

*Official Newsletter Department of Mechanical Engineering*

# अविन्या= वृद्धि

*Insight to innovative growth*



**Editor-in-chief:**  
Dr. Vaibhav Jain  
**Editor:**  
Ms. Surabhi Lata

**Student Editors:**  
Tushar Aneja  
Saquib Khan  
Dheeraj Joshi  
Anshul Kumar

## *The Head's Desk*



It is a matter of great pride and privilege for me to be associated with the Department of Mechanical Engineering for this 19th year. Year 2019-20 has been a year of accomplishments for the Department. We got Accreditation status from NBA. Three of the faculty members of the Department received their PhD degrees from reputed institutes viz. NIT Kurukshetra and DTU. The Department organized Faculty Development programme in which faculty of other institute from NCR participated. A course on SCILab organized by us with the help of NMEICT, IIT Bombay benefitted number of teachers of various schools of Delhi. A large number of faculty members and students presented their research papers in various conferences in Delhi, Pune and Hyderabad.

This year we organized industrial visits almost every fortnight for the students. Two national seminars, sponsored by CSIR and GGSIPU, respectively were organized by the Department. Number of lectures have been also arranged by ASHRAE society and SAE Collegiate Club of MAIT.

*Dr. Vaibhav Jain*



## *The PhD Corner*

**Mr. Sachin Gupta** completed his PhD in "*Augmentation of Heat Transfer in Internal Flow*" from J. C. Bose University YMCA, Faridabad in February 2021.

## *Department Vision*

To be a globally renowned department in Engineering and Technology, excelling in academics, research, innovation, and ethical values, while addressing the needs of industry and society through leadership in Mechanical Engineering.

## *Department Mission*

To prepare responsible and effective engineers for global challenges by:

1. Delivering quality education through cutting-edge technologies.
2. Fostering research, innovation, and the development of socially relevant technologies.
3. Upholding ethical values and promoting sustainable professional growth.

## *Program Educational Objectives*

**PEO 1:** Build on the capability to work in global organisations as individuals and as team members and leaders and to have competence to start, run and grow one's own business.

**PEO 2:** Develop the ability of modeling & analytical skills for problem-solving and decision making to deal with latest technological challenges in industry and Research.

**PEO 3:** Develop expertise in the design process of mechanical systems based on functionality, safety, standards, cost effectiveness, aesthetics and sustainability.

**PEO 4:** Inculcate ethical responsibilities and service towards peers, society and the nation.

**PEO 5:** Imbibe strong fundamental concepts of engineering and their application in the emerging fields of Engineering among students.

## **ASHRAE, Student Chapter MAIT**

**Membership Number: 8370536**



The ASHRAE Student Chapter MAIT was started in Feb 2019. Since its inception the ASHRAE Student Chapter MAIT has witnessed exponential growth. The society was started just with 15 members under the guidance of Dr. Vaibhav Jain and its strength has been increased to 71 student members. Some of the members graduated in year 2020 and currently has 53 student members. The students of this chapter have shown extreme compassion and exuberance in discharging all the tasks taken up by them with utmost dedication and hard work. The Chapter has grown to be stronger, compassionate, tech savvy and slated to give the better engineers of tomorrow. They are continued to indulge in new, green and sustainable technological research and generated more practical experience in our society and with that work smart towards developing new models in the field of HVAC&R. As it is evident from this report, they didn't let COVID-19 to stop them from doing their best and making the best use of the time at home and keep on expanding the chapter and its activities. ASHRAE is a world-renowned organization and they only want to uphold that name by constantly trying hard to be better than before.

**Student President: Mr. Satwick Mishra**

**Student Vice-President: Mr. Akashat Goel & Mr. Shivam Wahi**

***Dr. Vaibhav Jain***

## **Team Aerostars**

Founded in 2021 under the Mechanical Department of MAIT, Team Aerostars is a group of aviation enthusiasts advancing aerial technology through innovation and research in unmanned aerial vehicles (UAVs). Serving as a platform for knowledge sharing and collaboration, the team has transformed passion into expertise, excelling in competitions like SAE India ADDC, TechnoXian, and BML Munjal.

Committed to integrating engineering, technology, and sports, Aerostars empowers students to become creators rather than consumers. As we continue to reach new heights, our motto, "**In Thrust, We Trust,**" propels us forward.

***Dr. Kanchan Mudgil***

## **3D SPACE Club**

3D Space: Additive Manufacturing Society of MAIT, founded in 2019 by 20 visionary students, is dedicated to advancing additive manufacturing. The society transforms ideas into tangible solutions through hands-on experience with 3D printing, enhancing students' CAD skills and mastering Design for Additive Manufacturing (DFAM).

Beyond designing and building 3D printers, the society produces engineering-grade components and fosters interdisciplinary collaboration. It stays at the forefront of the industry through research, competitions, and conferences. Committed to innovation, 3D Space empowers students to excel in the evolving field of additive manufacturing.

***Ms. Surabhi Lata***

## **Team JATAYU**

Founded in 2012 under the SAEINDIA Collegiate Club of MAIT, Team Jatayu is a dynamic group of engineering students dedicated to redefining automotive engineering. Specializing in All-Terrain Vehicles (ATVs), the team has excelled in prestigious competitions like Baja SAE India, Baja SAE USA, and Enduro Student India, showcasing technical mastery and resilience.

Team Jatayu thrives on collaboration, integrating academic knowledge with real-world applications. From advanced vehicle design to complex manufacturing, their ATVs are known for innovation, performance, and industry-standard excellence. Beyond competitions, the team fosters a culture of learning, mentoring juniors, and contributing to MAIT's legacy of automotive excellence. With a passion for pushing the boundaries of off-road engineering, Team Jatayu continues to inspire future engineers.

***Mr. R.C. Saini***

# *AEROSTARS: Drone & UAV Development Society*

## **DRONACHARYA Drone Competition at IGDTUW**

**Team Aerostars** participated in Dronacharya Drone Competition at Inerve'22 (Annual technical fest of IGDTUW) on 1<sup>st</sup> October 2022 under the guidance of Dr. Vaibhav Jain. The drone and UAV development team from Maharaja Agrasen Institute of Technology secured 1<sup>st</sup> position in this competition and won a cash prize of Rs 25,000/-.



## **Drone Racing Competition at BML Munjal University**

**Team Aerostars** participated in Drone Racing Competition at Fest 67<sup>th</sup> Milestone at BML Munjal University, Sidhrawali, Gurgaon on 1<sup>st</sup> October 2022 under the guidance of Dr. Vaibhav Jain. The drone and UAV development team from Maharaja Agrasen Institute of Technology secured 3<sup>rd</sup> position in this competition displaying its quick responses to obstacles and showcased their ability to achieve great heights.



## **List of Faculty**

- ✚ Dr. Vaibhav Jain
- ✚ Prof. V.N. Mathur
- ✚ Mr. Anil K. Dahiya
- ✚ Mr. Anil Gupta
- ✚ Mr. Naveen Solanki
- ✚ Mr. Deshdeep Gambhir
- ✚ Dr. Kanchan Mudgil
- ✚ Ms. Surabhi Lata
- ✚ Dr. Sidharth
- ✚ Dr. Vipin Kr. Sharma
- ✚ Dr. Sumit Joshi
- ✚ Ms. Piu Jain
- ✚ Mr. Rakesh C. Saini
- ✚ Ms. Surbhi Upadhyay
- ✚ Dr. Sachin Gupta
- ✚ Dr. Ramakant Rana

## *One-Day Workshop on "3D Printing Technology and its Applications"*

3D Space (Additive Manufacturing Society of MAIT) organized a one-day workshop on "3D Printing Technology and its Applications" on 23<sup>rd</sup> December 2022 at Maharaja Agrasen Institute of Technology under the guidance of Ms. Surabhi Lata. The event was conducted to create awareness about the 3D printing techniques and its importance in today's modern world. The ongoing research and innovations were illustrated through ppts and short videos. The nature of creativity, and methods to enhance creativity through this technology were outlined challenging each individual to personalize the ideas.

# Online Webinar on “3D Printing – The Future of Manufacturing”

An online webinar was organized under the guidance of Ms. Surabhi Lata by 3D Printing Society “3D Space”, Department of Mechanical Engineering, in association with Curiosity 3D on “3D Printing – The Future of Manufacturing” on 30<sup>th</sup> July 2022. The guest speaker Mr. Raunaq Dua, Alumni, MAIT and founder of Curiosity 3D discussed about the 3D printing technique and its scope in the various fields. He gave practical examples and also defined the insights on various materials used in 3D printing and machines dependent on the application areas. He also provided students with numerous research and job opportunities and discussed how they can be availed. It was a good learning experience about the new technique in the field of modern manufacturing.

**MAHARAJA AGRASEN INSTITUTE OF TECHNOLOGY**  
Maharaja Agrasen Chowk, Plot No. 1, Sector - 22, Rohini, Delhi - 110086

An Online – Webinar  
On  
**3-D PRINTING – THE FUTURE OF MANUFACTURING**  
Organized by  
Department of Mechanical & Automation Engineering  
and  
Department of Mechanical Engineering  
in association with  
*Curiosity 3D (Authorized Training Partner, MAIT)*

**INVITED SPEAKER**  
  
**Mr. Raunaq Dua**  
Founder, CURIOSITY 3D, Alumni, MAIT

Date: 30<sup>th</sup> July 2022  
Time: 3:00 PM – 4:30 PM (IST)  
Webinar Platform: Google Meet  
<https://meet.google.com/ajj-ives-hek>

Dr. Nand Kishore Garg (Founder & Chief Advisor)	Sh. Vineet Kumar Gupta (Chairman)	Sh. S.P. Aggarwal (Executive Chairman)	Er. T.R. Garg (General Secretary)
Sh. Mohan Kumar Garg (Joint General Secretary)	Sh. Anand Kumar Gupta (Treasurer)	Sh. Gyanendra Srivastava (Chief Executive)	Prof. (Dr.) M.L. Goyal (Vice Chairman)
Prof. (Dr.) Neelam Sharma (Director)	Prof. (Dr.) S. S. Deswal (Dean Academics)	Prof. (Dr.) V. N. Mathur (HoD, MAE Department)	Dr. Vaibhav Jain (HoD, ME Department)

**4**

**ADDITIVE MANUFACTURING**  
What is 3D Printing?

harsh goyal has left the meeting

Webinar on Designing & 3D Printing  
CURIOSITY 3D™

REC Surabhi Lata is presenting

Curiosity 3D

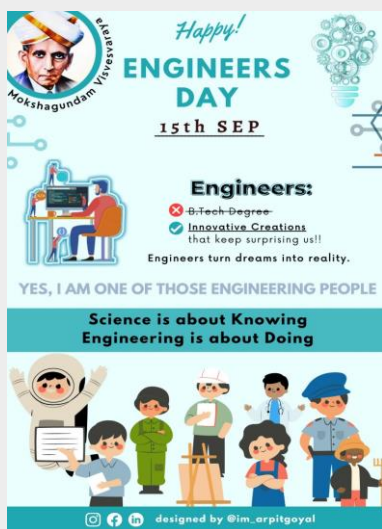
REC Surabhi Lata is presenting

3:11 PM ajj-ives-hek

# E-Poster Making Competition on Engineer's Day

Department of Mechanical Engineering in association with the Institute Innovation Council (IIC) and ASHRAE Student Branch MAIT under the guidance of Dr. Vaibhav Jain organized an E-poster making competition on Engineer's Day (15th September 2022). The theme of the poster was 'Engineers Day'. Online submissions were invited through a Google form for the poster. Students were allowed to use any software of their own choice to make the poster using their creativity. A total of 53 E-posters were received for the activity. After the scrutiny, 3 posters were selected for the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> prizes amounting to Rs 1500/-, Rs 1100/- and Rs 750/- respectively. Further, a consolation prize was given amounting to Rs 500.

1<sup>st</sup> Winner



2<sup>nd</sup> Winner



3<sup>rd</sup> Winner



Consolation Prize



# Online Seminar on “Success by Design”

Department of Mechanical Engineering in association with the IIC and ASHRAE Student Branch MAIT organized a seminar on “Success by Design” on 18<sup>th</sup> November 2022. The speakers for the session were Ms Vandana Kapuria, Director Enmax Smart System. Co-Chair (Student Activity), AIC and Mr Gaurav Verma, Scientist, BARC. The objective of the vent was to motivate and encourage the students to set and achieve ther goals. Ms Vandana Kapuria delivered an inspiring talk on the topic “Success by Design”. The talk was primarily focused on the smart way of achieving success. Ms. Kapuria emphasized the participants for setting their goals in the S.M.A.R.T. way i.e. Specific, Measurable, Actionable, Relevant and Time-bound. In the seminar students were guided on the following points: clarity about their goals, identifying their limiting beliefs, How to have Focus, understanding their WHY, the daily success habits, overcoming procrastination, freeing up large chunks of their time and much more. Mr Gaurav Verma from BARC shared his success story and guided the students for achieving success in the current challenging environment.



# One-Day Seminar on “Hands-on Training on Basics of 3D Printing”

A seminar was organized under the guidance of Ms. Surabhi Lata by 3D Printing Society “3D Space Club”, Department of Mechanical Engineering, on “Hands-on Training on Basics of 3D Printing” on 19<sup>th</sup> September 2022. The session was delivered by the senior students to their junior students discussing about the 3D printing technique and its scope in the various fields. The basics of 3D printing were explained and 3D printing process of physically demonstrated. It was a good learning experience about the new technique in the field of modern manufacturing.



# Research Publications

S.no.	Name	Conference Details	Year
1	Ms Piu Jain	International Conference on Mechanical, Industrial and Production Engineering, (ICMIPE)Salem	August 2022
2	Dr. Anil Kumar Dahiya	International Conference on Advancement in Manufacturing Engineering (ICAME-2022)	November 2022
3	Dr. Vikas Acharya	International Conference on Advancement in Manufacturing Engineering (ICAME-2022)	November 2022
4	Dr. Anil Kumar Dahiya	Fourth International Conference on Recent Advances in Materials and Manufacturing (ICRAMM 2022), Tamil Nadu	December 2022

## Individual Achievements

Dr. Sachin Gupta received a Research paper Award of Rs 50,000/- for publishing a research article in SCI Journal (Publisher: Elsevier, Journal: International Journal of Heat and Mass Transfer) from J. C. Bose University of Science and Technology, YMCA, Faridabad.

*“Education is not preparation for life; education is life itself.”*

**Maharaja Agrasen Institute of Technology**  
**Department of Mechanical Engineering**

Brahmgupt Block, Block No. II,  
Maharaja Agrasen Institute of Technology  
PSP Area, Plot No. 1, Sector – 22, Rohini, Delhi – 110086.