

The Head's Column



Mechanical Engineering is one of the oldest stream of engineering and is one of the most challenging and exciting career. At MAIT we have B.Tech Program in Mechanical and Automation Engineering, the course curriculum of which is designed considering the current need and requirement of trained professional in Industries. Engineers must address the most pressing problems facing society – problems with energy, water, food, health, and the environment – and do it in a sustainable, ethical, and humane way. Today engineering education and learning is passing through a major transition due to an explosion in availability of internet and fast communication. Students have access to varied information on any topic at the click of buttons of his mobile phone. The role of educators is critical in such scenario. He must satisfying the queries of young minds and motivate and help them to understand the engineering concepts. And then there are the radical transformations being wrought by technology which has witness the enormous excitement about online education. I believe there are huge opportunities to transform the way we teach engineering, and even who we teach it to. It will require effective professional development for both new and experienced instructors alike.

Dr. V. N. Mathur

ASHRAE, Student Chapter MAIT

Membership Number: 8370536



The ASHRAE student chapter MAIT was started in February 2019. Since its inception the ASHRAE Society MAIT has witnessed exponential growth. The society was started with 15 members under the guidance of Dr. Vaibhav Jain. The chapter strength has been increased to 42 members. The students of this chapter have shown extreme compassion and exuberance in discharging all the task taken up by them with utmost dedication and hard work. I would like to say one thing our chapter has shown amazing potential in its first year itself. This is just a beginning. We will continue to work hard, work smart towards developing new models in the field of HVAC and RAC. ASHRAE is a world renowned organization and we only want to uphold to that name.

Student President: Mr. Siddharth
Student Vice-President: Mr. Akash Goel

Dr. Vaibhav Jain

Faculty Corner

- ✚ **Mr. Siddharth** completed his PhD in “Utilization of ternary fuel blends in a compression ignition engine – Performance, Emission and Combustion Studies” from DTU, Delhi, in 2019.
- ✚ **Mr. Vipin Kumar Sharma** completed his PhD in “Performance studies of textured journal bearing” from DTU, Delhi, in 2019.
- ✚ **Mr. Narinder Kaushik** completed his PhD in “Experimental investigations on mechanical behaviour of friction stir welded aluminum based composites” from NIT, Kurukshetra, in 2019.



Doctor of Philosophy

Faculty pursuing PhD



- Mr. Anil Kumar Dahiya
- Mr. Alok Kumar
- Mr. Vikas Acharya
- Mr. Sachin Gupta
- Mr. Atul Kaushik
- Mr. Naveen Solanki
- Ms. Garima Sharma
- Ms. Piu Jain
- Mr. Ramakant Rana
- Mr. Rakesh Chander Saini
- Ms. Rachna Chawla
- Ms. Surbhi Upadhyay
- Mr. Vikas Sharma
- Mr. Madhukar Chhimwal
- Mr. Sumit Joshi
- Mr. Anupam Thakur
- Mr. Deshdeep Gambhir
- Mr. Ashwni
- Mr. Amit Gautam

Seminars/Workshops organized

- ✚ ASHRAE, Student Chapter MAIT organized one day workshop on “*Scope of Refrigeration and Air-Conditioning in India*” by **Dr. Rajinder Singh**, Chair Student Activity on **16th January 2019** coordinated by Dr. Vaibhav Jain.
- ✚ **Prof. (Dr.) G.P. Govil**, Advisor, Maharaja Agrasen Technical Education Society and Dean, Maharaja Agrasen University, Baddi gave a special talk on the topic “*Role of Ethics and Successful Career*” to the students on **6th February, 2019** organized by Dr. Vaibhav Jain.



Research Publications

- ✚ Mr. Vipin Kumar Sharma (5)
- ✚ Dr. Vaibhav Jain (6)
- ✚ Mr. Narinder Kaushik (1)
- ✚ Mr. Siddharth (3)
- ✚ Mr. Alok (2)
- ✚ Mr. Sachin Gupta (2)
- ✚ Mr. R. C. Saini (3)
- ✚ Mr. Sumit Joshi (1)
- ✚ Mr. Ramakant Rana (5)
- ✚ Mr. Ashwni goyal (3)
- ✚ Mr. Madhukar Chhimwal (1)
- ✚ Ms. Sonal Khurana (4)
- ✚ Ms. Garima Sharma (1)
- ✚ Ms. Surabhi Lata (4)
- ✚ Mr. Naveen Solanki (1)
- ✚ Mr. Harsh Joshi (1)

Faculty Development Programme

A one week FDP was organized on “Modern Trends in Renewable Energy Sources” from 13th – 18th May, 2019. This event was graced with the knowledge of eminent speakers across different colleges, viz, Prof. Purna Gaur, NSUT, Delhi; Prof. D.K. Jain, DCRUST, Murthal; Dr. J. P. Kesari, DTU, Delhi; Prof. Amit Pal, DTU, Delhi; Dr. Pankaj Gupta, IGDTUW, Delhi; Prof. Z.A. Jaffery, Jamia Millia Islamia, Delhi; and Dr. R.K. Yadav, Pragati Power Corporation, Delhi.

An industrial visit to NPTI, Faridabad, was also conducted during FDP where Sh. Mahender Singh addressed the faculty members followed by exposure to Simulator.



Industry-Institute Interactions

An industrial visit to **Pragati Combined Cycle Power Plant, Bawana** was organized on **16th February, 2019** for students of Mechanical and Automation Engineering Department. 40 students accompanied with 4 faculty members of MAE Dept. attended the same. They showed the boiler, steam turbine, gas turbine, HRSG (heat recovery steam generator) and control section which followed with the doubt session.



Industrial visit is a part of the educational tour which provides students with an opportunity to learn practically. An industrial visit to **Maruti Suzuki India Ltd., Gurugram** was organized on **01st March, 2019** for students of Mechanical and Automation Engineering Department. 35 students along with 4 faculty members attended the same.



An industrial visit to **Moon Beverages Pvt. Ltd., Sahibabad** was organized on **30th March, 2019** for 35 students accompanied with 3 faculty members. It started with manufacturing of soft drinks i.e. THUMS UP, LIMCA, MAAZA, RIMZHIM, BISLERI, SODA GOLD SPOT under arrangement with Parle. In 1994 the company became the authorized bottler of Coca Cola Atlanta, USA and started manufacturing of Coca Cola, Limca, Sprit, Maaza, Thums UP, Fanta, Minute Maid, Coke Zero & Kinley.



Robotics Society of MAIT

On **24th January, 2019**, an industrial visit was organized to the following places:

1. **Rohini Heliport, Rohini, New Delhi.**
2. **Vertonics Pvt. Ltd.**

A group of 32 Students, under the guidance of Mr. Ramakant Rana, Mr. Anupam Thakur and Mr. Naveen Solanki visited Rohini Heliport. Mr. A. K. Yadav (Head of Rohini Heliport) and Mr. Ramesh welcomed all and gave a brief introduction about the heliport. Mr. Prashant started the session for the students discussing about various helicopters, interior of India's biggest helicopter, their maintenance (air craft maintenance department) and safety and precautionary measures taken at heliport during operational environment.

The visit was further headed to Vertonics Pvt. Ltd., Delhi where students were imparted with the knowledge of robotics, sensor technology, CAD modelling for 3D printing and the process of 3D printing. Both the visits made students acquainted to the newer technology used in modern era and sparked a new opportunity for exploration.

Mr. Ramakant Rana



SAE India Collegiate Club

Enduro Student India-2019

The team reached PCET Nutan, Pune City on 14th February 2019. They carried out final tweaks in the ATV for the Technical Inspection. The team cleared the TI in 1st attempt following which engine check and brake test were also cleared. The team took attempts of the three dynamic events, with best lap times:

1. Sprint - 42 seconds
2. Dirtx - 56 seconds
3. Acceleration and Maneuverability - 5.241 seconds and 43 seconds respectively.

The team participated in static events namely: Design event, cost event and validation round. The final part of the event was a four hour endurance race in which the ATV ran flawlessly for more than three hours. The team bagged three prizes:

1. Spirit of ESI award: A special award which is granted to the team which is voted as the best and most helpful team amongst the participating team.
2. Maneuverability event – 2nd position
3. Sprint event – 2nd position



BAJA SAE Tennessee, USA

Team Jatayu participated in the prestigious international competition BAJA SAE Tennessee, USA hosted by BAJA chapter of Tennessee Technical University from 11th to 13th April, 2019, in the city of Cookeville, TN with a team of 15 members. The vehicle was able to pass the notoriously difficult technical inspection on second attempt itself. Our team leader, Jatin Prabhakar led the team handsomely even during the adverse situations.

HIGHLIGHTS: Passed the brake test in the first attempt. The Team was moved when the spectators in the maneuvering arena gave a thunderous applause to our vehicle during our maneuvering attempt.

PERFORMANCE:

Maneuverability Event: **8th rank**

Design Event: **10th rank**

Suspension and Traction: **18th rank**

Overall rank: **41**



SAE India BAJA-2019

The team took part in the competition Baja SAE India 2019 which was held in Pithampur, Indore, Madhya Pradesh from 23rd - 27th February, 2019 organized by SAE India and sponsored by Mahindra. The team was able to perform and maintained a dutiful position in various events and overall rank among the colleges in north zone. Subsequently we retained title of as one of the best teams in Delhi-NCR and North India. Also, four students secured placement in Mahindra and Varroc Group which is an eminently competitive nationwide exam.

NAME (year)	COMPANY
Ankit Banal (4th)	Varroc Group
Arpit Ghai (4th)	Varroc Group
Jatin Prabhakar (4th)	Varroc Group
Sourav Nanda (3rd)	Mahindra India

Presence @ International Conferences

On 20th January 20, 2019, a group of MAE students, under the guidance of Mr. Ramakant Rana, Mr. Rakesh Chander Saini, Dr Vaibhav Jain and Mr. Harsh Joshi attended the International Conference of Advance Research and Innovation (ICARI-2019) at Institution of Engineers India, Delhi State Centre (Engineers Bhawan), Bahadur Shah Zafar Marg, New Delhi, India to present their research works in various fields. This conference was organized by the “International Journal of Advance Research and Innovation”. There were seven research papers from the field of Robotics, Composite Material manufacturing and Refrigeration and Air-conditioning.



ANVESHANA

Science and engineering fair

ANVESHANA: Science and engineering fair is organized by Agastya International foundation every year in four regions across India i.e. Delhi-NCR, Hyderabad, Mumbai and Bangalore. A team of two students participated in ANVESHANA, Delhi-NCR 2019 and were among the 35 teams selected for the next round from 120+ projects ideas submitted. The final year B.Tech MAE students, Sidhaant Gupta and Mohit Kapoor under the guidance of Ms. Surabhi Lata presented the project idea “Charcoal Air filter for IC engine” in the theme “Energy”. They mentored two school students from 8th standard of Rajkiya Pratibha Vikas Vidhyalaya, Paschim Vihar, Delhi and presented their idea at National Science Centre, Pragati Maidan, Delhi on 23-24 January, 2019.

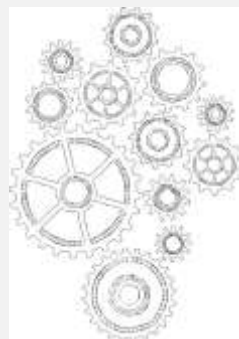


Individual Achievements

Dr. Vaibhav Jain, received best paper award during the International Conference on Emerging Trends in Electro-Mechanical Technologies and Management (TEMT-2019), held at HMRITM, Delhi (India), 26th-27th July, 2019.

Students Research Paper

A total of 30 Research papers were published in International Journals & International Conferences by students under the guidance of faculty of MAE Department.



University Toppers

Second Semester: 10 students
Fourth Semester: 7 students
Sixth Semester: 3 students
Eight Semester: 6 students

Department of Mechanical & Automation Engineering

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