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NEWS LINKS

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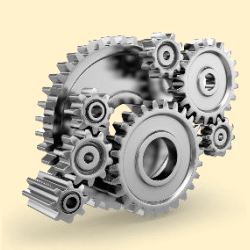
A BI-ANNUAL E-NEWSLETTER OF THE DEPARTMENT OF MECHANICAL & INDUSTRIAL ENGINEERING, MANIPAL INSTITUTE OF TECHNOLOGY, MANIPAL ACADEMY OF HIGHER EDUCATION, MANIPAL



Vision

Excellence in Mechanical and Industrial Engineering Education through Research, Innovation and Teamwork.

Mission

Educate students professionally to face societal challenges by providing a healthy learning environment grounded well in the principles of Mechanical and Industrial Engineering, Research, Creativity and Teamwork.

MESSAGE FROM HEAD OF THE DEPARTMENT

It is with immense pleasure I assume the role of leading the Dept. of Mechanical & Industrial Engg. At the outset I wish to express my sincere gratitude to our Director, Cdr (Dr) Anil Rana and Joint Director Dr. Somashekara Bhat for giving me an opportunity of heading one of the oldest and the vibrant departments in MIT. I am thankful to Dr. S.S. Sharma, and senior professors of the department for their invaluable support & guidance during my 16 years of association with the department.

Today with the advent of AI, Mechanical & Industrial Engineering streams are witnessing a sea change in technological developments driven by industry needs. These developments offer tremendous opportunities for research, innovation and growth, for having a positive impact on the society at large. Let's try to embrace these changes to add value and shape the future of Mechanical & Industrial Engg. together.

In line with the vision and mission statement of our department and institute, lets strive for expanding our UG and PG programs to meet the emerging needs, enhance the research profile of our department through interdisciplinary collaborations and industry partnerships and strengthen our relations with alumni and broader engineering community.

At this juncture I extend my best wishes to the graduating batch of 2024 and wish all the faculty members and students a fruitful semester ahead.

Dr Arunachala U Chandavar

MESSAGE FROM THE OUTGOING HEAD OF THE DEPARTMENT

As I conclude my tenure as the Head of the Department of Mechanical & Industrial Engineering, I wish to express my heartfelt gratitude to each and every one for the unwavering support and guidance extended to me during my tenure that have made my journey immensely fulfilling. After taking over as the head of one of the largest departments in MIT, though my initial tenure was hampered by Covid, with the support of the management and collective effort of all the stakeholders we could successfully steer out of those difficult times and were able to keep the wheels of education rolling. The pandemic also facilitated adoption of online learning and virtual classrooms making education more flexible and accessible.

Post covid, we were able to add immense value to the institute, university and society at large by strengthening the teaching learning process, starting new academic programmes, focussing on research & consultancy, placements and by fostering alumni relations. These achievements would not have been possible without the proactive support of management, faculty, students, alumni and all our stakeholders. My sincere thanks to our Director, Cdr (Dr) Anil Rana, Joint Director Dr. Somashekara Bhat, former Director Dr. Srikanth Rao, former Joint Director Dr. B H V Pai, all the Associate Directors, Heads of various Departments and Assistant Directors for their priceless support throughout the journey of my additional responsibilities.

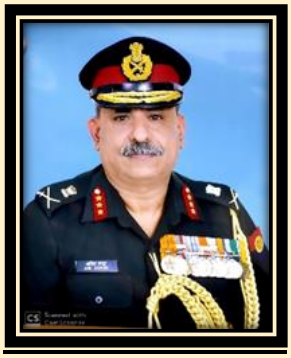
My heartfelt appreciation goes to the faculty members of our department as well as to colleagues across MIT's diverse departments for their collaborative spirit and dedication that have been instrumental in ensuring our department's success. A special note of gratitude to all the support staff of our department and administrative personnel of MIT whose tireless efforts have facilitated seamless functioning of our department. Lastly, as I pass the baton to my successor Dr. Arunachal U Chandavar, I extend my warmest congratulations and best wishes to him. May his tenure be marked by continued success and growth of our department.

Dr Sathya Shankara Sharma

DEPARTMENT NEWS

1. Workshop on 'Design Thinking' by Lt Gen Anil Kapoor, AVSM, VSM (Retired)

Lt Gen Anil Kapoor, ***AVSM, VSM*** adjunct faculty of the Department of Mechanical & Industrial Engineering conducted a half day workshop on "Design Thinking for Research & Development" under the faculty development program of MIT, which was organised in collaboration with the office of Associate Director (Faculty Development), MIT Manipal on 7th February 2024. Lt Gen Anil Kapoor is an alumnus of the prestigious National Defence Academy, Pune, Indian Military Academy, Dehradun, Defence Services Staff College, Wellington, Army War College, Mhow and National Defence College, New Delhi. A Gold Medallist both in B Tech (Electronics) and Master of Engineering (Mechanical), M Sc in Defence Studies, M Phil in Strategic Management of Technology, he is an expert in Radars, Guided Missiles, MRO Asset Management and Condition Based Monitoring of Assets. He was superannuated as Director General Electronics and Mechanical Engineering on 31st December 2020.



Design thinking is a human-centered approach to product development, based on a structured process to integrate the unmet needs of people by exploiting the power of technology & innovation to achieve business success. He spoke on the various approaches in design thinking for future professionals, with a preview of the design thinking process, design thinking postulates, value proposition, design thinking credo, self-development and creative problem solving. He also took up some case studies like the elevator problem and the Morbi bridge tragedy to better demonstrate the design thinking approach. The highlight of the workshop was the Johari Window model on knowing oneself and designing one's life. A brief insight was also given to Maslow's hierarchy of needs. The tail piece of the workshop was "Think like a professional of action, act like a professional of thought and Bond with the best".

Dr Shankar Narayan Bhat, Associate Director, Faculty Development, MIT welcomed the gathering, ***Dr. Raghuvir Pai B.*** proposed the formal vote of thanks and presented a memento to Lt Gen Anil Kapoor on behalf of MIT Manipal. About ***35*** participants from different departments of MIT attended the workshop.

DEPARTMENT NEWS

2. Workshop on "Instrumentation and Data Analysis in Solar and Thermal Engineering Research"

The Department of Mechanical & Industrial Engineering organized a hands-on workshop on "Instrumentation and Data Analysis in Solar and Thermal Engineering Research" from 8th to 13th April 2024 in hybrid mode. The event was conducted to commemorate the tenth anniversary of the Renewable Energy Lab. Commander ***(Dr) Anil Rana***, Director, MIT, and ***Dr Sathya Shankara Sharma***, Head - Department of Mechanical & Industrial Engineering, MIT, graced the inaugural function. ***Dr Arunachala U. Chandavar***, Professor and convenor, briefed the participants on the importance of the workshop. ***Dr Madhwesh N*** and ***Mr Varun K***, co-conveners, were present during the occasion.



The workshop was aimed at spreading awareness about the research in the thermal domain through experiments and data analyses. Theoretical sessions were conducted online, in which fundamentals of instrumentation, potential applications, experimental techniques, and data curation were discussed. Demonstrations of various process instruments and control systems followed by hands-on training to get acquainted with their usage were conducted in hybrid mode. More than twenty-five participants from various institutions of neighbouring districts and other states attended the program.

3. IIC activities for UG & PG students of Dept. of Mechanical and Industrial Engineering:

The Institution's Innovation Council organized two awareness activities on Start-ups for both PG & UG students and Research Scholars of the Dept. of Mechanical & Industrial Engg. respectively in March & April, 2024.

The first activity, the Exposure Visit was held on 12th March, 2024 for PG students belonging to CAAD, MET & TSES streams as well as to all the Research Scholars of the Department. The objective of the program was to provide the students with the required exposure about established MAHE start-up ecosystem like Innovation Centre, Bio incubator and Manipal Universal Business Incubator (MUTBI). Students were given an opportunity to interact with the CEO of BioNEST Bioincubator of MAHE, Manager of MUTBI, In-charge of MIT Innovation center and In-charge of Central Instrumentation Facility at MIT. A visit was arranged to Smriti Bhavan, museum of founder of MAHE and its institutions. Students came to know many success stories of the MAHE entrepreneurs.


DEPARTMENT NEWS

Exposure Visit to PG students & Research Scholars

On 5th April, 2024 an awareness session on Entrepreneurial Journey was conducted for 2nd year UG Students of Mechanical and Industrial Engineering streams of the department. The objective of this session was to give 2nd Year UG B.Tech. students, an understanding of how one can embark on an Entrepreneurial Journey while pursuing their UG education and post UG or at any point of their career. Speaker ***Dr. Y. Shrihari Upadhyaya***, former CEO of MUTBI presented an in-depth view of the MAHE Start-up Ecosystem, DST NIDHI-EIR (Fellowship for Graduates), Entrepreneurial Mindset, Start-up stories, and Importance of Team Building with various illustrations. At the end of the event, a senior batch of students ***Mr. Aniruddh Kammar*** (Mechanical Dept.), ***Mr. Suryansh Joshi*** (Aeronautical Dept.) and ***Mr. Ansh Goyal*** (Electrical Dept.) gave information on their entrepreneurial journey into a Start-up and explained the concept of B Tech final year Start-up Project they are involved in. They also enlightened the participants about their company, Skyrobee Aerolabs LLP.

Session on Entrepreneurial Journey to UG Students

APPRECIATION OF SERVICE

Dr. U. Achutha Kini, Professor, retired on 31st May, 2024 after serving the department for 37 years. Dr. Kini joined our department on 24th June 1987 and has since been a cornerstone of the Department of Mechanical & Industrial Engineering.

Dr. Kini's academic journey is a testament to his dedication and passion for engineering. He earned his B.E. in Mechanical Engineering from Malnad College of Engineering, Hassan, followed by an M. Tech. in Engineering Management from Mangalore University, and a Ph.D. in Corrosion Engineering from Manipal University.

Throughout his tenure, Dr. Kini held various positions, starting as a Lecturer in 1987, progressing to Reader, Associate Professor, and finally, Professor in 2012. His research contributions are remarkable, with over 65 publications in Scopus-indexed journals and more than 100 in total. He has also presented at over 50 conferences.

Beyond his academic and research achievements, Dr. Kini has been instrumental in various institutional responsibilities. He has served as the In-charge of the MIT Cafeteria, Workshop Superintendent, and Coordinator of the Departmental and Institutional NBA committees for two consecutive accreditations, among other roles. Dr. Kini's legacy will continue to inspire future generations of engineers. We wish him a fulfilling and joyous retired life.

Dr. U. Achutha Kini
(24/06/1987 – 31/05/2024)

Mr. Nagesh
(01/10/1991 – 30/04/2024)

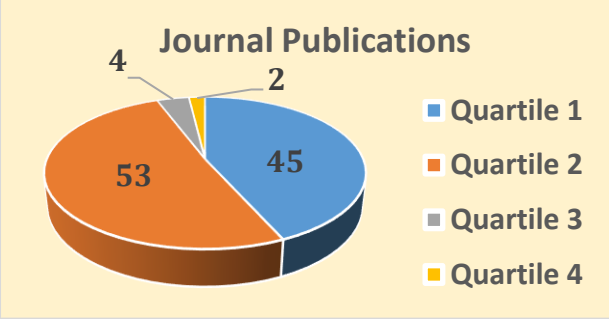
Mr. Nagesha, senior housekeeping staff of the department retired on 30th April, 2024 after serving the department for more than 32 years. He has been a sincere and hardworking support staff. Mr. Nagesha, used to attend to his duties everyday at 7.30 am in the morning and used to keep the workspace clean and tidy. His passion and dedication to his work have been appreciated by everyone. The department is grateful to him for his contributions and wishes him a happy retired life

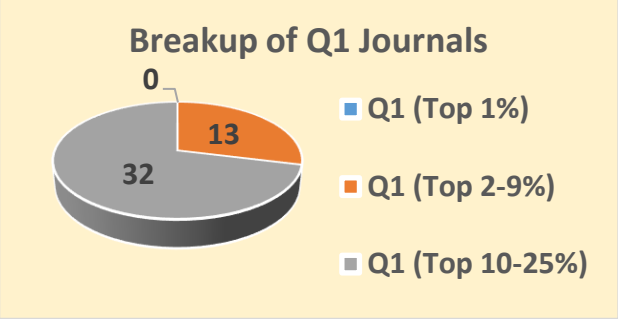
HOMAGE

Prof. K.S. Bhandary
(14/03/1947 - 24/02/2024)

Prof. K.S. Bhandary, retired faculty member of the Dept. of Mechanical & Industrial Engg. expired on 24th February, 2024 after a brief illness. Prof. Bhandary is an alumnus of the department having done B.E. in Mechanical Engg. from MIT, Manipal in the year 1969 which was then affiliated to Karnataka University. He has secured scholarship from Academy of General Education while pursuing B.E. at MIT. He had joined the Department of Mechanical Engineering, MIT, Manipal as a lecturer on 23rd January 1970. Later, he pursued MTech from IIT Madras under the QIP Scheme. He had handled many subjects and labs related to the design stream and actively took part in many departmental activities during his tenure in the institute. He used to single handedly prepare the class timetable, individual timetable of the faculty members and sessional timetable. He was friendly in nature, soft spoken, cooperative, sincere, and a dedicated faculty member of the department. He has served the department and institute for more than 36 years before opting for voluntarily retirement on 6th April 2006. He has left a lasting impression in the minds of not only the faculty members and non-teaching staff of our department but also with many of his associates in the Institute. The department deeply mourns the sad demise of Prof. K.S. Bhandary and prays Sadgati for the departed soul.

FACULTY ACHIEVEMENTS





- ***Publications:*** Faculty members of the department have published ***104*** research papers in Web of Science/Scopus indexed journals and ***03*** papers have been presented in international conferences held during January to June, 2024.

- ***Patents Awarded:***
  - ***Dr. Pavan Hiremath*** along with other inventors from MAHE have been awarded a patent for their invention titled ***"Radially Symmetric Coaxial Capacitance Differential Pressure Sensor" (Patent No. 526872, Application No. 201941032877)*** by the Controller of Patents, The Patent Office, Government of India in March, 2024.
  - ***Mr. Ganesha A.*** and ***Mr. Akshay Saxena***, B.Tech.(Mechanical Engg.) graduate from the class of 2017 have been awarded a patent for their invention titled ***"Pantograph Suspension System and Method for Vehicles" (Patent No. 519640, Application No. 201741047120)*** by the Controller of Patents, The Patent Office, Government of India in March, 2024.
  - ***Mr. Nithesh Naik*** and ***Mr. Dhruv Shah***, B.Tech.(Mechanical Engg.) graduate from the class of 2019 have been awarded a patent for their invention titled ***"Device for Inspecting Dimensions of a Tool Holder" (Patent No. 525256, Application No. 201941013525)*** by the Controller of Patents, The Patent Office, Government of India in March, 2024.
  - ***Mr. Nithesh Naik*** and ***Mr. Sreerag Mahadevan***, B.Tech.(Mechanical Engg.) graduate from the class of 2021 along with other inventors from MAHE have been awarded a patent for their invention titled ***"Multifunctional Cane" (Patent No. 535511, Application No. 202041045715)*** by the Controller of Patents, The Patent Office, Government of India in April, 2024.
  - ***Mr. Nithesh Naik*** and ***Mr. Udit Rathee***, B.Tech.(Mechanical Engg.) graduate from the class of 2021 have been awarded a patent for their invention titled ***"Universal Self Aligning Automated Gear Hobbing Fixture" (Patent No.471600, Application No. 201941014152)*** by the Controller of Patents, The Patent Office, Government of India in November, 2023.
  - ***Dr. Kirana Kumara P***, has been awarded a patent for his invention titled ***"A Hyper Elastic Boundary Element Based Surgical Simulator for Training Surgeons" (Patent No. 538905, Application No. 201741022553)*** by the Controller of Patents, The Patent Office, Government of India in May, 2024.
  - ***Dr. Sathyashankara Sharma***, ***Dr. Rajesh Nayak***, ***Dr. Ananda Hegde***, ***Dr. Gurumurthy B. M.*** and ***Mr. Nithish K.***, research scholar of the department have been awarded a patent for their invention titled ***"Method for Varying Properties of Aluminium" (Patent No. 539501, Application No. 202141048000)*** by the Controller of Patents, The Patent Office, Government of India in May, 2024.

- ***Patents Published:***
  - The patent filed by ***Dr. Vinyas, Dr. Subraya Krishna Bhat*** and Dr. Anjan N Padmasali from the Dept. of E&E, MIT titled ***"A Wireless C-Type USB Phone Charger With a Phone Holding Groove" (Application No. 202441004493)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in February, 2024.
  - The patent filed by ***Dr. Vinyas, Dr. Subraya Krishna Bhat*** and Dr. Anjan N Padmasali from the Dept. of E&E, MIT titled ***"A Wireless Dual Pin Phone Charger With Multiple Phone Holding Grooves" (Application No. 202441004494)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in February, 2024.
  - The patents filed by ***Dr. Vinyas, Dr. Subraya Krishna Bhat*** and ***Dr. Subhash Acharya***. titled ***"A charger mounted phone holder" (Application Nos. 202441004498*** and ***202441004499)*** have been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in February, 2024.
  - The patent filed by ***Dr. Vinyas***, titled ***"A Spectacle Frame Eye Drop Holder" (Application No. 202441007307)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in March, 2024.
  - The patent filed by ***Dr. Vinyas***, ***Dr. Subraya Krishna Bhat*** and ***Mr. Ramakrishna Vikas S.*** titled ***"Device for Assisting Infants in Walking and Scooting" (Application No. 202441032160)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in April, 2024.
  - The patent filed by ***Dr. Vinyas***, ***Dr. Subraya Krishna Bhat*** and ***Mr. Ramakrishna Vikas S.*** titled ***"Compression Fixture Plate Device for Universal Testing Machine" (Application No. 202441041074)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in May, 2024.
  - The patent filed by ***Dr. Vinyas*** and ***Dr. Subraya Krishna Bhat*** titled ***"Compression Fixture Plate Device for Use with Tension Testing Fixture Of Universal Testing Machine" (Application No. 202441042156)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in June, 2024.
  - The patent filed by ***Dr. Subraya Krishna Bhat*** and other inventors from MIT titled ***"System and Method for Generating Compact Organic Blocks from Green Waste" (Application No. 202441037544)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in May 2024.

- The patent filed by ***Dr. Gajanan Anne, Dr. G. Divya Deepak*** and ***Dr. Sathya Shankara Sharma*** along with B.Tech.(Industrial Engg.) students, ***Mr. A Ragav*** and ***Mr. Aashish Shrestha***, titled ***"Capo Device for Stringed Musical Instrument" (Application No. 202441038248)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in June, 2024.

- The patent filed by ***Dr. Srinivas Shenoy H.*** and other inventors from MAHE titled ***"Biodegradable Jute Composite and Process of Fabrication Thereof" (Application No. 202441054418)*** has been published by the Office of the Controller General of Patents, Designs & Trade Marks, The Patent Office, Government of India in June, 2024.

- ***Patents/Design Filed:***

  - ***Dr. Raviraj Shetty*** has filed a patent for his design titled ***"Quad-Flow Precision Abrasive Water-Jet Nozzle"*** with the Indian Patent Office, Kolkata in June, 2024 ***(Application No. 426134-001).***

- ***Grants Applied:***

  - ***06*** faculty members of the department have applied for research grants worth ***Rs.2,76,51,880/-*** from ISRO & VGST during January - June 2024.

- ***High Impact Factor/ Cite Score Publications:***

  - ***Dr. Shiva Kumar*** and ***Dr. Sawan Shetty***, have co-authored a research paper titled "Theoretical and experimental study of the effect of biomass based organic packing wettability on the LDDS and its life cycle analysis" in "Renewable Energy", Vol. 225, 120301, Q1(Top 2-9) in May 2024 having an Impact Factor of ***9*** and a Cite Score of ***18.4***.

  - ***Dr. Sooraj Mohan*** and ***Dr. Dinesha P***, have published a research paper titled "Cu/BEA catalysts for the selective catalytic reduction of engine out NOx" in "Fuel", Vol. 225, 120301, Q1(Top 2-9) in May 2024 having an Impact Factor of ***6.7*** and a Cite Score of ***12.8***.

  - ***Dr. Raghuvir Pai B*** and ***Dr. Vasudeva Karanth K***, along with ***Mr. Avinash K Hegde***, Research Scholar published a research paper titled "Influence of solar insolation on energy and exergy efficiency of a rectangular duct solar air heater with various types of V rib roughness: An analytical approach" in "International Communications in Heat and Mass Transfer", Vol. 153, 107397, Q1(Top 2-9) in April 2024 having an Impact Factor of ***6.4*** and Cite Score of ***11***.

- ***Dr. Arunachala U Chandavar***, along with ***Mr. Varun K***, research scholar has co-authored a research paper titled "Thermal performance augmentation of honeycomb metal matrix embedded phase change material in shell tube latent heat storage unit" in "Journal of Energy Storage", Vol. 91, 112045, Q1(Top 2-9) in July 2024 having an Impact Factor of ***8.9*** and a Cite Score of ***11.8***.

- ***Dr. Arunkumar H. S.***, ***Dr. Shivakumar*** and ***Dr. Vasudeva Karanth K.*** have published a research paper titled "Energy exergy and economic analysis of a multiple inlet solar air heater for augmented thermohydraulic performance" in "Applied Thermal Engineering", Vol. 246, 122918, Q1(Top 2-9) in June 2024 having an Impact Factor of ***6.9*** and a Cite Score of ***11.3***.

- ***Mr. Jonathan Monteiro*** co-authored a research paper titled "Investigating the properties of hydroxy propyl methyl cellulose based magnesium ion conducting solid polymer electrolytes for primary battery applications" in "Journal of Energy Storage", Vol. 89, 111575, Q1(Top 2-9) in June 2024 having an Impact Factor of ***8.9*** and a Cite Score of ***11.8***.

- ***Ph.D. Guidance:***

  - Doctoral degree was awarded to ***Dr. Ganesha Prasad***, full-time research scholar of the department for his doctoral thesis titled "***Modelling and Prediction of Tool Wear in Turbine Operation of Nickel-Iron-Chromium Superalloy from Machined-Surface- Images Using Deep Learning Technique"*** by Manipal Academy of Higher Education, Manipal on 29th January 2024. The research work was carried out under the guidance of ***Dr. Raghavendra Kamath C***, and was co-guided by ***Dr. Vijay G.S.***, Department of Mechanical and Industrial Engineering, MIT Manipal.

  - Doctoral degree was awarded to ***Dr. Doddapaneni Srinivas***, full-time research scholar of the department for his doctoral thesis titled ***"Multistage Solutionizing and Aging Behaviour on Stir Cast Aluminium-LM4 Hybrid Composites"*** by Manipal Academy of Higher Education, Manipal on 31st May 2024. The research work was carried out under the guidance of ***Dr. Gowri Shankar M. C.***, and was co-guided by ***Dr. Sathya Shankara Sharma***, Department of Mechanical & Industrial Engineering, MIT Manipal.

- ***FDP/Workshops Attended:***

  - ***09*** faculty members of the department have participated in ***21*** workshops/FDP's/Training Programs/certificate courses held during January to June, 2024.

- ***Reviewers:***

  - ***08*** faculty members of the department have served as reviewers for ***53*** various international/national journals & conference articles during January to June, 2024.

- ***Book Authoring:***
  - ***Dr. Ranjan Kumar Ghadai*** has edited a book titled ***"Microfabrication and Nanofabrication" ISBN: 978-3-11-133543-8*** published by DE GRUYTER in June, 2024.
- ***Conference Session Chair/ Technical Committee Member:***
  - ***Dr. Ranjan Kumar Ghadai***, has chaired a session at the "International Conference on Thermo-Fluids and Manufacturing Science 2024" held at Kalinga Institute of Industrial Technology, Bhubaneswar, India on 7th & 8th March 2024.
  - ***Dr. Manjunath Shettar***, has served as the Technical Committee Member for the "12th Asia Conference on Mechanical and Materials Engineering (ACMME 2024), held at Kyoto University of Advanced Science, Uzumasa Campus, Japan from 14th to 17th June, 2024.
- ***Resource Person/ Invited Talk:***
  - ***Dr. R. C. Shivamurthy*** has delivered a technical talk titled ***"Materials Characterization Tools for Additive Manufactured Parts"*** in the Karyashala under SERB Accelerate Vigyan Program (GOI) sponsored One Week High End Research Training Programme on " Post Processing of Additive Manufactured Parts" at Department of Mechanical Engineering, National Institute of Technology, Warangal, on 25th April 2024.
  - ***Dr. Vishwanath Managuli***, has delivered a Plenary Lecture at Department of Physics, MIT Manipal on 22nd May 2024.
- ***Awards:***
  - ***Dr. Pawan Hiremath*** and ***Mr. Nithesh Naik***, have received ***"Young Innovator Award"***, in recognition of demonstrating exceptional creativity, originality, innovation and pioneering spirit in the field of Engineering Science & Education, at the "International Conference on Innovative Discoveries and Emerging Advancements in Applied Sciences" (iDEAAS-2024) held at MAHSA University, Selangor, Malaysia in April, 2024.
- ***BOS Membership:***
  - ***Dr. Sathya Shankara Sharma***, has served as an external committee member for the BOS/BOE committee for the Mechanical Engineering stream and has attended BOS meetings at NMAMIT, NITTE held on 28th May 2024 and at MITE, Moodabidri held on 8th June 2024.
- ***BOS Membership:***
  - ***Dr. Sathya Shankara Sharma***, has served as external examiner for the PhD-comprehensive viva voce held at Malnad College of Engineering Hasan on 5th June, 2024.

PhD AWARDEES

Dr. Vinyas Shetty, faculty, has successfully defended his doctoral thesis titled ***"Numerical Investigation of Normal and Internally Disrupted Disc at L5-S1 Level of Human Lumbar Spine"*** for the award of PhD degree by the Manipal Academy of Higher Education, Manipal on 16th April 2024. The research work was guided by ***Dr. Raviraja A***., Professor, Department of Mechanical and Industrial Engineering, MIT, Manipal and co-guided by ***Dr. Shyamasunder Bhat N***., Professor and Head, Department of Orthopaedics, Kasturba Medical College, Manipal.

ALUMNI ACHIEVEMENTS

Mr. Rahul Shukla, an alumnus from the 1995 batch of B.E. Mechanical Engg. has been appointed as Vice President and Chief Sales & Marketing Officer at Titan Watches, Bengaluru. Prior to joining Titan, he has served Jockey India as President & Chief Retail Officer.
Ref: https://www.linkedin.com/in/rahul-shukla-1430366/

Mr. Ashwani Muppasani, an alumnus from the 1991 batch of B.E. Industrial & Production Engg. has been elevated to the prestigious position of Chief Operating Officer of Stellantis for India & Asia Pacific and as a member of Stellantis' Top Executive Team. He holds a master's degree in Industrial Engg. from Wichita State University, USA.
Ref: https://www.linkedin.com/in/ashwanimuppasani/

Dr. Manish Dhameja, an alumnus from the 1992 batch of B.E. Mechanical Engg. has been awarded Ph.D from premier institute "Indian School of Business" (ISB), Hyderabad. Currently he is serving as Chief Wholesale Banking Officer at Sohar International, Muscat.
Ref: https://www.linkedin.com/in/dr-manish-dhameja-8143031/

Mr. Aashish Mahajan, an alumnus from the 2007 batch of B.Tech. Mechanical Engg. has recently joined Intl. Fintech company C2FO, Kansas, USA as Vice President – Operations, India. C2FO is a Leawood, Kansas-based financial technology company that operates a working capital finance platform which allows businesses to access funds that are tied up in accounts receivable. Ashish was previously associated with Swiggy as Director - Central Operations (Driver Supply), Chandigarh.
Ref: https://www.linkedin.com/in/aashish-mahajan/

Mr. Radha Krishna Matury, an alumnus from the 1996 batch of B.E. Mechanical Engg. has joined Infosys Ltd. as Senior Delivery Manager. Prior to joining Infosys, he was associated with General Electric for 24 years.
Ref: https://www.linkedin.com/in/radha-krishna-matury-2750a47/

Mr. Abhay Maheshwari, an alumnus from the 2014 batch of B.Tech. Mechanical Engg. has received an award "Podcast Influencer of the Year", conferred at India Audio Summit & Awards by Radio and Music (and Indiantelevision.com). He is currently serving as Manager, Customer Success with ZS, a global management consulting & technology firm.
Ref: https://www.linkedin.com/in/maheshwariabhay/

STUDENT ACHIEVEMENTS

- ***Awards:***

1. Forbes Marshall Outstanding Project Award to Dept. of MIE UG Students:

The final year undergraduate students of Dept. of Mechanical & Industrial Engg. have secured both first and runner up positions in the Outstanding Project Awards 2024 competition conducted by Forbes Marshall, Pune. The team comprising ***Mr. M Sarath Chandra Reddy*** (B.Tech. Mech.), ***Mr. Lalith Surya Mamidipalli*** (B.Tech. IP) and ***Mr. Advay Srinivas Nikam*** (B.Tech. IP), have secured 1st place for their project entitled ***"Experimental Investigation on Vertical Axis Hydro Kinetic Turbines,"*** with a cash prize of ₹50,000,

The team comprising ***Mr. Akhil Jayesh Mhatre***, ***Mr. Prithviraj Avinash Patil*** and ***Mr. Kare Yugeshwar*** (all belonging to B.Tech. Mech.) have bagged the runner up position for their project entitled ***"Development and Characteristics of Direct Metal Laser Sintering of AlSiMg Alloy - Investigate Effect of Post Processing"*** which carried a cash prize of ₹25,000.

Dr. Shashi Kumar C M (Faculty)

Dr. Gajanan Anne (Faculty)

Mr. M Sarath Chandra Reddy

Mr. Akhil Jayesh Mhatre

Mr. Lalith Surya Mamidipalli

Mr. Prithviraj Avinash Patil

Mr. Advay Srinivas Nikam

Mr. Kare Yugeshwar

The winning project result was announced in the zoom meeting on 26th June 2024 which is commemorated as Thermodynamics Day, coinciding with the birth anniversary of Lord Kelvin and the runner up project result was announced on 5th July 2024. The winning project was guided by ***Dr. Shashi Kumar C M***, and the runner up project was guided by ***Dr. Gajanan Anne***, Assistant Professors, Dept. of Mechanical & Industrial Engg.

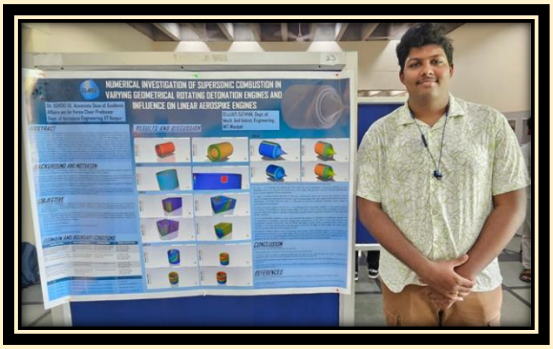
2. National Level Competition "MechAura- 2024" award:

Ms. Megha M Nair

Ms. Pradamya Mahajan

Ms. Megha M Nair and ***Ms. Pradamya Mahajan***, 3rd year students of B.Tech. (Mechanical Engg.) have participated in a national level competition called ***MechAura- 2024*** hosted by RTX Corporation, Pratt & Whitney India Engineering Center, Bangalore and have secured 1st Runner up position with a Samsung Tablet. The competition open only for 3rd year female students of Mechanical and allied branches witnessed participation from around 700 girl students had three rounds namely, online test, design dexterity challenge and technical & HR interview. They have also been offered a summer internship at Pratt & Whitney, followed by a six-month internship starting next year.

3. Completion of Fellowship Programme:



Mr. Gujjati Sathvik, 3rd year student of B.Tech. (Mechanical Engg.) has successfully completed the ***SURGE (Students – Undergraduate Research Graduate Excellence) Fellowship Program at IIT Kanpur*** during the recently concluded summer vacation. This elite and highly competitive program selects the best students across the country to work on cutting-edge research projects. As part of this program, he worked on the project titled, ***"Numerical Investigation of Supersonic Combustion in Varying Geometrical Rotating Detonation Engines and Influence on Linear Aerospike Engines"***. The research work was guided by ***Dr. Ashoke De***, Associate Dean of Academic Affairs and Air Force Chair Professor, Department of Aerospace Engineering, IIT Kanpur.

4. B.Tech. (Honours) Awardees:

Ms. Shivani S

Mr. Adwait Mahajan

Ms. Shivani S and ***Mr. Adwait Mahajan*** have successfully completed B.Tech.(Honours) in Mechanical Engg. in June, 2024. They belong to the third batch of B.Tech.(Honours) programme instituted by MIT for the 2018 onwards admitted students. As part of the course requirement their publication details are as under.

- ***Ms. Shivani S***, has co-authored a research paper under the guidance of ***Dr. Srinivas G.*** from the Dept. of Aeronautical & Automobile Engg. and ***Dr. Amar A. Murthy*** from the Dept. of Mechanical & Industrial Engg., titled "Aerodynamic Performance Enhancement of Centrifugal Compressor using Numerical Techniques." published in “F1000Research”, 13 (480) in May, 2024.
- ***Mr. Adwait Mahajan***, has co-authored a research paper under the guidance of ***Dr. Raghuvir Pai B., Dr. Ganesha A.*** and ***Dr. Girish H***. from the Dept. of Mechanical & Industrial Engg., titled "Performance Prediction and Optimization of Nanolubricants for Hydrodynamic Journal Bearings: A Data-Driven Approach for Regulating Volumetric Fraction and Aggregate Particle Size." published in “Cogent Engineering” 11(1), 2374946 in July, 2024.

The department congratulates and wishes them best of luck in his future endeavours.

5. *Student Publications:*

- ***Mr. Puneethraj H. P.***, research scholar, has co-authored a research paper with ***Dr. Manjunath Shettar*** titled "Synergistic Enhancement of the Mechanical Properties of EpoxyBased Coir Fiber Composites through Alkaline Treatment and Nanoclay Reinforcement" published in "Journal of Composites Science", 8(2), 66, [Q2]

- ***Mr. Rajendra U.***, research scholar, has co-authored a research paper with ***Dr. Dinesha P*** and ***Dr. Shiva Kumar*** titled "Characterization of biolubricants with nanoparticles additives" published in "Energy Sources, Part A: Recovery, Utilization and Environmental Effects", 46(1), 3684-3706, [Q1]

- ***Mr. Syed M. A.***, research scholar, has co-authored a research paper with ***Dr. Gowri Shankar M C*** and ***Dr. Manjunath Shettar*** titled "Watersoaking effect and influence of nanoclay on mechanical properties of bamboo/glass fiber reinforced epoxy hybrid composites" published in "Cogent Engineering", 11(1), 2338160, [Q2]

- ***Mr. Rajendra U.***, research scholar, has co-authored a research paper with ***Dr. Dinesha P*** titled "Comparative evaluation of lubricant properties of jatropha and jojoba methyl ester" published in "Cogent Engineering", 11(1), 2334397, [Q2]

- ***Mr. Suhas K.***, research scholar, has co-authored a research paper with ***Dr. Murthy B R N*** titled "A study on the optimization and functionalization of zirconiacoated multiwalled carbon nanotubes through hydrothermal process" published in "Materials Research Express", 11(4), 045603, [Q1]

- ***Mr. Avinash K. H.***, research scholar, has co-authored a research paper with ***Dr. Vasudeva Karanth K*** titled "Influence of solar insolation on energy and exergy efficiency of a rectangular duct solar air heater with various types of V rib roughness: An analytical approach" published in "International Communications in Heat and Mass Transfer", 153, 107397, [Q1]

- ***Mr. Supreeth D. K.***, research scholar, has co-authored a research paper with ***Dr. Siddappa I Bekinal*** titled " Optimization of Radial Electrodynamic Bearing Using Artificial Neural Network" published in "IEEE Access", 12, 67957 - 67970, [Q1]

- ***Mr. Vishwas R.***, B.Tech. Honours in Mechanical Engg. graduate from the class of 2023, has co-authored a research paper with ***Dr. Shivamurthy B*** titled "Acetone vapor sensing characteristics of Cr doped ZnO nanofibers" published in "Cogent Engineering", 11(1), 2311090, [Q2]

- ***Mr. Ganesh P.***, research scholar, has co-authored a research paper with ***Dr. Vijay G S*** and ***Dr. Raghavendra Kamath C*** titled "Optimization of the tool wear and surface roughness in the highspeed dry turning of Inconel800" published in "Cogent Engineering", 11(1), 2308993, [Q2]

- ***Mr. Ganesh P.***, research scholar, has co-authored a research paper with ***Dr. Vijay G S*** and ***Dr. Raghavendra Kamath C*** titled "A Study of Dimensionality Reduction in GLCM Feature Based Classification of Machined Surface Images" published in "Arabian Journal of Science and Engineering", 49(2), 1531-1553, [Q1]

- ***Mr. Shahabaz S. M.***, research scholar, has co-authored a research paper with ***Dr. Jayashree P K*** and ***Dr. Nagaraja Shetty*** titled "Optimization of Drilling Parameters on Delamination and Burr Formation in Drilling of Neat CFRP and Hybrid CFRP NanoComposites" published in "Materials Research Express", 11(3), 035006, [Q1]

- ***Mr. Sooraj M.***, Ph D. graduate, has co-authored a research paper with ***Dr. Dinesha P*** titled "Cu/BEA catalysts for the selective catalytic reduction of engine out NOx emissions: Experimental and kinetic investigations" published in "Fuel", 357, 130041, [Q1]

- ***Mr. Chirag G.***, B.Tech. Mechanical Engg. graduate from the class of 2023, has co-authored a research paper with ***Dr. Dinesha P*** titled " CO2 adsorption by KOH activated hydrochar derived from banana peel waste" published in "Chemical Papers", 78(6), 3845-3856, [Q2]

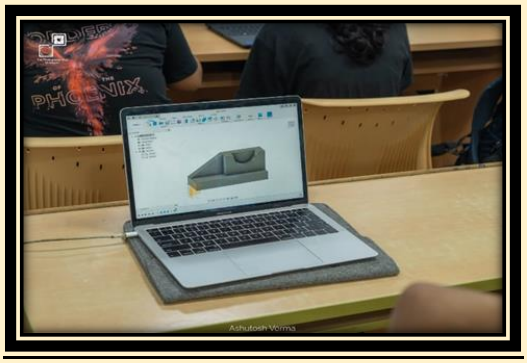
- ***Mr. Prashanth S. P.***, B.Tech. Mechanical Engg. graduate from the class of 2023, has co-authored a research paper with ***Dr. Arunanchala U Chandavar*** titled "Thermal performance augmentation of honeycomb metal matrix embedded phase change material in shelltube latent heat storage unit" published in "Journal of Energy Storage", 91, 112045, [Q1]

- ***Mr. Nithesh K.***, research scholar, has co-authored a research paper with ***Dr. Gowri Shankar M C*** and ***Dr. Sathya Shankara Sharma*** titled "Microstructure and surface characterization of copper and zinc added heat treated stir cast A356 alloy" published in "Cogent Engineering", 11(1), 2371530, [Q2]

CLUB ACTIVITIES

- ***IE (Mechanical):***

MATLAB & CAD WORKSHOP:

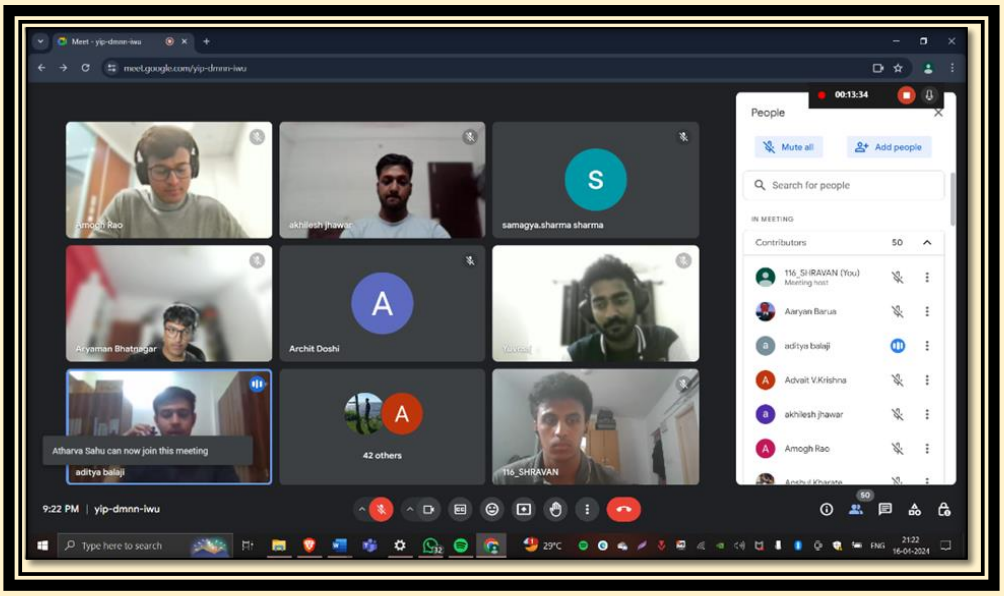


IE (Mechanical) Students Chapter organized a two-day ***MATLAB & CAD Workshop*** jointly in association with IE (E&E) Students Chapter on January 30th & 31st, 2024. A total of ***76*** participants, were provided hands-on learning experiences in both CAD and MATLAB software's. The sessions covered Fusion 360 basics for CAD design and MATLAB for calculations and data analysis. This interactive format, where participants worked alongside instructors on their laptops, fostered a collaborative learning environment and highlighted the integration of mechanical and electrical engineering skills. By the end, attendees gained practical knowledge and appreciated the interdisciplinary approach essential for meeting future engineering challenges.

FI CAR MODELLING WORKSHOP:

IE (Mechanical) Students Chapter, in collaboration with ISTE, hosted a two-day ***F1 Car Modelling Workshop*** on February 10th and 12th, 2024. The event focused on Formula 1 engineering and Computational Fluid Dynamics (CFD) simulation, providing participants with an in-depth experience in creating F1 CAD models using Solidworks & Fusion 360. They performed CFD simulations with ANSYS to analyse airflow dynamics and engaged in hands-on 3D printing sessions to bring their designs to life. The workshop concluded with attendees receiving certificates for their proficiency in CFD and 3D printing technologies. This event effectively combined theoretical and practical learning, showcasing the innovative spirit of the participants and preparing them for future challenges in automotive engineering.

HIGHER STUDIES AND PLACEMENT TALK:



On April 16, 2024, ***IE (Mechanical)*** Students Chapter hosted an online webinar in collaboration with the graduating Mechanical Engg. batch of 2024, focusing on ***placement opportunities and higher studies*** prospects. This virtual event provided a platform for students to share insights and experiences, empowering their peers in their academic and professional journeys. Resource persons from the Mechanical batch of 2024 offered valuable perspectives on securing research internships, navigating interviews, and leveraging support from the Dept. of Mechanical & Industrial Engg. The discussions also included debunking myths surrounding the Mechanical branch and pursuing higher education abroad. The webinar facilitated an engaging exchange of ideas, enabling participants to learn practical advice for their future endeavors and providing comprehensive support as they chalk out their career paths.