SR Engineering College
Innovation . Creativity . Entrepreneurship

MECHNEWS 2019-20

Department of Mechanical Engineering

VISION

Be a leader in promoting entrepreneurial mechanical engineering education, industry-relevant research and community building.

MISSION

- Nurture Innovation, Creativity, Entrepreneurial Mindset, and Mechanical Engineering Knowledge in students by implementing novel educational experiences
- Develop effective instructional infrastructure and faculty resources.
- Promote interdisciplinary learning and expertise in the application of Information Technology.
- Contribute to community development and the growth of Mechanical Engineering through service, consulting and research activities

PROGRAM EDUCATIONAL OBJECTIVES (PEOS):

The Mechanical Engineering graduates from S R Engineering College, Warangal are expected to:

PEO1: Pursue a career in the field of Mechanical Engineering.

PEO2: Continue higher education and/or professional development courses for life-long learning.

PEO3: Support community building and economic development through research activities to improve the quality of life.

PROGRAMME OUTCOMES (POS):

Engineering Graduates will be able to:

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 science 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 and the cultural, societal and environmental considerations.

PO4: Conduct Investigations if 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 responsibilities relevant to the professional engineering practice.

PO7. Environment and sustainability: Understand the impact of the professional engineering solutions of Engineering 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.

PROGRAMS SPECIFIC OUTCOMES (PSO)

PSO1. Graduate of the program will achieve excellence in advanced manufacturing systems with latest technologies

PSO2. Graduate will expertise in innovative courses, societal and industry oriented courses designed by the eminent faculty of the department.

PSO3: Graduate will involve in sponsored projects for motivating research activities

International journals:

1. Rajesh Boorla, Mohammed Moizuddin, Gankidi Gangadhar Reddy, Syed Faisal Nouman, Mechatronic approach in hydraulic braking system, Materials Science and Engineering (ICMSMT 2020), (2020) 012089, June-2020, 1-5, doi:10.1088/1757-899X/872/1/012089.
2. P. Satish Kumar & M. Shiva Chander, Wind Energy Based Portable Power Generation, International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), 10, 3, Jun 2020, 4131-4142, ISSN(P): 2249–6890; ISSN(E): 2249–8001.
3. Rajasri reddy and Vinay kumar reddy, Progressive Pseudo Rheumatoid Childhood Arthropathy, High Technology Letters, 26, 6, May-2020., 19, ISSN NO : 1006-6748.
4. Ramesh Babu Bejjam, K.Kiran Kumar, S.Venkata Sai Sudheer and N.Praveena Devi, Experiental Investigation of the effect of Particle Concentration and Temperature on Thermophysical Properties of Water-Based Metal-Oxide Nanofluids, Lecture Notes in Mechanical Engineering, February, 2020, 175-182, ISBN 978-981-15-1200-1, ISBN 978-981-15-1201-8 (eBook), doi.org/10.1007/978-981-15-1201-8.
5. Sandela Haripriya, Boorla Rajesh , D.Swetha Sudarshan, G.Swamy Yadav, Bandi Bhaskar, Strength Characteristics of Recycled Aggregate Concrete by ANN, International Journal of Innovative Technology and Exploring Engineering, 9, 3, Accepted 10-01-2020, ISSN No.2278-3075.
6. Pankaj Kumar, Manowar Hussain, Effects of Micro-EDM Parameters on the Surface Integrity of the Micro-Holes Fabricated on Nickel Sheet", Recent Trends in Mechanical Engineering, Springer, January-2020, 259-270, 978-981-15-1124-0, 10.1007/978-981-15-1124-0_23.
7. Manowar Hussain., Pankaj Kumar, A Study on Welding of Thin Sheet of Ti6-Al-4V Alloy Using Fiber Laser and Its Characterization, Recent Trends in Mechanical Engineering, Springer, January-2020, 271-280, 978-981-15-1124-0, 10.1007/978-981-15-1124-0_24.

8. Rajesh Boorla and Prabeena T, Fabrication of Patient Specific Knee Implant by Fused Deposition Modeling, Materials Today: Proceedings, November-2019, 3638–3642, 2214-7853.

9. Jay Prakash Srivastava, Dheeraj Joshi, L. Vivek, G. Sai Manish, G. Sravan, K. Enosh, E. Naresh Naik, K. Vamshi Krishna, M. Prem, K. Dayanand, Design and Fabrication of Human-Electric Hybrid Power Tri-Cycle, IOP Conference Series: Materials Science and Engineering, 653, 12004, November-2019, 1-7, Online ISSN:1757-899X, Print ISSN: 1757-8981, doi:10.1088/1757-899X/653/1/012004.

10. Manowar Hussain, Pranshul Gupta, Pankaj Kumar, and A. K. Das, Selective Laser Melting of Single Track on Ti–6Al–4V Powder: Experimentation and Finite Element Analysis, Arabian Journal for Science and Engineering, November-2019, doi.org/10.1007/s13369-019-04263-1.

11. B. Keerthi Priya, P. Satish Kumar, M. Shiva Chander, Effect of Mechanical properties and Microstructural Characterization of friction stir welded 5083 Alluminium alloy, Research Journal of Engineering and Technology, 10, 3, July- September 2019, 0976-2973 (Print), 2321-581X (Online).

12. Malothu Suresh, Pulla Sammaiah, Gannarapu Raj Kumar, Design and fabrication of liquid silicone rubber material with the addition of fiber particles for mobile phone pouch, Research Journal of Engineering and Technology, 10, 3, July- September 2019, 1-6, 0976-2973 (Print), 2321-581X (Online).

13. Praveena Devi N, Ch. Srinivasa Rao, K Kiran Kumar, Thermodynamic Analysis of Fe3O4Nanofluid Flowing Through A Circular Tube, International Journal of Engineering and Advanced Technology (IJEAT), 8, 6, August, 2019, 530-533, ISSN: 2249 – 8958.

14. Khaja Zaffer, Pulla Sammaiah, Improvement of Electrical Insulation in Silicone Rubber by Adding Al2O3, International Journal of Innovative Technology and Exploring Engineering (IJITEE), 8, 10, August 2019, 4695-

4698, ISSN: 2278-3075.

15. P Sammaiah, D Ramesh Babu, L Radhakrishna, P Rajendar , Kinetics of Moisture Loss during Dehydration of Drum Stick Leaves (Moringa Oliefera) In a Bio-Mass Tray Dryer, International Journal of Engineering and Advanced Technology (IJEAT), 8, 6, August, 2019, 2937-2941, ISSN: 2249 – 8958, 10.35940/ijeat.F8718.088619.

16. G. Raj Kumar, P. Sammaiah, M. Suresh, Existence of liquid silicone rubber material by addition of fiber particles for mobile phone body, Journal of Engineering Research and Application, 9, 8 (Series -II), Aug-2019, 12-15, ISSN : 2248-9622.

17. B. Satish Kumar, G. Janardhana Raju, G. RangaJanardhana, Minimization of Machine Idle Time and Penalty Cost in Flexible Manufacturing System Scheduling, International Journal of Engineering and Advanced Technology (IJEAT), 8, 6, 8/1/2019, 483-487, of Engineering and Advanced Technology (IJEAT), ISSN: 2249 – 8958

18. Mundrathi Saikiran a, G. Ravali a, Pankaj kumar, Comparative study of vegetable based and conventional cutting fluids in machining of copper alloys, Materials Today: Proceedings, 19, August, 2019, 611-614, 2214-7853, doi.org/10.1016/j.matpr.2019.08.077.

19. Mundrathi Saikiran a, Pankaj kumar, An investigation on the effects of vegetable oil based cutting fluids in the machining of copper alloys, Materials Today: Proceedings, 19, July-2019, 455–461, 2214-7853, doi.org/10.1016/j.matpr.2019.07.635.

International conference:

1. M.Shivachander, Design and Fabrication of Agri-Cutter, International Conference on Advanced Materials & Moderan Manufacturing (ICAMMM-20), 29-05-2020 to 30-05-2020.

2. M. Shivachander, Study on Temperature distribution during Friction stir welding of 5083 aluminium alloy, International Conference on Advanced Materials & Moderan Manufacturing (ICAMMM-20), 29-05-2020 to 30-05-2020.

3. Rajesh Boorla, Mohammed Moizuddin, Gankidi Gangadhar Reddy, Syed Faisal Nouman, Mechatronic approach in hydraulic braking system, Second International Conference on Material Science and Manufacturing Technology 2020 (ICMSMT-2020), at Hotel Aloft, Coimbatore, Tamilnadu, from 09 to 10-04-2020, 1-5.

4. M. Shiva Chander, M. Ramakrishna, and B. Durgaprasad, Impact of Process Parameters on Peak Temperature Inside the Workpiece During Friction Stir Welding of AA5083 Aluminum Alloys, Recent Trends in Mechanical Engineering (ICIME 2020), Gurunanak Institutions, Hyderabad, from 10 to 11-01-2020, 109-119, ISSN 2195-4364 (electronic), ISBN 978-981-15-7557-0 (eBook).

Conferences/Seminars/workshops/FDPs Conducted:

1. One day Seminar on Additive Manufacturing was conducted by Center for Materials and Manufacturing, Dept. of Mech. Engg., S R Engineering College, Warangal, on 28-02-2020.
2. One day Training Program on Solid Works & Hypermesh CAD/CAM Club was conducted by Dept. of Mech. Engg., S R Engineering College, Warangal, on 15-02-2020.
3. One day Workshop on Robotics - A Glims and Market Opportunities, was conducted by Robotic Club, Dept. of Mech. Engg., S R Engineering College, Warangal, on 10-02-2020.
4. Workshop on Research Methodology for Mechanical Engineers (IPR) was conducted by Dept. of Mech. Engg. S R Engineering College, Warangal, on 20-01-2020 to 21-01-2020.
5. One day Workshop on Renewable Energy Sources Club was conducted by Dept. of Mech. Engg., S R Engineering College, Warangal, on 10-01-2020.
6. One day workshop on Python was conducted by Dept. of Mech. Engg., S R Engineering College, Warangal, on 21-08-2019.
7. Workshop on Research Methodology for Mechanical Engineers (IPR) was conducted by Dept. of Mech. Engg. S R Engineering College, Warangal, on 18-11-2019 to 19-11-2019.

8. One day Workshop on Research Methodology for Mechanical Engineers (IPR) was conducted by Dept. of Mech. Engg. S R Engineering College, Warangal, on 21-09-2019.

Conferences/Seminars/workshops/FDPs Attended:

1. Skill development programme on welding techniques for technical staff and budding engineers organized by MLRIT-Hyderabad from 22-06-2020 to 26-06-2020.

2. One day online FDP on Design of experiments organized by CJITS-Jangaon on 22-06-2020.

3. Online FDP on Recent advances in mechanical engineering organized by BIET-Hyderabad from 22-06-2020 to 26-06-2020.
4. Online FDP on 3D Printing & Design organized by AICTE Training and Learning (ATAL) Academy from 15-06-2020 to 19-06-2020.

5. One day online Super session on Future of Education organized by ICT Academy Skycampus on 18-06-2020.

6. Online FDP on Emerging trends in r & ac organized by PCCER-Pune from 01-06-2020 to 06-06-2020.

7. 3rd International Conference on Innovations in Mechanical Engineering (ICIME-2020), on Impact of process parameters on peak temperature inside the workpiece during friction stir welding of AA5083 AL alloys organized by Gurunanak Institutions Technical Campus & Gurunanak Institute of Technology from 10-01-2020 to 11-01-2020.

8. FDP on Fundamentals of Manufacturing Processes NPTEL Online Certificate Course organized by NPTEL Online Certificate Course, July-2019 to October-2019.

9. One day Workshop on Emerging Trends in Welding and Non-Destructive evaluation organized by The Indian Institute of Welding, Hyderabad. And Indian Society for non-destructive testing, Hyderabad Chapter at Gurukul, NFC, Hyderabad on 30-08-2019.

10. Workshop on Outcome Based Education organized by S R Engineering College, Warangal from 21-07-2019 to 22- 07-2019.

11. Workshop on Research Methodoloy organized by KL Deemed as University, Vijayawada from 16-07-2019 to 18-07-2019.

DEPARTMENTAL ACTIVITIES

SREC

One day workshop on "**Indigenous Renewable Energy Technologies for Sustainable Development – 2020"** by **Dr. K.Srinivas Reddy**,"

One day workshop on Indigenous Renewable Energy Technologies for Sustainable Development – 2020" was conducted by Renewable energy club and Mechanical Engineering Dept. on January 10th 2018 at Mechanical seminar hall, Block II ME, SREC.

Dr. Reddy is a Professor of Mechanical Engineering at IIT Madras and he is also an honorary professor at University of Exeter, UK. He had given brief about Indigenous Renewable Energy Technologies for Sustainable Development.

Students listening to the speaker

Dr. Reddy Sir is interacting with the students as well as faculties of ME department.

Two day workshop on "Intellectual Property Right"

Two day workshop on Intellectual Property Right was organized by IPR coordinator, Dr. P. Sammaiah and Mechanical department on 19th November 2019 at SRiX.

The Center for Intellectual Property Right of our Institution permitted to organize a two day workshop on IPR activities to enhance the patent culture in our campus (SRECW).

Mr. Sandesh Agarawal, IP Curate Labs, New Delhi, interacted with the faculty and students to create the awareness about the patent filing and its importance.

Sandesh Agarwal addressing the students and faculty

Dr. P. Sammaiah addressing students about IPR course in the curriculum

One day seminar on "Additive Manufacturing"

One day seminar on Additive Manufacturing was organized by center for materials and manufacturing dept. of mechanical engineering on 28th February 2020 at Mechanical seminar hall, Block II ME, SREC.

Prof. G. D. Janki Ram from IIT, Hyderabad is interacting with students and faculties.

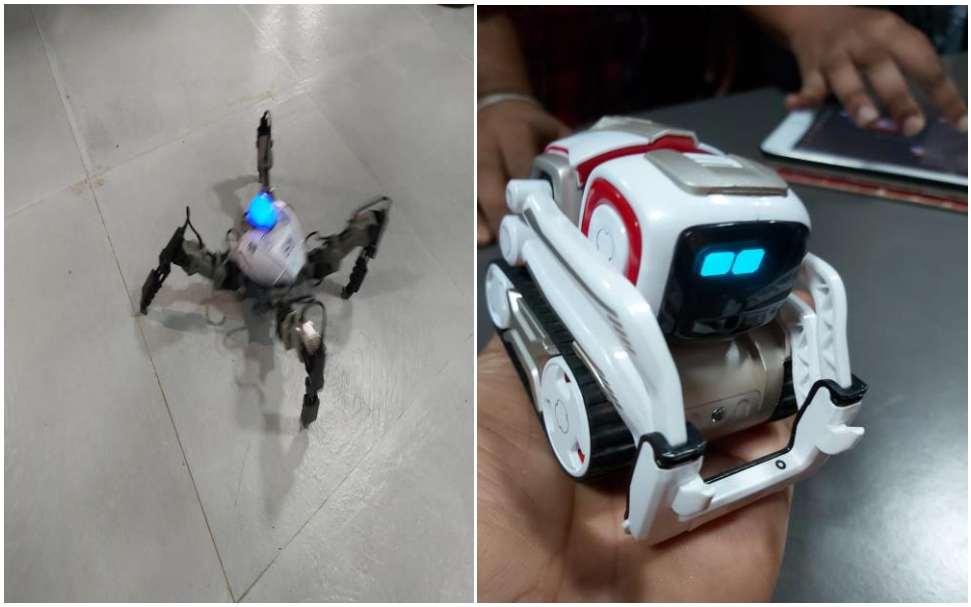
Students and faculties participated in the seminar

Prof. G. D. Janki Ram from IIT, Hyderabad is detailing about the various aspect of Additive manufacturing.

ONE DAY WORKSHOP ON "ROBOTICS - A GLIMS AND MARKET OPPARTUNITIES

One day workshop on ROBOTICS - A GLIMS AND MARKET OPPARTUNITIES was organized in the department of mechanical Engineering, under Robo Club in Association with SRiX on 10th February.

The Chief guest and Resource Person of the workshop Sri P.Karthik Kumar, Co-founder, You Code has given an elaborated lecture on ROBOTICS and explained about main components of Robotics. Mainly He explained about LIDOR (lies on the head of a Robot).



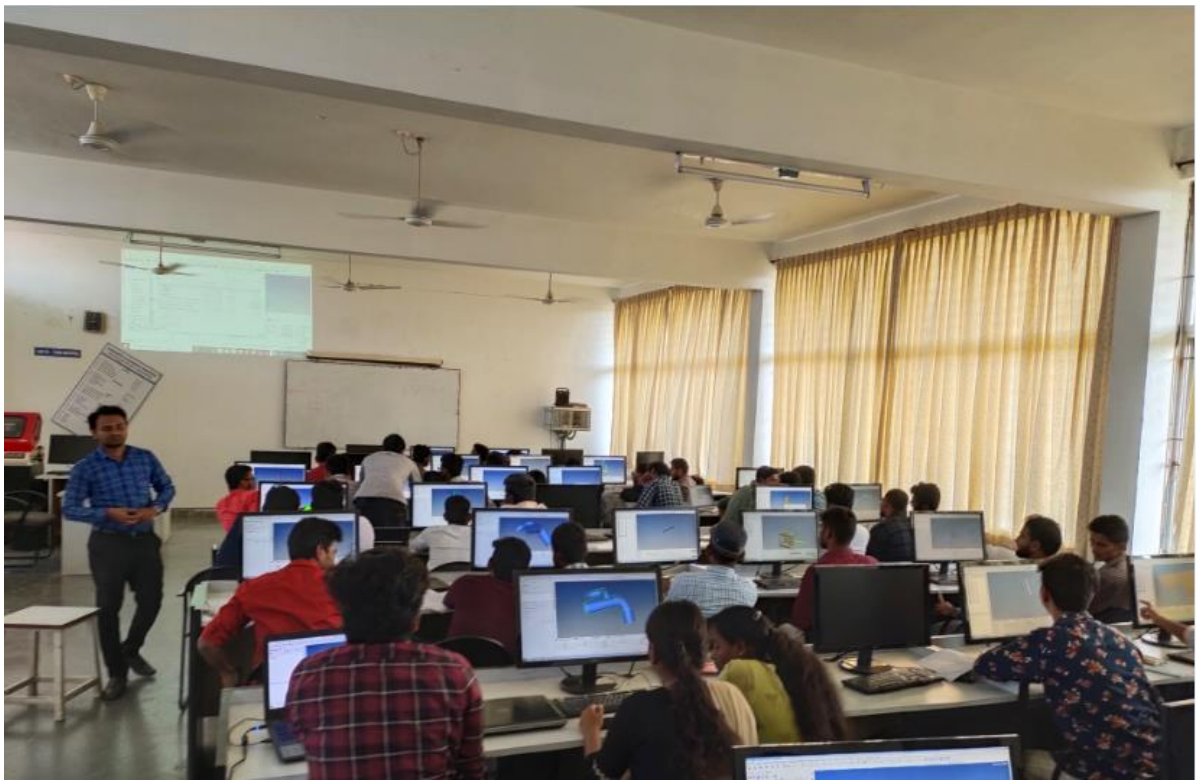
Hands- on -sesions on ROBOTICS

Resource person Sri P.Karthik Kumar, Co-founder, You Code, explained about AI in robots to make it as Autonomous Robots.

A Training Program on "SOLID WORKS & HYPERMESH"

A Training Program on SOLID WORKS & HYPERMESH was organized by Cad/Cam club Department of mechanical engineering on 15th February 2020.

Mr. P. Jagdeesh Reddy, J. V. Corporate addressing the students



Students at the work workshop

Mr. P. Jagdeesh Reddy and Team, j. v. corporate addressing the students at workshop

Students also attended the drive conducted by JV Corporate based on this training on 15th March 2020. They selected 13 students from final year