

Conferences attended by the Faculty

1. Dr. G. Ganesh Kumar, "Numerical Analysis On Angle Of Attack On Bow Shock Formation In Aerodynamic Flows" in 5th International Multi-Disciplinary Research Conference, organized by Osmania University, Hyderabad 26 Dec, 2020 ISBN 978-81-948668-1-7 Pp 219-229.

2. Dr. G. Ganesh Kumar, "Investigations On Plug-In Hybrid Electric Vehicle" in 5th International Multi-Disciplinary Research Conference, organized by Osmania University, Hyderabad 26 Dec, 2020 ISBN 978-81-948668-1-7.

3. Dr. G. Ganesh Kumar, "Design And Fabrication Of Plug-In Hybrid Electric Motorcycle" 6th International Conference "Shaastarth - 2020", Rungta College of Engineering & Technology, Bhilai (C.G.), INDIA 19-20 Dec, 2020 Registration ID: SH20-42.

4. Dr. G. Ganesh Kumar, "Parametric Studies On Bow Shock Formed In Aerodynamic Flows" 6th International Conference "Shaastarth - 2020", Rungta College of Engineering & Technology, Bhilai (C.G.), INDIA 19-20 Dec, 2020 Registration ID: SH20-53.

5. Dr. P. Prabhakara Rao, "Enhancement In Mechanical Properties of Ceramic Reinforced Aluminum MMC Via Stir Casting Methodology: A Review" in "ICAAMM-2020", Held at MLR Institute of Technology, Hyderabad, 24th & 25th July 2020.

6. Sri. Ch. Karunakar, "Investigation Of Flexural And Tensile Properties Of Kenaf And Glass Fiber Reinforced Composites" 4th National Conference on Recent Trends & Innovations in Mechanical Engineering Department of Mechanical Engineering, 24th & 25th July, 2020.

7. Sri. K. Kishor Kumar, "Compare Thin And Thick-Walled Cylinder Models Subjected To Thermo-Mechanical Loading "1st National Conference on Materials, Mechanics and Modeling (NCMMM2020), 29-30, August 2020, organized by NIT- Jamshedpur, India Pg. No -75. Paper Id : Ncm/2020/Ams/340.

STTPs/ FDPs/ Workshops Conducted by Department of Mechanical Engineering:

1. One Week Faculty Development Program On "Advanced Materials and Manufacturing" during 29th June-3rd July, 2020.

2. One Week Faculty Development Program On "Recent Developments in Mechanical Engineering (RD-ME-2020)" during 7th -11th , July, 2020.

3. One Day Workshop on "Aeromodeling Design of Drone" conducted by MESA on account of Sumshodhini'20.

Patents filed by the faculty of department:

1. Dr. K. Eswaraiah / Dr. K. Sridhar /Dr. G. Ganesh Kumar, "Left Ventricular Assisted Device with Magnetic Levitation" in Oct, 2020.

2. Dr. G. Ganesh Kumar, "Apparatus for converting dynamic energy of wheels of an automobile into electrical power" in July, 2020.

Faculty Publications in Various Journals:

1. Dr. G. Ganesh Kumar, "Investigations on plug-in hybrid electric vehicle" in Journal of Information and Computational Science.

2. Dr. G. Ganesh Kumar, "Numerical analysis on angle of attack on bow shock formation in aerodynamic flows" in Journal of Information and Computational Science, pp. 100-105.

3. Dr. M. D. Sameer, "Selection of friction stir welding tool rotational speed for joining dual phase DP600 steel sheets – an experimental approach" Journal of Adhesion Science and Technology, pages 1—26.

4. Dr. M. D. Sameer, "Effect of Tool Tilt Angles on Mechanical and Microstructural Properties of Friction Stir Welding of Dissimilar Dual-Phase 600 Steel and AA6082-T6 Aluminum Alloy" SAE International Journal of Materials and Manufacturing.

5. Dr. G. Sai Kumar, "Effect of Distinct Parameters on the Mechanical Properties of Solid-State Processed AA-2014" International Journal of Mechanical and Production Engineering Research and Development (IJMPERD).

6. A. Devaraju, M. D. Sameer, G. Sai Kumar, G. Srinu, Dr. G. Srinu, "Effect of distant parameters on the mechanical properties of solid state processes AA-2014" International Journal of Mechanical And Production Engineering Research And Development, pp. 5843-5848.

7. Dr. M. OM Prakash, "Experimental investigation of mechanical and erosion behavior of eggshell nanoparticulate epoxy biocomposite" in Polymers and Polymer Composites.

8. Dr. M. OM Prakash, "A review on the degradation of properties under the influence of liquid medium of hybrid polymer composites, 1-12" in SN Applied Sciences.

9. Dr. M. Om Prakash, "Experimental investigation of mechanical and erosion behavior of eggshell nanoparticulate epoxy biocomposite, 0967391120943454" in Polymers and Polymer Composites.



Installation of different equipment in Composites Lab



Installation of Furnace in Workshop



THE PRODIGY

DEPARTMENT OF MECHANICAL ENGINEERING

NEWSLETTER - DECEMBER 2020

Chief Editor:
Dr. K. Sridhar
Professor and Head

Editors-In-Charge:
Sri G. Vinod Kumar
Assistant Professor

Sri. S. Anil Kumar
Assistant Professor

Students Editorial Board

Mr.K. AKHIL RAJA (IV/IV)
Mr.D. SATHWIK REDDY (III/IV)

Principal's Message:



I feel proud and honour to write this message because this newsletter is the testimonial of the commitment of the department towards the outcome based education and enhanced student-teacher learning process which is in line with the vision and mission of the department. I hope that the department will strive further to improve the quality of the education and bring laurels to the institute.

Dr. K. Ashoka Reddy

HOD's Message:



It is happy to bring out this newsletter and the best part of the newsletter is that students bagged many accolades and prizes not only in academics but also in extracurricular activities. This newsletter will provide few examples of achievements of the students and faculty in the academic year 2020-21. I am looking forward to more success from the department.

Dr. K. Sridhar

PROGRAM OUTCOMES (POs)

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, attend the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent re-

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Vision of the Department

- To be a centre of excellence in Mechanical Engineering, to provide the best teaching-learning and research environment, to produce high quality professionals and entrepreneurs to cater the needs of society.

Mission of the Department

- M1: To impart quality education that builds strong ethical attitude, technical knowledge and professional skills by providing congenial teaching-learning environment.
- M2: To nurture the reasoning, problem solving and research capabilities of learners by providing the state-of-the-art facilities, to meet the changing needs of society.
- M3: To inculcate life-long learning and leadership traits for successful professional careers, by counseling and mentoring.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- PEO1 : To provide comprehensive knowledge in basic sciences, mechanical engineering and multi disciplinary areas.
- PEO2 : To apply modern tools and techniques to design analyze interpret and solve mechanical and allied engineering problems and communicate them effectively.
- PEO3 : To impart responsibility towards socio-technical, economical, environmental and energy related issues.
- PEO4 : To inculcate professionalism, ethical attitude, team spirit and lifelong learning to achieve career goals.

PROGRAM SPECIFIC OUTCOMES (PSOs)

- Engineering Graduates will be able
- PSO1 : To apply learned principles and knowledge in various applications of materials, design, thermal, production and industrial engineering.
 - PSO2 : To model, analyze, design, develop and implement advanced mechanical systems or processes.

Program Educational Objectives (PEOs) of PG - M. Tech (Design Engineering) Program The postgraduates of DESIGN ENGINEERING will be able to...

- PEO1 (Research and Innovation):** engage in research, innovation and in teaching in Higher education institutions
- PEO2 (Technical expertise and Successful career):** excel in profession in industry, and entrepreneurship with updated technologies in the domain of design engineering
- PEO3 (Soft skills and Lifelong learning):** exhibit professional ethics, effective communication and teamwork in solving engineering problems by adapting contemporary research towards sustainable development of society

Program Outcomes (POs) of PG - M. Tech (Design Engineering) Program

- At the time of graduation, the postgraduates of Design Engineering will be able to ...
- PO1:** independently carry out research /investigation and development work to solve practical problems
 - PO2:** write and present an effective technical report/document
 - PO3:** demonstrate competence in the area of design engineering

Program Specific Outcomes (PSOs) of PG - M. Tech (Design Engineering) Program

- The postgraduates of Design Engineering will be able to...
- PSO1:** apply knowledge of design engineering for development of effective and innovative solutions to engineering problems
 - PSO2:** apply appropriate methodology, contemporary hardware and software tools to solve complex engineering problems in the domain of design engineering

Mechanical Engineering Students Association (MESA) Activities

S.No.	Event Name	No. of Students Participate
1.	Mesa Inauguration	100
2.	Interaction session on GATE	80
3.	Live Demo on ANSYS	65
4.	Session on Career Guidance	100
5.	Teachers Day Celebration	105
6.	Session on Placements	66
7.	Interaction on Sumshodhini events	70

Training & Placement Activities:

1. DXC Technologies -17
2. TCS Codevita -2
3. Technip FMC -4
4. TCS Ninja -9
5. Cognizant GenC -14

Total No. of offers received in odd semester = 46

STUDENT PARTICIPATION STATISTICS OF SUMSHODHINI-2020

Sumshodhini is an annual national level technical symposium of KITS Warangal, conducted by ISTE student chapter that serves as platform for various workshops and technical events. Sumshodhini '20 featured a 1 day workshop on Aeromodelling Design of Drone conducted by Mechanical Engineering Department. The resource person Mr. Sayanth K S from Ezinith Education LLP, Navi Mumbai have come to teach the students about the fundamental of drone and its design. The workshop had an overwhelming response of 97 registrations.

As part of the technical fest several new events were introduced to challenge the critical thinking skills of the students. The events conducted were Paper Presentation, Poster Presentation, Tech Mela, Just a Minute, Ideathon and TechWiz. These events have been conducted by the student organizers with Mechanical Engineering Department faculty as judges. The overall fest was a success due to efforts and support of the college management, the principal, ISTE faculty coordinators, Head of the Department, Department faculty coordinators and the faculty and also due to the work of student organizing team.

1. Aeromodelling of Drone Workshop - 97
2. Paper Presentation- 33
3. Poster Presentation - 27
4. Tech Mela - 31
5. Just a Minute - 35
6. Ideathon and - 31
7. TechWiz - 34

GALLERY OF SUMSHODHINI-2020

