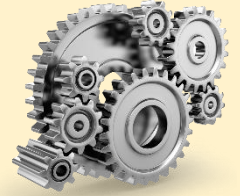




NEWS LINKS



September 2021 | Volume 3 | Issue 2

A BI-ANNUAL E-NEWSLETTER OF THE DEPARTMENT OF MECHANICAL & MANUFACTURING ENGINEERING,
MANIPAL INSTITUTE OF TECHNOLOGY, MANIPAL ACADEMY OF HIGHER EDUCATION, MANIPAL

MESSAGE FROM HEAD OF THE DEPARTMENT

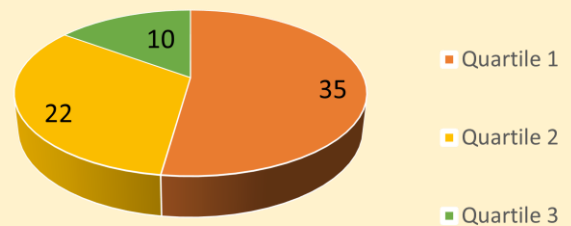


Just when we thought the pandemic is going to end with the inoculation drive started by the government, the second wave started compelling us to conduct the laboratory classes using online platform, which we successfully did. It appears that we are now getting acquainted to the new normal. However, in my opinion there is no substitute to 'one to one' learning in the teaching-learning process. Let us always take care and sincerely hope and pray that things will get back to normal at the earliest. Despite all odds, I am delighted to inform you that the department has put up a robust performance on the research front as well as with regard to student activities during January - June 2021. My sincere appreciation and gratitude to all the stakeholders and look forward to their continual support in all our future endeavours. At this juncture, my best wishes to the graduating batch of 2021. I also wish all the present students and faculty members a fruitful semester ahead.

Dr Sathya Shankara Sharma

FACULTY ACHIEVEMENTS

- **Publications:** Faculty of the department have published 67 research papers in Web of Science/Scopus indexed journals and 03 papers have been presented in various international conferences held during January to June, 2021.



- **Grant Received:** A VGST grant amounting to INR 3,00,000/- was received by **Dr Dinesha P (as PI)**, Associate Professor from the Government of Karnataka for the project titled, "Design and Development of Selective Catalytic Reduction Modules for NOx Reduction from Compression Ignition Engines" in the month of February, 2021. **Mr Sooraj Mohan** (research scholar) is currently executing the project for his doctoral thesis work under his guidance.
- **Grant Applied:** 05 faculty members of the department have applied for research grants amounting to **INR 1,59,55,377/-** from various government/industrial organizations during January - June, 2021.
- **FDPs/Workshops Attended:** A total of 12 faculty members of the department have attended FDP/Workshop's during January-June 2021.
- **Reviewers:** 05 faculty members of the department have served as reviewers for various international/national journals & conference articles during January-June 2021.

EDITORIAL BOARD

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Dr Sathya Shankara Sharma

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- Mr Kevin A Mathias
- Mr C S Suhas Kowshik

Sub - Editors (Students)

- Mr Abhishek Pal
- Mr Madhur Singh



FACULTY ACHIEVEMENTS

- **Dr Raghuvir Pai B**, Professor was elected as the Founder President of Asset Management Society, India on 30th January 2021 for the period 2021-2023. The society has an executive council with members from IIT's, IIM's, Industry, Defence and other academic institutions. The society has an International Advisory Committee, National Advisory Committee and National Technical Committee headed by eminent people in the area of Asset Management. The objective of the society is to sustain and enrich the maintenance engineering and asset management skills of asset management practitioners and organizations.
- **Dr Raghuvir Pai B**, Professor was the Invited speaker for the AICTE-ATAL sponsored online Faculty Development Programme on "Green Tribology and Sustainable Engineering" organised by Department of Mechanical Engineering, Canara Engineering College, Bantwal from 22nd to 26th June, 2021.
- **Dr Raghuvir Pai B**, Professor inaugurated the 'Tribology Study Group' in the Dept. of Mechanical Engineering at St Joseph Engineering College, Mangalore and delivered a talk on 'Tribology in Engineering and Biology' on 6th January 2021.
- **Dr Raghuvir Pai B, Dr D Srikanth Rao (Professors)** and **Dr Girish H**, have co-authored a book chapter titled "Studies on the Load Carrying Capacity of a Multi-Pad Adjustable Bearing Under Misaligned Conditions" published in June 2021 in "Advances in Fluid Dynamics" - Selected Proceedings of ICAFD 2018 (pp. 277-288). (Lecture Notes in Mechanical Engineering). Springer Gabler, ISSN (Print) 2195-4356, DOI: https://doi.org/10.1007/978-981-15-4308-1_22
- **Mr Bharat Bhat** was awarded doctoral degree for his thesis titled "Numerical Investigation of Anterior Cruciate Ligament (ACL) Reconstruction in Human Knee Joint" by Manipal Academy of Higher Education, Manipal, in May 2021. The research work was carried out under the guidance of **Dr Raviraja A**, Professor, Department of Mechanical & Manufacturing Engineering & Associate Director (Academics), MIT, Manipal and **Dr Kiran Kumar Acharya**, Professor, Dept. of Orthopaedics, KMC, Manipal.
- An **Indian patent** was awarded to the patent filed by **Mr Nithesh Naik**, Assistant Professor (Senior Scale) and **Dr Zeeshan Hameed BM**, Associate Professor, Department of Urology, KMC Manipal and Chief of KMC Innovation Center for their novel innovation titled "A Scissors-Needle System for Intra-Cavitary Hydro-Dissection and Excision of Tissues" in January 2021 by India Patents Office (Intellectual Property India). The innovation aids to perform cold enbloc dissection and excision of bladder tumors in bladder cancer patients.
- **Dr Vijay G S**, Associate Professor (Senior Scale) and **Dr Siddappa I Bekinal**, Associate Professor were invited as guest speakers for the 3 day faculty development program on "Modelling, Optimization and Analysis of Engineering Problems using Soft Computing Techniques", organized by the Department of Mechanical Engineering, Yenepoya Institute of Technology, Moodubidri, held on 30th March & 1st April 2021.
- **Dr Manjunath Shettar**, Assistant Professor (Senior Scale) has served as the Technical Committee Member for the 9th "Asia Conference on Mechanical and Materials Engineering" (ACMME-2021), Virtual Conference held during 26th to 28th June, 2021.
- **Mr Nitesh Naik**, Assistant Professor (Senior Scale), along with **Mr Zhanhu Guo** from University of Tennessee have published a research paper titled "Overview of Anion Exchange Membranes Based on Ring Opening Metathesis Polymerization (ROMP)" in "Journal of Polymer Reviews" having an Impact factor of 7.543 (Quartile 1, top 1%), in February 2021. <https://doi.org/10.1080/15583724.2021.1881792>.



FACULTY ACHIEVEMENTS

- **Dr Vishwanath Managuli**, Assistant Professor (Senior Scale) has delivered a TEQIP lecture on “Fundamental of Core Subjects in Mechanical Engineering” to the Students of Engineering College Jhalawar, Rajasthan on 12th February 2021.
- **Dr Kirana Kumara P**, Assistant Professor (Senior Scale) has chaired a session for the 6th “International Conference on Smart Engineering Materials” (ICSEM 2021) organized by ICSEM, Nha Trang, Vietnam during 8th to 10th January 2021.
- **Dr Vishwanath Managuli**, Assistant Professor (Senior Scale) has chaired a session on biomechanics for the “Virtual Seminar on Applied Mechanics” (VSAM-2021) organized by the “Indian Society for Applied Mechanics” on 28th May 2021.

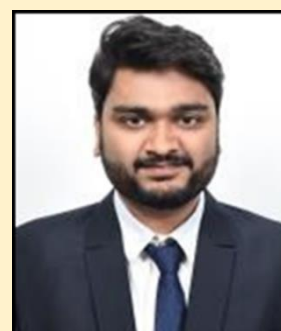
PhD AWARDEES

- **Mr Pradeep Kumar Shetty**, Associate Professor (Senior Scale) was awarded doctoral degree for his thesis titled “ Impact of Servant Leadership on Ethical Climate, Organizational Citizenship Behavior and Perceived Organizational Support - an Empirical Analysis “, by Tumkur University, Tumkur in February 2021. The research work was carried out under the guidance of Dr. Babu Thomas, Professor, Department of Business Administration, St Aloysius College , Mangalore.



- **Mr Jamaluddin Hindi**, Assistant Professor (Senior Scale) was awarded the Doctoral degree for his thesis titled “Hardness Related Characteristics of Precipitation Hardened Al 7075-Cast Iron Powder Reinforced Metal Matrix Composites” by Manipal Academy of Higher Education, Manipal, in March 2021. The research work was carried out under the guidance of Dr U. Achutha Kini, Professor and Dr Sathya Shankara Sharma, Professor & Head, Department of Mechanical and Manufacturing Engineering, Manipal Institute of Technology, Manipal.

- **Mr Pavan Hiremath**, Assistant Professor (Senior Scale) was awarded doctoral degree for his thesis “Investigation and Evaluation of Post Carburizing Treatments on Gear Alloy Steels for Improving Surface Characteristics and Bulk Mechanical Properties” by Manipal Academy of Higher Education, Manipal, in May 2021. The research work was carried out under the guidance of Dr Sathya Shankara Sharma, Professor & Head and Dr Gowrishankar M C, Associate Professor, Department of Mechanical & Manufacturing Engineering, Manipal Institute of Technology, Manipal.





ALUMNI ACHIEVEMENTS



- **Mr Rajaram Pai**, an alumnus from the batch of 1993 B.Tech. Mechanical Engg. has been appointed as Chief Business Officer - Industrial at Mahindra Lifespace Developers Ltd., the real estate and infrastructure development arm of Mahindra group. Rajaram will oversee strategy, planning, development, sales, operations and value creation for the Integrated Cities & Industrial Clusters (IC & IC) business vertical of the Company spanning Mahindra World City and ORIGINS developments across India. He has more than 27 years of experience across diverse sectors.

- **Mr Arun Patnaik**, an alumnus from the batch of 1991 B.Tech. Industrial & Production Engg., CEO and Director of AABSyS has been appointed as the Odisha State Lead for the National Association of Software and Service Companies (NASSCOM) Small & Medium Enterprises (SME) Council. Mr Patnaik will represent NASSCOM to prioritize on the development of SME ecosystem in the state of Odisha to create more opportunities and build talent for the IT SME sector.



- **Mr Sahil Kapoor**, an alumnus from the batch of 2009 B.Tech. Mechanical Engg. and **Mr Sanchit Gupta** (an alumnus from the batch of 2003 B.Tech. CSE), are the co-founders of Sunset Cinema Club, have inspired the nation by turning an arid patch of land into a Greek-themed drive-in cinema at Tri-City, Chandigarh. By partaking in the 90-day challenge to make a positive difference in society, the duo has set an example to self-employed individuals.

- **Mr Rishabh Nautiyal**, an alumnus from the batch of 2003 B.Tech. Mechanical Engg. has been appointed as Head of Education Business Unit – Europe at Tata Consultancy Services (TCS) in Oslo, Norway. He is associated with the tech giant since 2007.



- **Mr Akhil Kokkalemade** an alumnus from the batch of 2014 B.Tech. Mechanical Engg. has been recognised for academic excellence as an MBA student at the University of Rochester—Simon Business School through the publication of his name on the esteemed Dean's List.



ALUMNI ACHIEVEMENTS



- **Mr Dhananjay Kumar**, an alumnus from the batch of 2010 B.Tech. Industrial & Production Engg., has been placed among the top rank holders in the Bihar Public Service Commission (BPSC) examination. Dhananjay will join the service as a revenue officer.

- **Mr Swapnil Maruvada**, alumnus from the batch of 2017 B.Tech. Mechanical Engg. batch has secured an All India Rank of 76 in the GATE 2021 Examination.



STUDENT ACHIEVEMENTS

- **Mr Rohith Kini T**, final year B Tech Mechanical Engg. student in association with **Mr Thomas Manuel S**, Associate Professor and **Ms Vidhushi Gupta & Mr Madhu Sharma**, students, Manipal College of Dental Sciences, Mangalore have applied for a patent for MAHE for their invention titled “ Device for Entrapment of Infectious Materials During Dental Procedures” with the Office of the Controller General of Patents, Designs & Trade Marks, Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Government of India in February, 2021.
- **Mr Aditya Bantwal, Mr Aditya Singh** and **Mr Abhay Ramachandran Menon**, students of 8th semester B.Tech. Mechanical Engg. have co-authored a research paper with **Dr Nitesh Kumar**, Assistant Professor (Senior Scale), titled “Pathogenesis of Atherosclerosis and its Influence on Local Hemodynamics: A Comparative FSI Study in Healthy and Mildly Stenosed Carotid Arteries, published in “International Journal of Engineering Science”, Volume 167,103525 having an impact factor of 8.843 and a cite score of 13.4”.
- **Mr Shrinivasa Prabhu**, a student of 6th semester B.Tech. Mechanical Engg has co-authored a research paper with **Mr Suhas Y Nayak**, Assistant Professor (Senior Scale), titled "Effect of CNT-Based Resin Modification on the Mechanical Properties of Polymer Composites" published in “Frontiers in Materials”, Quartile 2; IF: 3.515, in the month of January 2021.
- **Ms Rashmi Samanth**, graduate in Mechanical Engineering from the class of 2020, **Mr Shrinidhi L K & Mr Krishna Manoj Salunkhe**, students of 8th semester B.Tech. Mechanical Engineering have co-authored a research paper with **Mr Srinivas Shenoy H, & Mr Suhas Y Nayak**, Assistant Professors (Senior Scale) and **Dr Sathish Rao U**, Associate Professor (Senior Scale) titled "Two Body Wear Characteristics of Polyalthia Longifolia/Mangifera Indica/Jute Fiber Reinforced Epoxy Composites using Taguchi Technique" published in “Materials Research”, Quartile 2, IF: 1.524 in the month of February 2021.



STUDENT ACHIEVEMENTS

- **Ms Rashmi Samanth**, graduate in Mechanical Engineering from the class of 2020 has co-authored a book chapter with **Mr Suhas Y Nayak**, Assistant Professor (Senior Scale) titled "Experimental Analysis of High Velocity Impact Properties of Composite Materials for Ballistic Applications" in "Impact Studies of Composite Materials, Composites Science and Technology", Springer Nature Pte. Ltd. in the month of May 2021.
- **Mr Rajath Shenoy K**, graduate in Mechanical Engineering from the class of 2020 has co-authored a book chapter with **Mr Suhas Y Nayak**, Assistant Professor (Senior Scale) titled "Numerical Approach to Evaluate Failure of Composites Under Ballistic Impact" in "Impact Studies of Composite Materials, Composites Science and Technology", Springer Nature Pte. Ltd. in the month of May 2021.
- **Mr K Varun**, research scholar has co-authored a research paper with **Dr U C Arunachala**, Associate Professor (Senior Scale) titled "Transient Parametric Pilot Study on Thermosyphon Heat Transport Device: A Computational Fluid Dynamics Hypothesis and Experimental Exploration", published in "Heat Transfer-Asian Research" (Wiley), June 2021, Vol. 50, Issue 4, pp. 3426-57.
- **Mr K Varun**, research scholar has co-authored a research paper with **Dr U C Arunachala**, Associate Professor (Senior Scale) titled "Intensification of Thermo-Hydraulic and Exergetic Performance by Wirematrix and Wavy Tape: An Experimental Study", published in "International Communications in Heat and Mass Transfer" (Elsevier), February 2021, Vol. 121, pp. 105124.
- **Mr Sooraj Mohan**, research scholar has co-authored a research paper with **Dr Dinesha P**, Associate Professor titled, "Modelling and Analysis of a Solar Minichannel Flat Plate Collector System and Optimization of Operating Conditions Using Particle Swarms" published in the Elsevier journal "Thermal Science and Engineering Progress" (Vol. 22, 100855) in the month of May, 2021. The journal is indexed in Scopus (Q1-87%) and SCI.
- **Mr Ajay C M**, M Tech (TSES) student and **Mr Sooraj Mohan**, research scholar have co-authored a research paper with **Dr Dinesha P**, Associate Professor titled, "Decentralized Energy from Portable Biogas Digesters Using Domestic Kitchen Waste: A Review" in the Elsevier journal, "Waste Management" (Vol. 125) in the month of April, 2021. The journal is indexed in Scopus (Q1-93%) and SCI (IF-7.145).
- **Mr Naomon Khan**, M Tech (TSES) student and **Mr Sooraj Mohan**, research scholar have co-authored a research paper with **Dr Dinesha P**, Associate Professor titled, "Regimes of Hydrochar Yield from Hydrothermal Degradation of Various Lignocellulosic Biomass: A Review" in the Elsevier journal, "Journal of Cleaner Production" (Vol. 288, 125629) in the month of March, 2021. The journal is indexed in Scopus (Q1-98%) and SCI (IF-9.297).
- **Mr Shreyas P Shetty** and **Ms Sadvidya Nayak** students of 8th semester B Tech Mechanical Engg. have co-authored a research paper with **Dr Shiva Kumar**, Associate Professor (Senior Scale) and **Dr K Vasudeva Karanth**, Professor titled "Thermo-Hydraulic Performance Prediction of a Solar Air Heater with Circular Perforated Absorber Plate Using Artificial Neural Network" published in "Thermal Science and Engineering Progress", 23, 2021, 100886.
- **Ms Preeti Maurya**, research scholar has co-authored a research paper with **Dr Vijay G S**, **Dr Raghavendra Kamath C** & **Dr B Shivamurthy**, Associate Professors (Senior Scale) titled "Cryogenic Machining of Elastomers: A Review" published in "Machining Science and Technology". 25(3), 2021.



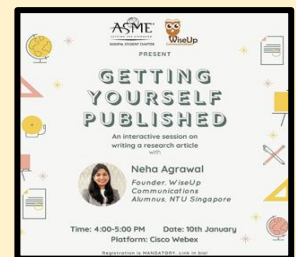
STUDENT ACHIEVEMENTS

- **Mr Yermal Shirraj Rao**, research scholar has co-authored a research paper with **Dr N S Mohan**, Professor, **Dr B Shivamurthy**, Associate Professor (Senior Scale) and **Dr Nagaraja Shetty**, Assistant Professor (Senior Scale) titled “Effects of Solid Lubricant Fillers on the Flexural and Shear Strength Response of Carbon Fabric-Epoxy Composites” published in “Polymer Testing”, 96, 107085 (2021).
- **Ms Sneharika Akula** & **Ms Sadvidya Nayak** students of 8th semester B Tech Mechanical Engg. have co-authored a research paper with **Dr Gururaj Bolar**, and **Dr Vishwanath Managuli**, Assistant Professors (Senior Scale) titled “Comparison of Conventional Drilling and Helical Milling for Hole Making in Ti6Al4V Titanium Alloy Under Sustainable Dry Condition” published in “Manufacturing Review”, Volume 8, pp. 1-13,(2021).
- **Mr R Munshi** & **Mr R S Agarwal**, graduates in Industrial & Production Engg. from the class of 2019 have co-authored a research paper with **Dr Vishwanath Managuli**, Assistant Professor (Senior Scale) titled “Compressive Behaviour of 3D Printed Sandwich Structures Based on Corrugated Core Design” published in “Materials Today Communications”, Volume 26, March 2021, 101725.

CLUB ACTIVITIES - ASME

- **Getting Yourself Published**

In January, 2021, ASME Manipal hosted a webinar in partnership with WiseUp Communications on 'Getting Yourself Published'. More than 100 participants attended the webinar. The webinar educated the participants on the process of writing a research paper and getting oneself published.

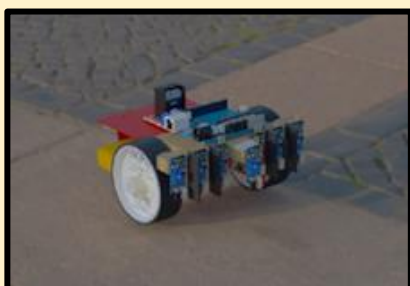


- **Website launch**

ASME Manipal formally launched their pure coded website in June 2021. The website was in the works for more than a year and required surveying of over 500 websites. The website was designed by Mr. Naman Sharma and was prepared by Ms. Malika Arora. The Social Media Post about the launch of the website received over 40,000 views. The team is also developing a mobile website link to the website: <https://asmemanipal.org/>

- **IAM3D**

ASME Manipal Student Chapter successfully designed and manufactured a 3D printed drone for the IAM3D competition in the ASME Asia-Pacific Fest. The bot was manufactured during the second wave of COVID-19.



- **Line Follower Robot**

ASME Manipal Student Chapter participated in Technex, a flagship Technical event held by St. Vincent Pallotti College of Engineering and Technology, Nagpur. All teams had to make their own line follower robot with specifications. Line follower bot is an automated mobile machine that can detect and follow a specific colour line drawn on a plane background. This year due to the COVID-19 pandemic the competition was held online.