

the insider



INTRODUCTION

We are pleased to look forward to spotlighting the numerous events, activities, and accomplishments bagged by our students and faculty in the month of December 2022 in the final issue of MITAOE's "The Insider" published in 2022. The purpose of "The Insider" is to inform our readers about the institute, and we sincerely

hope that they find this to be both beneficial and educational. Additionally, we would like to express our gratitude to our academics and staff for their contributions to this publication. Please contact us at marketing@mitaoe.ac.in if you have any ideas or the feedback that could help us get better.

SPOKESPERSON

Beyond the walls of the departments, outside of the fences of the Institute, the actual image is portrayed by the MIT Academy of Engineering students. We at the MIT Academy of Engineering, Alandi, Pune, feel proud to share our students' achievements and their holistic development, initiated by our Institute. From technical paper publications to filing patents, from confident presentations at conferences to working on live industrial projects, from participating in various events to bringing accolades, our students have nailed their impression of society. We feel proud to get associated with reputed organizations like ASFU and Rotaract Club in hosting many events. The journey of the students, creating their footprints, and fulfilling the needs of the techno-society is very encouraging for us.



Dr. Prafulla Hatte
Dean School of Mechanical Engineering

Our faculty members have been playing the pivotal role of mentoring the students to ensure the completion of the cycle of learning, unlearning, and relearning. We believe in the "Students First, Teachers Always" motto. Let's expect some more vibes to be created by our students in the coming days.

CO CURRICULAR ACTIVITIES

- Constitution Day was observed on December 8th, 2022, by the equal opportunity centre under the guidance of the Director, Dr. Mahesh Goudar and team.



- Dean and Professor, Dr. Shyam Shukla and Assistant Professor Swapnali Mohol in collaboration with Sayali Dubash's "Joy of Sharing Forever" initiative organized an awareness program for students and teachers in the department of civil engineering on December 5, 2022 to promote reuse and recycling.

ACHIEVEMENTS

Niranjan Girhe, a B. Tech computer engineering student, won first place in the **UNESCO INDIA AFRICA HACKATHON 2022**. Niranjan Girhe was given **3,00,000/-Rs.** by the Honorable Vice President of India. Young innovators have a proper venue to collaborate and develop answers to the social, environmental, and technical issues that the cooperating countries are facing thanks to the **UNESCO INDIA - AFRICA Hackathon**.



Aditya Birangal, a student of BTech Computer Engineering, was selected for the Google Start-up Bootcamp University edition at the Google office in Mumbai. His idea was selected amongst **1500+** other startups from the **Google Bootcamp**.

The Devfest Mumbai event invited **Pratik Kale**, a BTech student studying computer engineering, to speak. Additionally, he participated in the **Bangalore Google Cloud Next Innovators program**.





The Director, Dr. Mahesh D. Goudar was presented with an award for **outstanding leadership** in higher education at the **Education Period Innovation Summit 2022**. As the leading organisation for media and technology studies, Elets Technomedia, has recently expanded to include India and other nations.

Prf. Avinash Kumar, Prf. Prathamesh Vhatkar, Prf. Hrijul Shende, Prf. Ashitosh Chavan, Prf. Kaliprasad Mahapatro won the Best Paper Award at the **2022 IEEE Pune Section International Conference (IEEE PuneCon2022)**. IEEE Pune Section International Conference (IEEE PuneCon2022) is an international conference which was conducted by the **IEEE Pune Section and International Institute of Information Technology, Pune** in collaboration with **Persistent Systems**. The article's title was **Real-Time Trajectory Prediction and Localization of Omni-directional Badminton Robot**, and the publication was titled **2022 IEEE Pune Section International Conference (PuneCon)**.



At the **Citi Code Challenge 2022**, **Nandini Barkul, Shwetal Desai, Onkar Chendage, and Pratham Madhani**, all **BTech** computer engineering students, took second place. **230** teams competed in the challenge to offer a solution to a genuine issue.

DevFest 2022 Pune was officially co-organized by the **Google Developer Student Club**, which was led by **Vatsal Jain**, a **TY** student studying computer engineering. DevFest is a worldwide tech conference organised by the **Google Developer Groups (GDG)** community in collaboration with the **Google Developer Student Club (GDSC)**. The **GDG** and **GDSC** organisers of each DevFest event design it to meet the learning requirements and interests of the local developer community, with a heavy emphasis on knowledge sharing, networking, and learning about Google developer technologies.



Entrepreneurial Development Foundation, Alandi was chosen for the **Startup India Seed Fund Scheme** on 8th December 2022 intending to give funding support to entrepreneurs for market entry, product testing, prototype creation, proof of concept, and commercialization.



In **AICTE – EduSkills Connect 2022**, a total of **6 nominations** were received; and ended up **winning 3** of those. Both the **Juniper Educator Excellence** and **Best Performing Cot Coordinator** prizes went to **Prf. Sandeep Shiravale**. Additionally, **MIT Academy of Engineering (West Zone)** won an award for **Best Performing Institute**.



The Department of Mechanical Engineering and Industrial Engineering at the **Indian Institute of Technology (IIT) Roorkee, India**, hosted the **9th International and 49th National Conference of Fluid Mechanics and Fluid Power (FMFP-2022)**, which took place from December 14 to December 16, 2022 where **55 participants** in the **B.Tech. Open Elective Programme** from the School of Mechanical, Civil, and Chemical Engineering as well as to **Dr. Pramod Kothmire**, the course champion (Associate Professor, School of Mechanical Engineering) participated. The course was titled **Advanced Computational Fluid Dynamics (B.Tech - Open Elective)**. **14 groups** presented their findings at the conference. Prof. Gretar Tryggvason of Johns Hopkins University in the United States, Prof. Perumal Nithiarasu of Swansea University in the United Kingdom, Prof. Jyotirmay Banerjee of SV NIT Surat, Prof. S. Nadaraja Pillai of SASTRA University in Tamil Nadu, and Prof. Andallib Tariq of IIT Roorkee all expressed their high praise for the projects and teaching methods.

RESEARCH & DEVELOPMENT

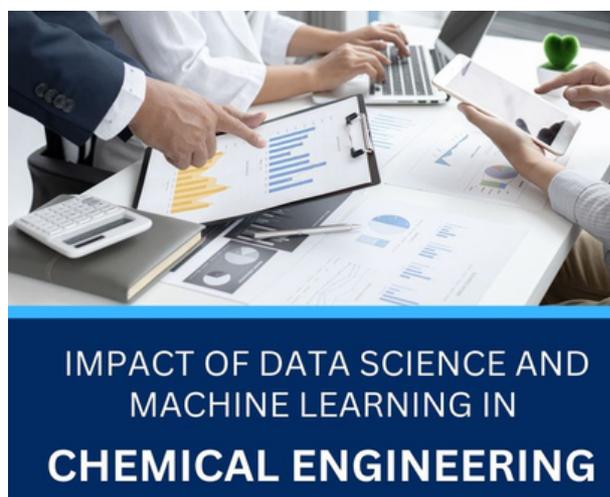
- Second International Conference on Advances in Electrical, Computing, Communication and Sustainable technologies (ICAECT), 21-22 April 2022, Date of Publication: 1 July 2022, IEEE. Prf. Kaliprasad A. Mahapatro, Prf. Ashitosh D. Chavan, Prf. Aniket D. Gundecha, and Prf. Prasheel V. Suryawanshi had the Higher Order Extended State Observer in Presence of Fast Varying. Link: IEEE Conference Publication | IEEE Xplore-Higher Order Extended State Observer in Presence of Fast Varying Mismatched Uncertainty.
- Based on the critic weight determination approach, Prf. S. Balamurugan, Prf. D. Seenivasan, and Prf. Pritam S. Kalos developed the multi-response and multi-criteria decision-making optimization of the transesterification reaction for the generation of biodiesel. Proc IMechE Part E: J Process Mechanical Engineering 1–1, © IMechE 2022, DOI: 10.1177/09544089221110954 July 11, 2022.
- Patent published with Title “Water Cooling System Using Peltier Effect” On 18th Nov 2022 by Prf. Suraj Joshi, Prf. Sanket Jadhav, Prf. Aditya Chavan, Dr. Prachi Rajarapolu, Dr. Prafulla Hatte.
- Dr. Shyam Shukla presented a technical paper at the International Conference on Advances and Creations in Mechanical Engineering (ICACME 2022) titled "Intelligent combination of Sump Model Study with CFD Analysis."
- Recently, the thermophysical behaviour of MXene ionanofluids for hybrid solar photovoltaic and thermal systems was modelled using artificial neural networks by Prf. Nagoor Basha Shaik, Prf. Muddasser Inayat, Prf. Watit Benjapolakul, Prf. Balaji Bakthavatchalam, Prf. Surendra D. Barewar, Prf. Widhyakorn Asdornwised, and Prf. Surachai Chaitusaney.
- Prf. Suganya Natarajan, Prf. Syed Hamim Jeelani, Prf. Prashant Sunagar, Prf. Sushilkumar Magade, Prf. Sahil Sanjeev Salvi, and Prf. Sumanta Bhattacharya investigated conventional concrete using rice husk ash (RHA) as a substitute for finer aggregate, according to IPR Journal of Physics: Conference Series 2272 (2022) 012030, published by IOP Publishing, with the following doi:10.1088/1742 6596/2.
- For the selection of a conveyor, Prf. Fulzele, Prf. S.B., Khatke, Prf. S.B., Prf. Kadam, S.J., et al. applied multi-attribute decision-making techniques. Computing Soft (2022). <https://doi.org/10.1007/s00500-022-07338-8>.

- A paper titled "Medical Assistance Robot with Capabilities of Mask Detection with Automatic Sanitization and Social Distancing Detection / Awareness" was presented by Harshvardhan Vibhandik, Sudhanshu Kale, Samiksha Shende, and Dr. Mahesh Goudar at the 6th International Conference on "Electronics, Communication and Aerospace Technology (ICECA 2022)," which was held in Coimbatore, Tamil Nadu, from December 1st to 3rd, 2022.
- The research paper "Selection of two-wheelers using analytical hierarchy approach" which was given by Dr. A. G. Kamble at the international conference on advances in smart materials, chemical & biochemical engineering, which was held from December 16–18, 2022, at NIT Rourkela.

OUR BLOGS

A blog post explaining how chemical engineering has considerably evolved technologically throughout the years was released on **December 30, 2022** and is titled "Impact of Data Science and Machine Learning in Chemical Engineering."

Click here to know more about the advancements of Chemical Engineering
<https://bit.ly/3Ih4xe3>



PATENTS

- Grass Cutter, by Ranjeet Vijayrao Bhosale, Aaditya Shivprakash Barve, Pratham Bharat Madhani, Yashodhan Shrikant Ghule, Dr Pritam Kalos, and Mr.Nilesh Bhandare, Design Application No. 367059-001, 30 June 2022.
- AI-Based Human Assistant Robot, by Dr A. N. Bhute and Mr D. B. Panchal, was created on 30 June 2022.
- The invention's title is "Electrolyte Level Monitoring System Using IoT", and its inventors are Vinay Khandagale, Vaishnavi Soundane, Sachin More Lekhanksh, Bondade Omkar Jagtap, and Dr. Rajeshwari M Goudar. They filed their patent application on August 7, 2022, at 202221039247.

OTHERS

- On July 4, 2022, the School of Electrical Engineering hosted a Direct Second Year (DSY)BTECH Parent Teacher meeting online.
- On March 6, 2022, the Rotaract Club of MITAOE was established under the direction of students studying mechanical engineering and Dr. N. B. Totala.
- From July 13 to July 16, 2022, MIT Academy of Engineering hosted the Pune BIAG Regional Drone Race Championship and Pune BIAG Regional Drone Weightlifting competitions on its campus. The contest was run by ASFU as part of the 2nd National Drone Ranking Series, which was overseen by BIAG India (Aviation and Space Federation for Universe). Dr. Mahesh Goudar, President, Organizational Committee & Director of MITAOE, and Chief Advisor Dr. Karbhari V. Kale, Vice Chancellor of SPPU, Pune, provided the information during a press conference. Lt. Gen. K.J. Singh, State Information Commissioner, UT, Chandigarh; Prof. Vinay Pathak, Vice Chancellor, Kanpur University; Dr. Amita Dev, Vice Chancellor, Indira Gandhi Government of Delhi Technical University for Women. The following contests were held:
 - Drone Race (Nano/Mini) (800 g total weight; 500 g drone + 300 g batteries).
 - Lifting weights with drones (1.5 kg including Batteries.)
- On July 9, 2022, the FY Students & football team was chosen.
- Dr. Shyam Shukla presented a lecture on "Career opportunities in Civil Engineering"
- Mr. Vijay Pingale worked at JSPM & RSCOE setting papers for engineering mechanics.
- A Project of Civil Engineering B. Tech Participated in ICACE and presented their Project Research Work on online mode under the guidance of Mr. Khushal Kanade. The Project Research Paper would be published in "The Journal of Materials in Civil Engineering"

- The selection of engine oil using multi-attribute decision-making techniques was a project undertaken by Akash Salunke, Ajit Lokhande, Akash Neharkar, Rupesh Satpute, and Avinash Kamble, Int. J. Industrial and Systems Engineering, Vol. 42, No. 1, 2022.
- Dr. Nitin M. Rane and Dr. Sandeep P. Shewale conducted a study for the journal Current Nanomaterials on the optimization of nanoscience parameters for extracting phenolic compounds from Ficus religiosa by three- phase partitioning (TPP) method, 2022, 7, 223-227.
- A study was undertaken by Mayank Bundele, Nitin Rane, Vikramaditya Lande, Akshay Dani, and Shraddha Shende on the environmentally friendly production of TiO₂ nanoparticles from Plumeria rubra L. leaves for anticorrosive applications, Materials Today, <https://doi.org/10.1016/j.matpr.2022.09.469>, 2023.
- Powar, S.B., and Dhamangaonkar, P.R. conducted research on the estimation of the critical insulation thickness for ducts and conductors with regular polygonal cross sections, Materials Today: Proceedings, 2022.
- For the students of SY & DSY in the subject of building design and construction, Mr. Sitaram Surywanshi organised an expert session on the topics of legal aspects and sanctioning of plans in civil engineering CV205.

“We thank all the faculty members, staff, and students who have been helpful and cooperative while the newsletter was under process. It is with a team of active members that the December edition of “The Insider” is ready to be published.”

EDITORIAL TEAM

Prerna Sukhramani | Milan Sagdhara | Nilesh Lokhande | Sarvesh Shinde