

# Maharaja Agrasen Institute of Technology, Delhi

## Department of Mechanical and Automation Engineering

## Department of Mechanical Engineering



ASHRAE India chapter organised an International Symposium on 'Clean Energy, Air and Water: Circular Economy' on 16th September 2024 at Development Alternatives, Qutub Institutional Area, Delhi. ASHRAE President, Mr Dennis Knight, USA graced the occasion with many HVAC industry experts. Students depicted their idea through posters and oral presentation, followed by Engineer's day celebration with a video prepared by Ms Anushka, Student MAIT and DL presentation by Mr Dennis Knight.

Mr. Dennis Knight talked about the Building Information Modeling (BIM), specifically within the context of mechanical engineering or design. He covered a wide range of topics, from the fundamentals of BIM to advanced applications and future trends.

### Key Topics Covered:

- BIM Fundamentals:
  - Introduction to BIM concepts and its role in integrated design.
  - BIM tools and processes.
- Mechanical Design
  - Specific steps involved in designing mechanical systems (e.g., HVAC).
  - Use of BIM for tasks like placing ducts, equipment, and defining properties.
- BIM Advancements:
  - Current trends such as integrated project delivery, automated processes, and advanced analytics.
  - Emerging technologies like cloud-based BIM, energy modeling, and computational fluid dynamics.
  - Future developments like virtual design, life cycle analysis, and disaster simulation.
- Challenges and Opportunities:
  - Barriers that hinder the widespread adoption of BIM.
  - Importance of standards like ASHRAE 224.
  - Potential benefits and future directions for BIM.

The overarching theme of the talk is the value of BIM in modern building design and construction. BIM offers a comprehensive approach to managing project information,

facilitating collaboration among different stakeholders, and improving the efficiency and quality of the design process. By leveraging BIM tools and methodologies, professionals can streamline workflows, reduce errors, and achieve better outcomes.

Specific insights from the attachments include:

- The importance of integrated design in BIM to ensure coordination among different disciplines.
- The potential of BIM to improve the accuracy and efficiency of mechanical system design.
- The growing role of advanced technologies like cloud-based BIM and AI in the construction industry.
- The need for industry standards and best practices to guide the adoption and implementation of BIM.

Overall, the talk by Mr. Dennis Knight provided a valuable overview of the current state of BIM and its potential to revolutionize the way buildings are designed, constructed, and operated.

Around 30 students of ASHRAE Student Branch MAIT presented their poster under the guidance of Dr Vaibhav Jain.

### **List of participants**

1. Pulkit Mahour
2. Keerat Singh
3. Akshat Bhatt
4. Ruchir
5. Aditya Singh
6. Rohan Rore
7. Ankit
8. Keshav Nandan
9. Tushar
10. Md Taufique Umar
11. Subhash Singh
12. Myank Jatuly
13. Lalit Sharma
14. Aman Kumar
15. Sahil Verma

16. Keshav Vats
17. Aman Vats
18. Anmol
19. Hritik
20. Deepak
21. Md Kaunain
22. Rishab Chawala
23. Gokul
24. Mayank Jatley
25. Anushka
26. Vishu
27. Abhishek Kumar
28. Aditya Kumar
29. Krishna Bakshi

### **Event Photos:**



