.
10. Electric vehicles technology.
11. Irrigation control systems
12. AI for electrical applications
13. Energy efficient motors.
14. Cyber security for power system



Ms. I.Vidhyadhari	Dr. J S V Shiva Kumar	Dr.P. Ramana
Student I/C	**Faculty SPOC**	**HOD - EEE**

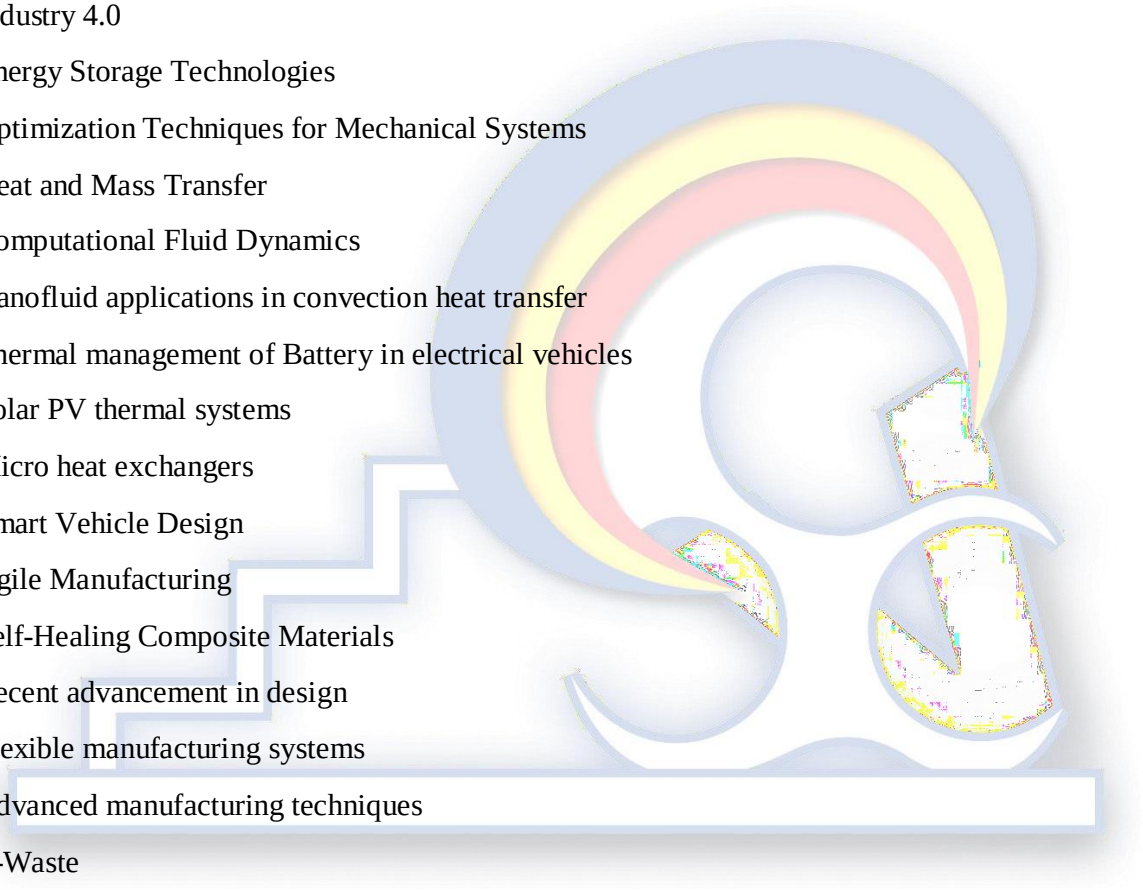
Civil Engineering

1. EBIM applications in structural engineering
2. New and advanced construction materials
3. Advanced Water proofing materials in structural applications
4. Building for Resilience: Designing Infrastructure to Withstand Natural Disasters
5. Building optimal design
6. Fossil fuels and renewable energy
7. Oil spills: Environmental Impact, Human Impact, Preventative Measures
8. Desalination:
9. Soil pollutions and treatment
10. Phytoremediation
11. Microbial Fuel Cells for Wastewater Treatment
12. Remote Sensing Application in Environmental Protection
13. Sustainable Water Management System
14. Air Quality Prediction using Machine Learning
15. Applications of IOT in Solid Waste Management
16. Marine geotechnics
17. Dams and tunnelling
18. Geosynthetics in soil stabilization
19. Geohazards and Risk Assessment
20. Sesimic control
21. Soil Dynamics
22. Soil Structure Interaction
23. Unsaturated Soil Mechanics
24. Unconventional materials and methods in soil stabilization
25. Liners in Municipal solid waste management
26. Sustainable Materials for pavement Design
27. Applications in Transportation Engineering
28. Intelligent Transport Systems
29. Asphalt products and properties

Ms.G.Lavanya	Mr. K. Naga Rajesh	Dr. G. Ganesh Prabhu
Student I/C	**Faculty SPOC**	**HOD - CIVIL**

Mechanical Engineering

1. Green Technologies
2. Sustainable Manufacture
3. Robotic and Human Machine Affairs
4. Industry 4.0
5. Energy Storage Technologies
6. Optimization Techniques for Mechanical Systems
7. Heat and Mass Transfer
8. Computational Fluid Dynamics
9. Nanofluid applications in convection heat transfer
10. Thermal management of Battery in electrical vehicles
11. Solar PV thermal systems
12. Micro heat exchangers
13. Smart Vehicle Design
14. Agile Manufacturing
15. Self-Healing Composite Materials
16. Recent advancement in design
17. Flexible manufacturing systems
18. Advanced manufacturing techniques
19. E-Waste
20. Machine learning applications in mechanical engineering



Topics related to contemporary engineering fields are also considered

Ms.K.Jasmitha Sai	Dr. S.Ravi Babu	Dr. G. Sasi Kumar
Student I/C	**Faculty SPOC**	**HOD - MECH**

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