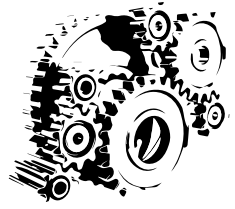




# NEWS LINKS



SEPTEMBER 2020  
Volume 2 | Issue 2

A Bi-annual E-newsletter of the Dept. of Mechanical and Manufacturing Engineering  
Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal

## MESSAGE FROM HEAD OF THE DEPARTMENT



We are passing through one of the most difficult times of our lives. An invisible virus has brought the entire world to its knees. I sincerely hope and pray that we will get through these difficult and challenging times at the earliest.

At this juncture I am delighted to inform you that the Dept. of Mechanical & Manufacturing Engg. is celebrating its diamond jubilee this year. During these 60 years of existence in MIT the department has added an immense value to the institute, university and society at large by starting new academic programmes, focusing on research & consultancy, placements and by strengthening alumni relationship. This milestone would not have been possible without the proactive support of management, faculty, students, alumni and all our stakeholders. My heartfelt appreciation and gratitude to all of them and look forward to their continual support in all our future endeavours.

My best wishes to the graduating batch of 2020 and wishing all the present students and faculty members a fruitful semester ahead

-Dr. S.S. SHARMA

## DEPARTMENT NEWS

• The International Conference on Maintenance and Intelligent Asset Management (ICMIAM-2020) was jointly organized by the Department of Mechanical and Manufacturing Engineering, MIT (MAHE) Manipal, Federation University, Australia and Asset Management Council, Australia on the 17th and 18th January 2020 at the Manipal Academy of Banking, Bengaluru.



Dr. Gopinath Chattopadhyaya from Federation University, Australia, Mr. Dave Daines from Asset Management Council, Australia and Dr. Raghuvir Pai B., Professor, Dept. of Mech. & Mfg. Engg., MIT were the Chairpersons of the conference. Dr. D. Srikanth Rao, Director, MIT, presided over the inaugural function and Dr. S.S. Sharma, HOD graced the inaugural function.

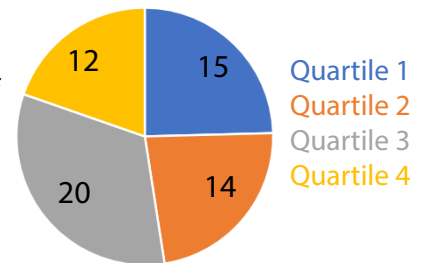
The conference focussed on the overview of the benefits of working within an asset management framework, as well as insights into implementing, improving and enhancing asset management through systems & standards, and technologies for balancing costs, risk and performance.

There were 50 papers and 8 posters presented in 10 parallel sessions in the areas of Asset Management, Data Science, Asset Life Cycle Management, Water Audit and Analysis, Tribology and Maintenance. The conference had delegates from India, Australia, New Zealand, Spain, Mexico, Hong Kong, South Africa, Papua New Guinea and USA.

The conference was sponsored by Department of Science and Technology-Science and Engineering Research Board (DST-SERB) Government of India, Council for Scientific and Industrial Research (CSIR) Government of India, Forbes Marshal Pvt Ltd. Pune, Anton Par, DUCOM, Maini Material Movement, Concord United Products, Mr Ramesh Kumar SAP, Lenovo, Fracktal Works, ION and EDS Technologies.

## FACULTY ACHIEVEMENTS

• Faculty members have published 61 research papers in various Web of Science/Scopus indexed journals and 09 faculty members have presented papers in various international conferences held during January to June, 2020.



Quartile Distribution of Journal Publications

• 05 Faculty members of the department have served as reviewers of international/national journals & conference articles during January to June, 2020.

• 02 faculty members have attended Workshop/FDP's during January to June, 2020.

• Mr. Nitesh Kumar, Dr. Shah Mohammad Abdul Khader, and Dr. Raghuvir Pai B., have published a paper titled " Fluid Structure Interaction Study of Stenosed Carotid Artery Considering the Effects of Blood Pressure" in "International Journal of Engineering Science", volume 154, September 2020, issue having an impact factor of 9.219.

## EDITORIAL BOARD

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- “ Eye Tribology Research Group” headed by Dr. Raghuvir Pai B., Professor, has applied for an provisional Indian Patent (Application No. 202041025410) for “A Novel Technique For In Vivo Measurement Of Coefficient Of Friction In The Human Eye With Contact” at the Indian Patent Office, Chennai.
- Dr. Raghuvir Pai B., Professor, coordinated “Ford University Consortium Workshop” along with Dr Ashok Rao, Associate Director, R & C, Dr. Satish Shenoy, HOD, Dept. of Aeronautical and Automobile Engg. and with the support from Ford India & Deakin University Australia, in online mode on 18th March, 2020 at MIT Manipal. Participants for the workshop were from MIT Manipal, Ford GTBC Chennai, Deakin University, VIT Vellore and Chennai, PSG, Coimbatore, SSN College of Engineering, Chennai and IIITDM Kancheepuram. The objectives of the workshop was to explore possibilities of research collaboration in key areas with the respective universities and establishing working groups for the same. Dr. D. Srikanth Rao, Director, MIT Manipal presided over the workshop.
- Mr. Nithesh Naik, Assistant Professor (Senior Scale) jointly in association with Mr. Kshitij Bharadwaj (Student 6th Sem. B.Tech. Mechanical) and Dr.Vathsala Patil, Faculty, MCODES has applied for an provisional Indian Patent (Application No. 202041008172) for the device titled “An Automatic Light Positioning and Focusing System” at the Indian Patent Office, Chennai.
- Dr. Anupama Rajendra Hiremath, Assistant Professor (Senior Scale) along with the research scholar of the department Mr. Sridhar T. have authored a technical report titled “Use of Bio-Fibres in Various Practical Applications” available as a book chapter in “Encyclopaedia of Renewable and Sustainable Materials”, Published by Elsevier in January 2020.
- Mr. Ramakrishna Vikas, Assistant Professor (Senior Scale) has received “Best Paper Award” for his research paper titled “Comparative Study on the Mechanical Properties of Precipitation Hardened and Low Temperature Thermo-mechanically Treated AA6061” presented at “Global Conference on Advanced, Smart & Sustainable Technologies in Engineering, held at MITE, Moodabidri, in January 2020.
- Mr. Manjunath Shettar Assistant Professor (Senior Scale) has received “Outstanding Reviewer” award from IOP Publishing, Bristol, UK in April 2020.
- All the students of M.Tech. – Manufacturing Engg. programme have secured internship with stipend for a duration of 9 months in “ Aditya Auto Pvt. Ltd.”, Bangalore starting from August, 2020.

## GRANT RECEIVED DETAILS

The collaborative project titled "In Vivo Measurement Of Coefficient Of Friction In The Human Eye With Contact Lens" between Dept. of Mechanical and Manufacturing Engg., Dept. of Instrumentation and Control Engineering, MIT, Department of Optometry, MCHP and Department of Ophthalmology, KMC Manipal, received 1st instalment of Rs. 40,27,972.00 out of the sanctioned amount of Rs 56,28,320.00 from DST-SERB Core Research Grant on 05th Feb. 2020. Dr. Raghuvir Pai B. Professor and Dr. S.M.Abdul Khader, Associate Professor, were respectively chief investigator and co-investigator of the project from the department.

## PhD AWARDEE

Mrs. Anupama R. Hiremath, Assistant Professor- Senior Scale was awarded doctoral degree for her thesis titled “Fabrication, Mechanical and Thermal Behavior of Chilled Aluminum Alloy (LM-25) Reinforced with Borosilicate Glass Metal Matrix Composites” by VTU, Belagavi, in January 2020. The research work was carried out under the guidance of Dr. Joel Hemanth, Associate Dean, School of Engineering, Presidency University, Bengaluru.



## ALUMNI ACHIEVEMENTS

- Snehal Patil, alumnus from 1983 Mechanical Engg. batch has founded a "Nature Club" in Surat which has been the habitat for numerous animals, birds, reptiles, butterflies, insects etc. With over 100+ types of trees and almost no harmful impact on the environment, sustainability enthusiast Snehal has shown everyone that it is possible to live in harmony with nature. The club also organises various adventure activities and camps for creating environmental awareness among young children.



- Apurva Anand, alumnus from 2008 Mechanical Engg. batch has founded "BRB Popped Chips", a unique snack that is neither baked nor fried but popped. It has almost 60% less fat compared to fried potato chips and are also Gluten-Free.

- Ramesh Bojja, alumnus from 1998 Mechanical Engg. batch is the Co-Founder and CEO of "Smart Hash Labs", a company that provides block chain solutions. Block chain technology helps to store digital records in a secure and auditable manner, enabling a speedy, safe and cost-effective transfer of assets. He has authored a book titled 'World is One Bloody Family'

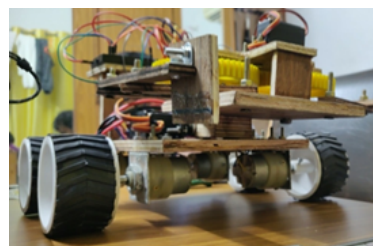


## STUDENT ACHIEVEMENTS

- K Rajath Shenoy and Rashmi Samant from final year B.Tech Mechanical Engg. co-authored a paper along with Prof. Suhas Y Nayak, Assistant Professor(Senior scale), titled "Influence of Fabric Orientation and Compression Factor on the Mechanical Properties of 3D E-Glass Reinforced Epoxy Composites" published in "Journal of Materials Research and Technology", (IF 5.289).
- Rashmi Samant from final year B.Tech Mechanical Engg. co-authored a paper along with Suhas Y Nayak, Assistant Professor(Senior scale), titled "Potential of Natural Fibers in Composites for Ballistic Applications – A Review" published in "Journal of Natural Fibers", (IF 2.622).

## CLUB ACTIVITIES

### ASME



- ASME Manipal team participated in the techno- management festival "BITS Quark- 2020" held at BITS, Pilani - K. K. Birla Goa Campus. The team had participated in the event, "Roboclench", in which it had built a mobile robot that can clench.

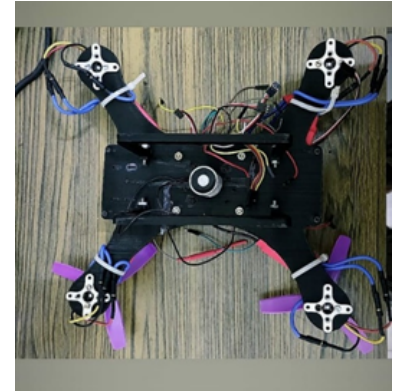




- ASME Manipal conducted “Fusion 360 Workshop” on 1st February, 2020 to help students understand 3D design and modelling concepts using Fusion 360 software provided by Autodesk. The workshop laid emphasis on formulation of effective models and preparation of detailed design reports.



- ASME Manipal participated in IAM3D, REBoat and the Old Guard competition in the “Efest Asia-Pacific 2020”, held at Marvadi University, Rajkot on 28th & 29th February, 2020. The work on the respective projects started 4-5 months prior to the competition and was completed in time. The IAM3D report was lauded as one of most complete reports in the competition, especially for its 100% Additive manufacturing score, and being the only team to achieve this. The REBoat was judged as the best designed Boat for its aesthetic yet smart design. The Old Guard presentation was on Regression Rate of Hybrid Rocket Motor and was among the Top 5 presenters.



- The ASME team is taking part in “KMC Hackathon”, an event that encourages students to come up with innovative solutions to tackle real-world problems. With COVID-19 pandemic in mind, the ASME team came up with an idea to relieve the workload of the doctors and nursing staff. To make their work easier, an Internet of Things based system is being worked upon, which would allow access to sensor readings from ICUs and home-quarantined patients directly at nursing stations and doctor's devices. A jacket is also being developed with the same idea, with ergonomically placed sensors and ease of access to data. The team currently is in phase 2 of the competition and has received a grant for developing a prototype.

- K. Uday and C. S. Aravind from ASME Manipal have published a paper titled "Automatic Sensing and Switching the Water Pump: A New Approach," at the 4th International Conference on Intelligent Computing and Control Systems (ICICCS), Madurai, India, 2020, pp. 170-173, doi: 10.1109/ICICCS48265.2020.9121147.