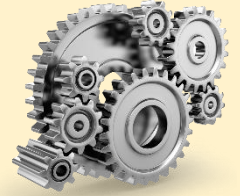




NEWS LINKS



October 2022 | Volume 4 | Issue 2

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

MESSAGE FROM HEAD OF THE DEPARTMENT



It is my pleasure to present to you the current issue of "Newslinks" showcasing the activities of the Dept. of Mechanical & Industrial Engg. from January to June, 2022. At this juncture it is nice to see the MIT campus buzzing with student activity with the commencement of classes in the offline mode after a gap of almost 2 years. I am happy to inform you that the B. Tech. - Industrial & Production Engg. programme of the department has received 3-year extension of accreditation from the National Board of Accreditation (NBA). My sincere appreciation and gratitude to all the faculty members, students, and alumni who have strived to achieve this feat and look forward to their continual support in all our future endeavours.

I take this opportunity to convey my best wishes to the graduating batch of 2022 and wish all the students and faculty members a fruitful academic year ahead.

Dr Sathya Shankara Sharma

DEPARTMENT NEWS

• *NBA Accreditation*

B Tech - Industrial & Production Engg. programme of the department has received 3 year extension of accreditation (2022-2025) from the National Board of Accreditation (NBA)

• *Farewell to Dr D Srikanth Rao*



The Dept of Mechanical & Industrial Engg organized a farewell function to honour **Dr D Srikanth Rao**, former Director and Professor in the department, who retired from active service on 31st January, 2022. The function was held on 5th March, 2022 at M.V. Seminar hall and was presided by Cdr (Dr) Anil Rana, Director, MIT. Dr S S Sharma, HOD, welcomed the gathering. Dr Somashekara Bhat, Joint Director, Prof K J Kamath, former HOD & senior most visiting faculty of MIT, Dr B H V Pai former Joint Director of MIT and other faculty members shared their memories of association with Dr Srikanth Rao. Dr Raghuvir Pai B, former Director of MIT and senior most professor of the department read the scroll of honour. Mr Suhas Kowshik rendered the invocation & Mr Vishal Shenoy proposed the vote of thanks. The program was compered by Mr Augustine Barboza. Mrs Swathi Rao, spouse of Dr Srikanth Rao graced the occasion. The formal stage function was followed by lunch arranged at the premises of MIT workshop.

EDITORIAL BOARD

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Cdr (Dr) Anil Rana

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Prof Augustine Barboza

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- Dr Suhas Y Nayak
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- Mr Kevin A Mathias
- Mr C S Suhas Kowshik



DEPARTMENT NEWS

• *Alumnus Visit*

Mr T S Vineet, an alumnus from the 1977-1982 batch of Mechanical Engg visited the department and interacted with the undergraduate students on 14th April, 2022. He has more than 20 years of experience in Industrial Marketing, Corporate Planning, Project Planning and Process Management spread over India, USA & Europe. Currently he is a consultant and trainer and has been a visiting faculty to Business Schools, Engineering and Professional Institutes across the country.



He has trained more than 20,000 engineering students in an effort to elevate their suitability for employment. He has also trained employees and senior management executives in various aspects of soft skills for top companies like Accenture, Axis Bank, Capgemini, BEML, ISRO, Sasken, Siemens, L&T, Kotak Mahindra, Oracle, Toshiba etc. The interaction session was held at UG CAD lab and was attended by 70 students of 6th semester. In his address to the students Mr Vineeth, apart from academic knowledge highlighted the importance of Communication, Interpersonal and Presentation Skills, English Language Enhancement, Customer Interaction, Decision Making, Leadership and Negotiation in professional life. The session was attended by Dr D Srikant Rao, former Director, Dr S S Sharma, HOD, Dr Raghuvir Pai B., Professor, Prof K J Kamath and other faculty members of the department. Mr Vineeth was instrumental in starting the cultural festival REVELS in MIT way back in 1982.

• *Collaboration between MIT and Ingersoll Rand Technologies and Services Pvt Ltd*



A Non-Disclosure Agreement has been signed between MIT and Ingersoll Rand Technologies and Services Pvt. Ltd., Bengaluru under the initiative of Dept of Mechanical & Industrial Engg to undertake collaborative projects related to the areas of Thermal and Renewable Energy. As an outcome of the agreement, the following projects will be taken up:

- Design, fabrication and analysis of miniature wind tunnel to test compact heat exchangers.
- Efficacy of Nano-lubricants in screw compressors.
- Robust mechanism to dehumidify the air at compressor entry.

The agreement was signed on 14th June, 2022. Ingersoll Rand officials, Cdr (Dr) Anil Rana, Director, Dr Somashekhara Bhat, Joint Director, Dr S S Sharma, HOD, Dr Raghuvir Pai B, Dr Arunachala U Chandavar, Dr Krishna Murthy, Dr Shiva Kumar & other faculty members were present during the occasion.



DEPARTMENT NEWS

• **Industrial Advisory Committee**

An Industrial Advisory Committee (IAC) has been constituted under the category "**Mechanical Stream**" comprising Dept. of Mechanical & Industrial Engineering, Dept. of Mechatronics Engineering, Dept. of Aeronautical and Automobile Engineering and Dept. of Humanities & Management. IAC has been formed with the mission to build a strong foundation of support and communication between industries, professional bodies, and society members. IAC comprises HOD's of the above departments, 2 to 3 nominated, experienced industry professionals for each department and other faculty members of the respective departments. IAC is headed by the respective HOD's in rotation once in every six months. Presently it is headed by Dr S S Sharma, HOD, Dept of Mechanical & Industrial Engg. The sole objective of IAC is to promote industry interaction and to bridge the gap between academics and industry.

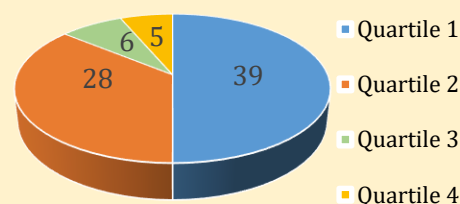
HOMAGE



- **Shri C Sadashiva Kamath**, who had retired as Reader on 30th November 2008 after serving the Dept of Mechanical & Mfg Engg. for 32 years passed away on 30th August, 2021. Shri Kamath was an authority on Fluid Mechanics & Turbo Machinery subjects and has played a pivotal role in modernizing Fluid Mechanics Laboratory of the department. The department deeply mourns the sad demise of Shri. C Sadashiva Kamath and prays Sadgati for the departed soul.

FACULTY ACHIEVEMENTS

- **Publications:** Faculty members of the department have published 78 research articles in Web of Science/Scopus indexed journals and 07 papers have been presented in various international conferences held during January to June, 2022.



- **Grants Applied:** 07 faculty members of the department have applied for research grants worth **INR 1.03 crores** from various research organizations during January to June, 2022.
- **Grant Received:** A research grant worth **Rs. 47.96 Lakhs** has been received by **Dr Siddappa I Bekinal**, Associate Professor from AR &DB, DRDO, New Delhi as Principal Investigator for the research proposal titled "Design, development and rotor dynamic analysis of Optimized Stack-Structured Permanent Magnet Bearings (OSPMB) on 5th May, 2022. **Dr Vijay G S**, Professor and **Dr Mrityunjay Doddamani**, Assistant Professor, NITK Surathkal are the co-investigators for the research project.
- **FDP/Workshop's attended:** 09 faculty members of the department have participated in various international/national level workshop's/FDP's/training courses held during January to June, 2022.
- **Reviewers:** 11 faculty of the department have served as reviewers for various international/national Journals & conference articles during January - June 2022.



FACULTY ACHIEVEMENTS

- **Patents filed:**
 - **Dr Sathya Shankara Sharma**, Professor & HOD, **Dr Gowri Shankar M C**, Associate Professor, **Dr Manjunath Shettar** and **Dr Pavan Hiremath**, Assistant Professors (Senior Scale), and **Mr Srinivas Doddapaneni**, Research Scholar have filed a patent for the invention titled "**A process for hardening surface of a metal and system thereof**" with the Indian Patent Office, Delhi in March 2022 (Application No. 202241013855).
 - **Dr Sathya Shankara Sharma**, Professor & HOD, **Dr Murthy B R N**, Associate Professor (Senior Scale), **Mr Sandeep Nambiar** & **Mr A A Prasanna**, Research Scholars have filed a patent for the invention titled "**Alloy composition and a method of synthesizing the alloy composition**" with the Indian Patent Office, Delhi in March 2022 (Application No. 202241017141).
- **PhD Guidance:** Doctoral degree was awarded to **Mr Elton Dylan Nazareth** for his thesis titled "Steady State, Transient and Stability Behavior of Coupled Natural Circulation Loops" by Manipal Academy of Higher Education, Manipal, in April 2022. The research work was carried out under the guidance of **Dr Arunachala U Chandavar**, Professor, Department of Mechanical and Industrial Engineering, MIT, Manipal.
- **Keynote address:** **Dr Sathya Shankara Sharma**, Professor & HOD, delivered a key note address on the topic "Heat Treatment - Research Opportunities" at a technical event held at NMAMIT, Nitte on 30th April 2022.
- **Invited Talk:**
 - A guest talk was delivered by **Dr Sathya Shankara Sharma**, Professor & HOD, at the National Conference on "Recent Advances on Mechanical, Robotics and Automation Technology", organized by Srinivas University, Mangalore on 28th June 2022.
 - **Dr Vishwanath Managuli**, Assistant Professor (Senior Scale) was the guest speaker for the awareness program on "Basics of Atomic Force Microscopy and its Utilization in Imaging in Different Modes" organized by MUTBI, MAHE, Manipal on 14th March, 2022.
 - **Dr R C Shivamurthy**, Assistant Professor (Selection Grade) delivered a guest lecture on "Characterization of Materials" at Siddaganga Institute of Technology, Tumakuru, on 17th of Feb., 2022.
- **Resource Person:** **Dr Vijay G S**, Professor was the resource person and trainer for the workshop on "Mathematical Modelling and Optimization" organized by MAHE-SRF, under the Directorate of Research, MAHE, Manipal held on 20th & 21st June 2022.
- **BOS Membership:** **Dr Sathya Shankara Sharma**, Professor & HOD, **Dr Vijay G S**, Professor, **Dr R C Shivamurthy**, Assistant Professor (Selection Grade) and **Dr Gururaj Bolar**, Assistant Professor (Senior Scale) have served as external committee members for the BOS/BOE at various institutes for UG and PG engineering programs during January -June 2022.
- **Cyber security certification:** **Dr Nithesh Kumar**, **Mr Dilifa Jossley Noronha**, **Mr Ganesha A**, Assistant Professors (Senior Scale) and **Dr Girish H**, Assistant Professor have secured Cyber Crime Intervention Officer (CCIO) certification from Information Sharing and Analysis Centre (ISAC) through MAHE-ISAC Centre of Excellence for Cyber Security. This certification qualifies the candidates to be empanelled in the cadet level of National Security Database (NSD) Program, Govt. of India. It is also recognized by the Ministry of Education, GOI and evaluated by AICTE under NEAT 2.0 program.



PhD AWARDEE



- **Mr Suhas Yeshwant Nayak**, Assistant Professor (Senior Scale), was awarded the Doctoral degree for his thesis titled “Experimental Investigation of Ballistic Characteristics of Epoxy Based Hybrid Composites for Armours” by Manipal Academy of Higher Education, Manipal, in February 2022. The research work was carried out under the guidance of Dr Satish Shenoy B, Professor, Department of Aeronautical and Automobile Engineering, Manipal Institute of Technology, Manipal along with Dr Mohamed Thariq Bin Hameed Sultan, Laboratory of Biocomposite Technology, Institute of Tropical Forestry and Forest Products (INTROP), Universiti Putra Malaysia, Serdang, Malaysia and Dr Chandrakant R Kini, Department of Aeronautical and Automobile Engineering, Manipal Institute of Technology, Manipal.

ALUMNI ACHIEVEMENTS



- **Mr Ravi Kunwar**, an alumnus from the 1993 batch of B Tech Mechanical Engineering, has recently been promoted as Vice President - Asia Pacific and China, at HMD Global, the Finnish mobile phone manufacturer of Nokia Mobiles.

- **Mr Varun Jain**, an alumnus from the 2006 batch of B Tech Mechanical Engineering and presently the Director of Career Wheels Pvt. Ltd., has won the first prize in Technology Efficient Enterprise at the National MSME Awards 2022. He has done his masters in Engg. Design from University of Southern California.



- **Mr Rahul Shukla**, an alumnus from the 1995 batch of B Tech Mechanical Engineering, has been promoted as President and Chief Retail Officer of Jockey India.

- **Mr Sridhar Deivasigamani**, an alumnus from the 1995 batch of B Tech Mechanical Engineering, has gained international recognition for his venture, ‘Intellihot’. By combining AI with leading-edge technology, Intellihot is prepared to revolutionize the HVAC industry with hot water-as-a-service and change the way water service is delivered. It is based in Greater Chicago Area



- **Mr Harsh Kumar**, an alumnus from the 1996 batch of B Tech Mechanical Engg. has joined EY India Technology Consulting Practice as Partner - Technology Consulting for Digital & Emerging Technologies. Prior to this, he was associated with IBM India as Partner and Executive Director – Distribution and Industrial Sector.



STUDENT ACHIEVEMENTS

- **Award Winner:** Student of B Tech. Industrial & Production Engg, **Mr RijuRay**, has received **“Inspire Award - Recognizing those who care for the world”**, in recognition for achieving exceptional results by demonstrating outstanding leadership behaviours embodied in Leadership Imperative: Our Credo & Our Purpose **from KPMG** on 19 May, 2022.
- **Prize Winners:**
 - **Mr Chandraraj Singh** student of 6th semester B Tech Mechanical Engg along with **Mr Anmol Agarwal** and **Mr Harshit Yaduka** students of 6th semester B Tech in Computer & Communication, have formed a team known as ‘PacManBytes’, which has secured the **runners-up position in the ZS Campus Beat Tech Challenge**, organised by ZS Associates. The ZS Campus Beats Tech Challenge invites young tech enthusiasts from campuses across the country to participate in a case challenge for tech roles at ZS.
 - **Ms Manaswi Deepak Jadhav** student of 4th semester B.Tech. Mechanical Engg along with **Mr Aditya Katkuri**, **Mr Dheeraj Chettiar** and **Mr Suryansh Sunil** students of 4th semester B Tech Aeronautical Engg have secured **3rd place at CAD Clash** - a national level CAD competition conducted by ACS College of Engineering, Bangalore
- **Start-up:** Student of 6th semester B Tech Mechanical Engg, **Mr Kushal Agarwal** along with **Mr Sanskar Khandelwal** student of 6th semester B Tech Computer Science have cofounded **Nifty Homes, a luxury décor start-up**. It is among the fastest growing start-ups in the decor industry. Started in 2020, Nifty Homes combines technology with traditional crafts to provide a brand experience to the customers like no other. Their unique value chain includes product development, design, supply, manufacture and sales.
- **Guest Lecture:**
 - **Mr Vismay Nayak**, student of 6th semester B Tech Mechanical Engg has delivered a lecture on “Introduction & history of 3D printing technology” during the one-day National Webinar on “Basic training in use of 3D printing technology for rehabilitation & healthcare professionals” organized by CRC, Davangere, which was held virtually on February 11, 2022.
 - **Ms Ashrayee Ranjan** student of 6th semester B Tech Mechanical Engg has delivered a lecture on “3D printing technology in health care sector” during the one-day National Webinar on “Basic training in use of 3D printing technology for rehabilitation & healthcare professionals” organized by CRC, Davangere, which was held virtually on February 11, 2022.
- **Research Article Publications:**
 - **Mr Aditya Bantwal Satish Kumar, Mr Aditya Singh & Mr Abhay Ramachandran Menon**, B Tech Mechanical Engg graduates from the class of 2021 have co-authored a research paper with **Dr Nitesh Kumar**, Assistant Professor (Senior Scale), titled “Hemodynamic study of blood flow in the carotid artery with a focus on carotid sinus using fluid structure interaction” published in “Journal of Fluids Engineering, Transactions of the ASME”, Vol. 144(2), pp. 021403 (Q1, Top 10-24) in February 2022.



STUDENT ACHIEVEMENTS

• *Research Article Publications:*

- **Ms Prajakta Chandrakant Kandarkar, M Tech (MET)** graduate from the class of 2021 has co-authored a research paper with **Dr Sathish Rao U**, Associate Professor (Senior Scale), titled "Investigation on the influence of lead zirconate titanate piezo material on different diaphragm materials in the mechanical deformation process", published in "Materials Today Proceedings", Vol. 47, 2021, pp. 3251-3255 in January, 2022.
- **Mr Doddapaneni Srinivas**, research scholar has co-authored a research paper with **Dr Sathya Shankara Sharma**, Professor & HOD, **Dr Gowri Shankar M C** & **Dr Jayashree P K**, Associate Professors, **Dr. Manjunath Shettar** & **Dr Pavan Hiremath**, Assistant Professors (Senior Scale), titled "Influence of various trace metallic additions and reinforcements on A319 and A356 alloys—a review" published in "Cogent Engineering" Vol. 9, (Q2, Top 25 – 49) in January 2022.
- **Mr Sandesh Bhaktha B**, M Tech (MET) graduate from the class of 2021 has co-authored a research paper with **Dr Sathish Rao U**, Associate Professor (Senior Scale), titled "Experimental analysis of viscoelastic properties of room temperature vulcanized silicone based magnetorheological elastomer", published in 'Defence Science Journal', Vol. 72, pp. 98-104, (Q3 Top 50-74) in January, 2022.
- **Mr Rajesh**, research scholar has co-authored a research paper with **Dr Sathya Shankara Sharma**, Professor & HOD, **Dr. Gowri Shankar M C**, Associate Professor, **Dr Gurumurthy B M** & **Dr Ananda Hegde**, Assistant Professors (Senior Scale), titled "Hybrid heat treatment for conventionally treatable steel powder reinforced age hardenable aluminium alloy matrix composites and mechanical property evaluation" published in "Materials Research" Vol. 25 (Q2, Top 25 – 49) in January 2022.
- **Mr Sooraj Mohan**, research scholar has co-authored a research paper with **Dr Shiva Kumar**, Professor and **Dr Dinesha P**, Associate Professor, titled "Experimental investigation of SI engine characteristics using acetone butanol ethanol (ABE) – gasoline blends and optimization using particle swarm optimization" published in "International Journal of Hydrogen Energy", Vol. 47(8), pp. 5692-5708, (Q1, Top 2-9) in January 2022.
- **Ms Ritu Kiran Kartik**, student of 6th Semester B Tech (Mechanical Engg) has co-authored a research paper with **Dr Shiva Kumar**, Professor, titled "Numerical analysis based performance prediction in a direct evaporative cooler used for building cooling" published in "Journal of Building Performance Simulation" Vol 15(2), pp. 237-250 (Q1, Top 2-9) in February, 2022.
- **Mr Doddapaneni Srinivas**, research scholar has co-authored a research paper with **Dr Sathya Shankara Sharma**, Professor & HOD, **Dr Gowri Shankar M C** Associate Professor, **Dr Manjunath Shettar** and **Dr Pavan Hiremath**, Assistant Professors (Senior Scale), titled "Artificial neural network for predicting hardness of multistage solutionized and artificially aged LM4 TiB2 composites" published in "Materials Research" Vol. 25 (Q2, Top 25 – 49) in February, 2022.
- **Ms Rashmi Samant**, B Tech Mechanical Engg graduate from the class of 2020 has co-authored a research paper with **Dr Suhas Y Nayak** & **Mr Srinivas Shenoy H**, Assistant Professors (Senior Scale), titled "Mangifera indica midrib fibres as reinforcements for CNSL epoxy composites" published in "Journal of the Textile Institute" Vol. 113(4), pp.657-670, (Q1 Top 10-24) in March 2022.



STUDENT ACHIEVEMENTS

• *Research Article Publications:*

- **Mr Doddapaneni Srinivas**, research scholar has co-authored a research paper with **Dr Sathya Shankara Sharma**, Professor & HOD, **Dr Gowri Shankar M C**, Associate Professor, **Dr Ananda Hegde** and **Dr Gurusurthy B M**, Assistant Professors (Senior Scale), titled “Optimization of preheating temperature for TiB₂ reinforcement on the preparation of stir cast LM4TiB₂ composites and effect of artificial aging on hardness improvement using ANOVA” published in “Manufacturing Review” Vol. 9 (8), (Q2, Top 25 – 49) in March, 2022.
- **Mr Abhishek S Madival**, research scholar has co-authored a research paper with **Dr Raviraj Shetty, Associate Professor (Senior Scale)** and **Dr Manjunath Shettar Assistant Professor (Senior Scale)**, titled “Processing, characterization of furcraea foetida (FF) fiber and investigation of physical/mechanical properties of FF/epoxy composite” published in “Polymers”, Vol. 14(7), (Q1 Top 10-24) in April, 2022.
- **Mr Manjunath L Nilugal**, student of M Tech (TSES) has co-authored a research paper with **Dr Madhwesh N**, Associate Professor and **Dr K Vasudeva Karanth**, Professor, titled “Numerical investigations on the effect of volute casing treatment for performance augmentation in a centrifugal fan” published in “Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science”, Vol. 236(6), pp.2791-2802, (Q2 Top 25-49) in March, 2022.
- **Mr Supreeth Dinesh Kumar**, research scholar has co-authored a research paper with **Dr Siddappa I Bekinal**, Associate Professor and **Dr R C Shivamurthy**, Assistant Professor (Selection Grade), titled “A review of superconducting magnetic bearings and their application” published in “IEEE Transactions on Applied Superconductivity”, Vol. 32(3), pp. 1-15, (Q2 Top 25-49) in April, 2022.
- **Mr Thomas Joe, Mr Jacob Zachariah Neelankal** and **Ms Sonia Gupta**, students of B Tech (Mechanical Engg) have co-authored a research paper with **Mr Srinivas Shenoy H** and **Dr Suhas Y Nayak**, Assistant Professors (Senior Scale), titled “Comparative evaluation of chemical treatment on the physical and mechanical properties of areca frond, banana, and flax fibres” published in “Journal of Natural Fibres” Vol 19(4), pp.1531-1543, (Q1, Top 10-24) in April, 2022.
- **Mr Sandeep Nambiar S**, research scholar, has co-authored a research paper with **Dr Murthy B R N**, Associate Professor (Senior Scale) and **Dr. Sathya Shankara Sharma**, Professor & HOD, titled “Vickers micro hardness variation during change in concentration of constituent elements in Ni_{50-x}Fe_xMn₃₀Sn_{20-y}In_y, Heusler alloys” published in “Manufacturing Review”, Vol. 9(4), (Q2, Top 25-49) in January, 2022.
- **Mr Sandeep Nambiar S**, research scholar has co-authored a research paper with **Dr Murthy B R N**, Associate Professor (Senior Scale) and **Dr Sathya Shankara Sharma**, Professor & HOD, titled “Microstructure and mechanical properties of annealed quinary Ni-Mn-Sn-Fe in Heusler alloy” published in “Engineered Science”, Vol. 17, pp. 303-308, (Q1, Top 2-9) in January, 2022.
- **Mr Rakshath G Poojary**, student of M Tech (T&M) has co-authored a research paper with **Dr Raghuvir Pai B**, Professor, **Dr Shah Mohammed Abdul Khader**, Associate Professor & **Dr Girish H**, Assistant Professor, titled “Finite element analysis of cornea and lid wiper during blink, with and without contact lens” published in “Journal of Ophthalmology”, (Q2, Top 25-49) in May, 2022.



STUDENT ACHIEVEMENTS

• *Research Article Publications:*

- **Mr Sandeep Nambiar S**, research scholar, has co-authored a research paper with **Dr R C Shivamurthy**, Assistant Professor (Sl. Grade) & **Dr Murthy B R N**, Associate Professor (Senior Scale), titled “Comparative genomics based putative drug targets identification, homology modelling, virtual screening and molecular docking studies in chlamydomonas reinhardtii” published in “Engineered Science”, Vol. 19, pp. 125-135, (Q1, Top 2-9) in May, 2022.
- **Ms Rashmi Samant, B Tech Mechanical Engg** graduate from the class of 2020 has co-authored a research paper with **Dr Suhas Y Nayak**, Assistant Professor (Senior Scale), titled “Potential of natural fibres in composites for ballistic applications – a review” published in “Journal of Natural Fibers” Vol. 19(5), pp. 1648-1658, (Q1 Top 10-24) in May 2022.
- **Ms Rashmi Samant, B Tech Mechanical Engg** graduate from the class of 2020 has co-authored a research paper with **Dr Suhas Y Nayak** & **Mr Srinivas Shenoy H** Assistant Professors (Senior Scale) & **Dr Raghavendra Kamath C**, Associate Professor (Senior scale) titled “Characterization of a novel polyalthia longifolia midrib fibres as a potential reinforcement for polymer composites” published in “Journal of Natural Fibers” Vol. 19(6), pp. 2106-2118, (Q1 Top 10-24) in May 2022.
- **Mr Sooraj Mohan**, research scholar has co-authored a research paper with **Dr Dinesha P**, Associate Professor, titled “Emulsification of waste cooking oil biodiesel blend with hydrogen peroxide to assess tailpipe emissions and performance of a compression ignition engine” published in “Heat Transfer”, Vol. 15(4), pp.3721-3735, (Q2, Top 25-49) in June 2022.
- **Mr Ganesh C J**, student of M Tech (CAAD) has co-authored a research paper with **Dr Siddappa I Bekinal**, Associate Professor & **Dr Vijay G S**, Professor, titled “Modelling of interior permanent magnet motor and optimization of its torque ripple and cogging torque based on design of experiments and artificial neural networks”, published in “Engineered Science”, Vol. 18, pp.193-203, (Q1, Top 2-9) in March 2022.
- **Mr Supreeth Dinesh Kumar**, research scholar has co-authored a research paper with **Dr Siddappa I Bekinal**, Associate Professor & **Dr R C Shivamurthy**, Assistant Professor (Sl. Grade), titled “An overview on electrodynamic bearings”, published in “IEEE Access”, Vol. 10, pp. 57437 – 57451, (Q1, Top 10-24) in June 2022.
- **Mr Niranjana N Prabhu**, research scholar has co-authored a research paper with **Dr Shivamurthy B**, Associate Professor (Senior Scale), titled “Electrospun zinc oxide nanofiber based resistive gas/vapor sensors - a review”, published in “Engineered Science”, Vol. 19, pp. 59-82, (Q1, Top 2-9) in January 2022.
- **Mr Sooraj Mohan**, research scholar & **Mr Aiswarya V**, student of M Tech (TSES) have co-authored a research paper with **Dr Dinesha P**, Associate Professor, titled “Synergetic influence of hydrogen peroxide emulsification and MWCNT nanoparticles to reduce engine exhaust emissions using B20 biodiesel blend” published in “International Journal of Hydrogen Energy”, Vol. 47(51), pp. 21863-21877, (Q1, Top 2-9) in June 2022.



STUDENT ACHIEVEMENTS

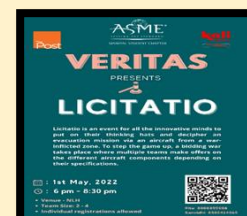
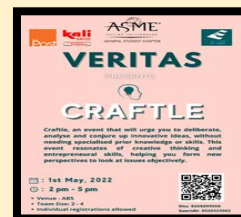
• *Research Article Publications:*

- **Ms Diya Sen**, student of 8th Semester B Tech (Mechanical Engg) has co-authored a research paper with **Mr Nithesh Naik**, Assistant Professor (Senior Scale), titled "Nanotechnology and nanomaterials in dentistry: present and future perspectives in clinical applications" published in "Engineered Science" Vol. 20, pp. 13-22, (Q1, Top 2-9) in April, 2022.
- **Mr Shreepannaga**, research scholar has co-authored a research paper with **Dr M Vijaya Kini**, Professor, titled "Fatigue behaviour and damage characterization of quasiisotropic carbon/epoxy laminates", published in "Cogent Engineering" Vol. 9(1), (Q2, Top 25-49) in June 2022.
- **Mr Utkarsh Swain** and **Mr Gautam Jaladi**, B Tech Mechanical Engg graduates from the class of 2020 have co-authored a research paper with **Mr Krishna Kumar P**, **Mr Ritesh Ramakrishna Bhat** & **Mr C S Suhas Kowshik**, Assistant Professors (Senior Scale), titled "Thermal necrosis assisted dental implant removal: a 3 dimensional finite element analysis" published in "Engineered Science" Vol. 19, pp. 225-235, (Q1, Top 2-9), in May, 2022.
- **Mr Aditya Lokesh Hegde**, research scholar has co-authored a research paper with **Dr Raviraj Shetty**, Associate Professor (Senior Scale) & **Dr Rajesh Nayak**, Associate Professor, titled " Optimization and prediction of hardness, wear and surface roughness on age hardened stellite 6 alloys" published in "Manufacturing Review", Vol. 9, (Q2, Top 25-49) in April 2022.
- **Mr Abhimanyu Hegde** and **Mr Shreyaskumar R Bhat**, B Tech Mechanical Engg graduates from the class of 2021 have co-authored a research paper with **Mr Rakesh L**, Assistant Professor (Senior Scale), titled "A computational fluid dynamics study on patient specific bifurcated carotid artery", published in "Engineered Science", Vol. 19, pp. 243-252, (Q1, Top 2-9) in April 2022.

CLUB ACTIVITIES - ASME

• *Veritas - The flagship event*

ASME Manipal Student Chapter hosted their flagship event, Veritas for the first time this year. The entire fest took about 3 weeks to design and organise. Veritas was a stage to let an engineer's ideas come to life, to design events and see them through from start to finish. The event witnessed a huge variety of participants. The participants were not just limited to various like branches but also included students of different years, highlighting the approachability the event was designed with. The participants admired the variety, approachability, and simple elegance of the events. "**Craftle**" posed one of the most unique problem statements to solve, "**Who wants to be a Mechanillaire**" stimulated the brains of the participants with interesting time-based questions and "**Licitatio**" tested the planning and strategizing capabilities of the participants. The event was sponsored by Kali BMH Systems (P) Ltd.





CLUB ACTIVITIES – IE MECHANICAL

- **Workshop**

An internal **SolidWorks** Workshop was conducted by IE Mechanical to help build its members' technical skills. The 10-day workshop was organized in December with various daily tasks and challenges. Participants worked on SolidWorks to learn and implement 3D sketching, part modelling, and assembly of complex mechanisms. Certificates were distributed to the participants and the best designs were 3D printed.

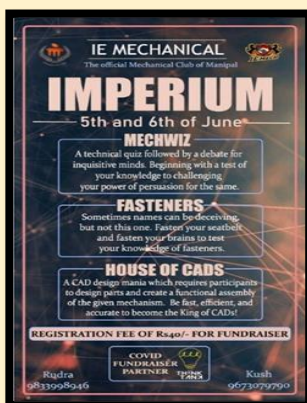


- **Higher studies guidance session**

On 13th March, Alumni from IE Mechanical pursuing higher studies from well-renowned universities shared their preparation experiences and gave tips on preparing for competitive exams like GTAE, GRE, GMAT, etc. Members as well as non-members planning to pursue higher studies attended the webinar and vastly benefitted from the same.

- **Placement guidance session**

On 14th March, successfully placed alumni from IE Mechanical threw light on placement preparation for upcoming graduates. Non-club members attended the webinar as well. The experts shared their experiences and gave tips for securing good placements.



- **Imperium - The annual technical event**

Imperium, the annual technical event of IE Mechanical was conducted in June with various unique and innovative technical events/competitions. The participants were given appropriate technical challenges to unleash their mechanical engineering skills. The competitions handled during the event included **MECHWIZ**, **FASTENERS**, and **HOUSE OF CADs**.