

Event Report

Event Name: IMech Tech Talk - Cyber SHM

Date: 01/04/2024

Time: 3:00 PM on words

Venue: Mechanical Seminar Hall

1. Introduction

On the 1st of April, 2024, the Institution of Mechanical Engineers (IMechE) organized a tech talk titled "Cyber SHM" at the Mechanical Seminar Hall. The event aimed to provide insights into the latest advancements in Structural Health Monitoring (SHM) using cyber technologies. The seminar was attended by students, faculty members, and industry professionals.

2. Organizing Committee

- **Institution of Mechanical Engineers (IMechE)**

Teacher Coordinators in Charge:

- Rajib Bandyopadhyay
- Pranibesh Mondal

Student Coordinator in Charge:

- Samayan Mazumder, Project Fellow, IIC

3. Arrival and Registration

The seminar began with the arrival and registration of participants at 2:30 PM. Attendees were provided with seminar kits, including brochures, notebooks, and pens. The registration process was smooth, and participants were seated by 2:55 PM.

4. Welcome and Introduction

The event officially started at 3:00 PM with a welcome address by the Teacher Coordinator, Rajib Bandyopadhyay. He introduced the theme of the seminar and emphasized the importance of integrating cyber technologies with SHM. Following the welcome address, Pranibesh Mondal gave a brief introduction to the guest speaker and the agenda of the talk.

5. Guest Speaker Session

The guest speaker for the event was Dr. Dilip Sen, a renowned expert in cyber-physical systems and SHM. Dr. Debojit Nagg is currently a professor at TCS, with extensive research and industry experience in the field.

5.1. Overview of Cyber SHM

Dr. Dilip Sen began the session with an overview of Cyber SHM, explaining its significance in modern engineering. He highlighted the traditional SHM methods and the limitations they face in terms of data acquisition, processing, and real-time analysis.

5.2. Integration of Cyber Technologies

The speaker delved into the integration of cyber technologies with SHM, discussing the role of the Internet of Things (IoT), artificial intelligence (AI), and machine learning (ML) in enhancing the accuracy and efficiency of SHM systems. Real-world case studies were presented to demonstrate the practical applications and benefits of Cyber SHM.

5.3. Challenges and Future Trends

Dr. Debojit Nagg addressed the challenges associated with Cyber SHM, including data security, system interoperability, and the need for standardized protocols. He also shared insights into future trends and innovations that are expected to shape the field in the coming years.

6. Interactive Session and Q&A

The seminar included an interactive session where participants had the opportunity to ask questions and engage in discussions with the guest speaker. Topics such as cybersecurity in SHM, the role of cloud computing, and the potential for predictive maintenance were explored. The Q&A session was highly interactive, with enthusiastic participation from both students and faculty.

7. Conclusion

The event concluded with a vote of thanks by the Student Coordinator, Samayan Mazumder. He expressed gratitude to Dr. Dilip Sen for sharing his valuable knowledge and insights. The seminar was well-received, with participants appreciating the depth of information and the engaging presentation style.

Acknowledgements

We extend our sincere thanks to Dr. Dilip Sen for his enlightening talk and to all participants for their active involvement. Special thanks to the organizing committee and volunteers for their efforts in making the event a success.

Attendance Sheet

ATTENDANCE SHEET

Name of the event: I Meche Tech Talk - Cyber SHM

Date & Time: 01/04/2024 Venue: Mechanical Seminar Room

Sl. No.	Name	Department	Year
1.	Anish Patra	Mechanical	UG-3
2.	Soumit Mondal	M.E.	3rd Year
03.	Pranay Das	Mechanical	UG-3
04.	Arghya Nandi	ME	Prof.
05.	S. Neogy	ME	Faculty member
06.	Doyel Bisoi	Chemical	UG-III
7.	Tamal Ray Chowdhury	M.E.	UG-III
08.	Swastik Banerjee	M.E.	UG-3
09.	Souparnika Mondal	M.E.	UG-1
10.	Saham Sharma Sarkar	M.E.	UG-I
11.	Swarnil Mahapatra	ME	UG-IV
12.	Amrita Dasgupta	ME	UG-III
13.	Samudra Sen	ME	UG-III
14.	Anusag Kabiraj	ME	BME-III
15.	Suman Soudamandal.	ME	BME-III
16.	Puspak Bera	ME	BME-III
17.	Shreemanta Chakraborty	ME	BME-IV
18.	Ananya Rakshit	ME	BME-IV
19.	Prahar Sarkar	ME	Research Sch
20.	Shraban Halder	ME	UG-II
21.	JOY MANDAL	ME	Ph.D.
22.	Sabyasachi Mondal	Mechanical Engineering	Ph.D.
23.	Kumar Abhinav Jha	Mechanical Engineering	Ph.D.
24.	Asmita Mondal	Mechanical Engg.	UG-III
25.	Pranoy Ghosh	Mechanical Engg.	UG-II
26.	Ankita Dasgupta	Production Engg.	UG-III
27.	Akshabrata Das	Mechanical Engg.	UG-I
28.	Sampad Chanda	Mech. Engg.	UG-I
29.	Sagnik Mitra	Prod Engg.	UG-III

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Sl. No.	Name	Department	Year
30.	Sayoni Panamuk	ME	UG I
31	Reet Mondal	chem	UG II
32	Sajal Chakraborty	ME	UG II
33	Reetam Baidya	ME	UG II
34	Harsh Mondal	ME	UG II
35	Arbab Barui	Chem	UG II
36	Rajat Choudhary	chem	UG II
37	Shadab Akhter	ME	UG II
38	Harsh Preet	Production	UG II
39	Harsh Das	Production	UG II
40	Asif Ali	ME	UG II
41.	Aman Haque	Chem	UG II
42.	Samayam Mukherjee	IIC	UG III
43.	Arbab Mahastab	IBSD	Project Fellow MTech

Photos



