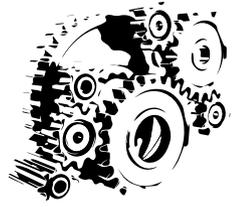




# NEWS LINKS



JANUARY 2020  
Volume 2 | Issue 1

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



Wishing all the readers a very happy and prosperous New Year 2020. It's my pleasure to present to you the current issue of "Newslinks" the E-newsletter of the Dept. of Mechanical & Mfg. Engg. highlighting the activities of the department from July to December, 2019. On this occasion, I am happy to inform you that the B. Tech. - Industrial & Production Engg. programme of the department has received its maiden 3-year 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 endeavors. Wishing all the students and faculty members a fruitful semester ahead.

- Dr. S.S. SHARMA

## DEPARTMENT NEWS

• B. Tech. Industrial & Production Engg. programme of the department has received its maiden three years of accreditation from the National Board of Accreditation (NBA).

• The 5th International Conference on Computational Methods in Engineering and Health Sciences (ICCMEH2019) was jointly organized by Manipal Academy of Higher Education (MAHE), Kyushu Institute of Technology (Kyutech), Japan and Universiti Putra Malaysia (UPM), on 16th and 17th July 2019 at the UPM campus, Serdang, Malaysia. Dr. Raghuvir Pai B. represented MAHE and was one of the chairpersons of the conference.

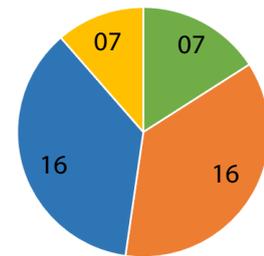


• Prof. A.N. Kantharaj, Associate Professor (Senior Scale), retired on 31st July 2019 after serving the department for more than 37 years. During his long association with the department he has published many papers in international journals and conferences and has served as the in charge of MIT Cafeteria, office bearer of Faculty Club and Treasurer of Temple Committee.



## FACULTY ACHIEVEMENTS

• Faculty members have published 44 research papers in various Web of Science/Scopus indexed journals and 04 faculty members have presented papers in various international conferences held during July to December, 2019.



Quartile 1  
Quartile 2  
Quartile 3  
Quartile 4

Quartile Distribution of Journal Publications

• 08 faculty members of the department have applied for funded projects amounting to Rs. 1.85 crore from various government and research organizations during July to December, 2019.

• 03 faculty members of the department have received research grant of Rs. 53.17 lakhs for projects from various government and research organizations.

• Dr. Dolfred Vijay Fernandes and Mr. Nithesh Naik have been sanctioned with an SEED funding of Rs. 1.06 lakh for projects from MAHE during July to December, 2019.

• 09 faculty of the department have served as reviewers of international/national conference articles during July to December, 2019.

• 16 faculty members have attended FDP's held at reputed institutions during July to December, 2019.

• Dr. Rajendra B, has delivered a talk on "Perspective Projections" for a workshop held at JSS Science and Technology University, Mysore on 12th July 2019.

• Mr. Suhas Y Nayak along with Dr. Satish Shenoy B and Dr. Chandrakant R Kini from the Dept. of Automobile & Aeronautical Engg. have established a collaboration for developing "Composite Materials for Anti-Ballistic Applications" with Dr. Mohammad Thariq Bin Hameed Sultan, INTROP, Universiti Putra Malaysia, Serdang, Malaysia in July 2019.

## EDITORIAL BOARD

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Dr. D. Srikanth Rao

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### Sub-Editors

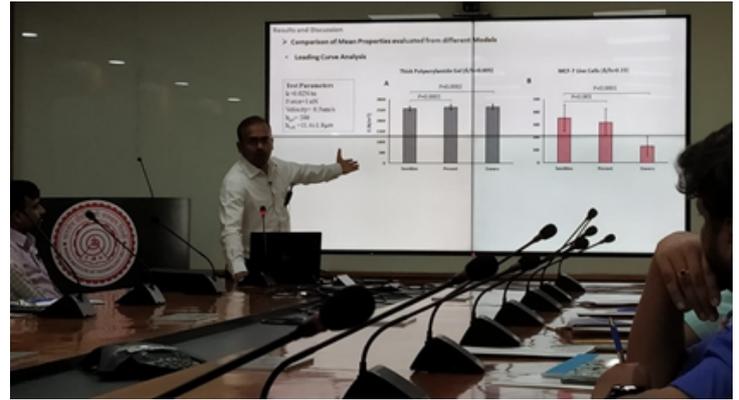
1. Dr. Achutha Kini U.
2. Mr. Dilifa Jossley Noronha
3. Mr. Suhas Y. Nayak
4. Mr. Kevin A. Mathias

### Sub-Editors (Students)

7. Mr. Abhishek Pal
8. Mr. Madhur Singh
9. Ms. Rashmi Samant
10. Mr. Prateek Kapoor

- Mr. Suhas Y Nayak has delivered a talk on "Research Opportunities in the area of Composite Materials" at Dr. T.M.A Pai Polytechnic, Manipal on 14<sup>th</sup> October 2019.
- Dr. Vishwanath Managuli has established an International collaboration with Wroclaw University of Science and Technology (WUST), Wroclaw, Poland, in August 2019. The MOU which was established at the university level will enable collaboration on joint educational and research activities that include opportunities for professional staff development, exchange of visiting scholars for conducting research and for providing academic opportunities to students from both campuses.
- Mr. Rithesh Bhat has received the best paper award for the technical paper titled " An Integrated approach of CCD-TOP-SIS-RSM for optimizing the marine grade GFRP Drilling Process Parameters " which was presented in First International Conference on Manufacturing, Material Science and Engineering held at CMR Institute of Technology, Hyderabad, on 16<sup>th</sup> & 17<sup>th</sup> August 2019.

- Dr. Vishwanath Managuli was invited as a Guest Speaker in the Workshop series "Atomic Force Microscopy- Beyond Topography: Advances in AFM Characterization" held at IISc-Bengaluru (15/07/19), IIT-Bombay (17/07/19) and IIT-Delhi (19/07/19). He delivered a talk on "Contact Models for Mechanical Characterization of Biological Cells and Polymer Samples using AFM based Nano-Indentation Technique".



- Dr. Vishwanath Managuli was invited as a Guest Speaker for the 8th annual seminar on Nano Technology in India, titled BTNT-2019. It was sponsored by Oxford Instruments and was organized at the National Institute of Science, Education and Research (NISER), Bhubaneswar, Orissa on 5<sup>th</sup> & 6<sup>th</sup> of December-2019. He delivered a talk on "Overcoming Uncertainties in the Nano Mechanical Characterization of Biological Cells using AFM based Nano Indentation Technique".
- Mr. Rakesh L . , has received the best paper award for the technical paper titled "Modelling & optimisation of floating drum biogas reactor" which was presented in International Conference on Applied Fluid Mechanics & Dynamics (ICAFMD-2019) held on 10<sup>th</sup> & 11<sup>th</sup> September at Singapore.

## GRANT RECIEVED DETAILS

<u>Faculty Name</u>	<u>Project Title</u>	<u>Sanctioning Organiza-tion</u>	<u>Amount Sanc-tioned</u>
Dr. Raghuvir Pai B & Dr. Abdul Khader	Fundamental study on carotid artery stenting using numerical simulation 2019.	DST & Japan Society for Promotion of Science	Rs.7,51,000/-
Dr. Vijaya Kini M Jointly with Mr. Padmaraj M H	Fatigue life analysis and study of slurry erosion behaviour of quasi-isotropic carbon fibre reinforced composites under the influence of marine environment.	Naval Research Board, DRDO, New Delhi	Rs.34,03,000/-
Dr. Arunachala U Chandavar	Steady state, transient and stability behaviour of coupled natural circulation loops.	Science & Engg. Research Board, DST, Delhi	Rs.11,63,430/-

## GUEST LECTURES HELD

- Dr. P K Vijayan, Raja Raman Fellow, Bhabha Atomic Research Center, Trombay, Maharashtra, gave a talk on "Stability Analysis of Single Phase Natural Circulation Loops" to the students of M. Tech (TSES), department faculty and research scholars on 19th September, 2019. The natural circulation loops find their applications in various fields most importantly in nuclear reactors and solar thermal power plants. The best example given was the espresso coffee machine used in airports and railway stations. The different types of instabilities that could occur in natural circulation loops as well as the methods that could be used to analyze them were discussed.



- Dr. Swapan Ghosh, founder of Nova Surface Care Centre Pvt Ltd. (NSCC), a polymer scientist with over 30 years of research experience in academia and Industrial R&D gave a talk on "Coating Technology" to the students and faculty members on 26th September, 2019. NSCC designs and develops customized well-engineered materials based on chemical nanotechnology with multifunctional properties. It has developed super-hydrophobic/super-oleophobic coatings for various substrates like glass, fabric, leather, paper, wood, concrete, metal, etc.

- Dr. B. Y Murthy an alumnus of the department from the 1966 batch of Mechanical Engineering under the then MEC delivered a talk on "My Technical Journey After Graduating" to the faculty members and students on 13th December, 2019. Dr B Y Murthy a doctorate from IIT Bombay in Fluid Power is presently the Managing Director of Veebee Hydraulics Private Limited, Hyderabad. It manufactures cost effective high pressure Gear Pumps for use in hydraulic industry and the farm sector. Dr. Murthy was the Founder Member of the National Society for Fluid Mechanics and Fluid Power and served as President of the Society for two consecutive terms.



## SHORT TERM TRAINING HELD



- The Department. arranged an training session on "Arena Software" for the benefit of V semester I & P Engg. students on 1st of October. Arena is a discrete event simulation and automation software. The resource person for the training was Mr. Aruna Prabhu, Asst. Professor (Sr. Scale), Dept of Mech. & Mfg. Engg. The resource person gave insight about the software and various options available for modelling and carrying out the analysis followed by the hands on training using the software.

## ALUMNI ACHIEVEMENTS

- Mr. Atul Pai, alumnus from 2015 Mechanical Engg. batch has secured acceptance for his research project in the IDEX program. The project focussed on reducing the weight of war weapons that will be of immense help to the Indian Defence Forces. In addition to the Defence Minister and IDEX scientists appreciating Atul's work, the Government of Goa has offered two acres of land for the implementation of this project.



- Mr. Priyam Mohanty, alumnus from 2005 Mechanical Engg. batch was awarded the global visionary award by Vision World Academy. Priyam is the founder and CEO of Tzar Aerospace Research Lab, Khorda, Orissa. Mr. Priyam holds a masters degree form Cranfield Unviersity in the area of Advanced Lightweight Structures and Impact.

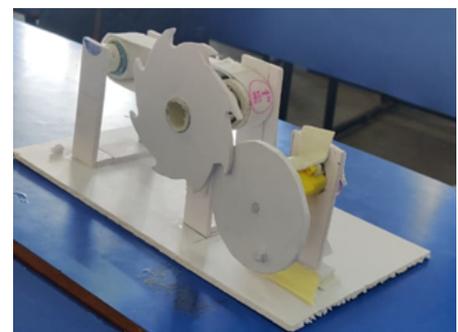
## STUDENT ACHIEVEMENTS

- Rashmi Samant from final year Mechanical Engg. published a paper titled "Plasmon-assisted self-cleaning sensor for the detection of organosulfur compounds in fuels" in "Journal of Materials Chemistry" Vol. 7, No.45 having an Impact Factor of 6.641.
- K Rajath Shenoy and Rashmi Samant from final year Mechanical Engg. along with Praneeth P. Sarvade from Mechanical Engg. - 2019 batch and Philipp Kaiser from Technical University of Munich, Germany published a paper titled "Influence of chemical treatment on the physico-mechanical characteristics of Tamarind and Borassus fruit fibres—a comparative assessment" in "Materials Research Express, Vol.6 having an Impact Factor of 1.449.
- K Rajath Shenoy from final year Mechanical Engg. presented two papers at the 5<sup>th</sup> International Conference on Computational Methods in Engineering and Health Sciences (ICMEH2019) held at Universiti Putra Malaysia in July 2019. He was awarded the best presenter award for one of the papers presented.
- Rashmi Samant from final year Mechanical Engg. presented two papers at the 5<sup>th</sup> International Conference on Computational Methods in Engineering and Health Sciences (ICMEH2019) held at Universiti Putra Malaysia in July 2019.

## CLUB ACTIVITIES

### ASME

- 6 Members of ASME Manipal took part in the Impromptu Design Challenge ASME Efx held at Gogte Institute of Technology, Belgavi on 20<sup>th</sup> September, 2019. The team made a Geneva Mechanism conveyor belt within the stipulated time and with the provided limited resources.





- ASME Manipal organized a workshop on Tribology on 21<sup>st</sup> September, 2019 at Heat Transfer Lab. The workshop was conducted by Dr. Raghuvir Pai B., Professor, Dept. of Mechanical & Mfg. Engg., which was attended by 23 students from different branches. It covered topics such as introduction to tribology, its history, applications, importance, scope and types of lubricants. Experiments like usage of water as a lubricant in rotating shafts instead of oil, measurement of coefficient of friction and pressure and temperature variation in a bearing were demonstrated.

- An workshop on “Design Study and Aerodynamics using Ansys” was conducted at PG CAD Lab on 1<sup>st</sup> October, 2019. The workshop was open to all the members of ASME Manipal Chapter. Topics covered in the workshop were discovering fatigue points and factors affecting aerodynamics, structural analysis and CFD by finite element method.



- An workshop on “Pneumatics and Hydraulics” was held for third year students in the Pneumatics Lab on 29<sup>th</sup> October, 2019. The workshop was conducted by Dr. Deepak D., Associate Professor, Dept. of Mech. & Mfg. Engg. The participants were given hands-on experience in setting up pneumatic and hydraulic circuits.

- ASME Manipal organized a 2-day “Fusion 360 Workshop” and competition on 2<sup>nd</sup> and 3<sup>rd</sup>, November, 2019. The students were taught about the basic aspects of 3D modelling and designing. A competition was held after the workshop and winners were awarded cash prizes.



- ASME Manipal jointly in association with SAE and IE Civil participated in Swachh Bharat Abhiyan on the 1<sup>st</sup> of October 2019, at Hoode Beach, Kemman. The team collected 9 large bags of plastic and other waste items over a one kilometre stretch of shoreline

## IE MECHANICAL

- IE Mechanical organised an 3 day -"AUTOCAD WORKSHOP in September 2019 for 1<sup>st</sup> year B.Tech. students at UG CAD Lab. The different features of the software relating to modelling and drawing were illustrated to the students with hands on experience.

