

||JAI SRI GURUDEV||

**SJC INSTITUTE OF TECHNOLOGY**

**Department of Aeronautical Engineering**

**PARTICIPATION OF STUDENT SEMINAR SERIES BY ASME GT INDIA GROUP**

This visit was organized to Sir M. Visvesvaraya Institute of Technology, Bangalore for 5<sup>th</sup> and 7<sup>th</sup> Sem Aeronautical Students on On 14 oct 2022 by the department to attend the event “**STUDENT SEMINAR SERIES**” Which was conducted by **ASME GT INDIA GROUP**.

In this event the speakers from IIT Kharagpur, IIT Madras, and from Reputed companies like Honeywell, Rolls Royce, and General Electric has given the valuable lectures on “**GAS TURBINE TECHNOLOGIES-FUNDAMENTALS AND ADVANCEMENTS**”.

**Speakers of this event: -**

1. Dr. Shraman N Goswami (Honeywell, Bengaluru)
2. Dr. Kalicharan Nayak (Rolls Royce, Bengaluru)
3. Mr. Hitesh Mistry (GE Research, Bengaluru)
4. Dr. Chetan Mistry (IIT Kharagpur)
5. Dr. N. Rao (IIT Madras)



The poster is for a student seminar series organized by ASME GT India Group. It features the ASME logo at the top left and the ASME International Gas Turbine Institute logo at the top right. The main title is "Student Seminar SERIES BY ASME GT INDIA GROUP". The date and time are "14 OCT 2022" from "09:45AM - 05:30PM". The location is "SMVIT, BENGALURU". The topic is "GAS TURBINE TECHNOLOGIES-FUNDAMENTALS AND ADVANCEMENTS". The speakers are listed as follows:

- DR. SHRAMAN N GOSWAMI (Honeywell, Bengaluru)
- DR. CHETAN MISTRY (IIT Kharagpur)
- DR. KALICHARAN NAYAK (Rolls Royce, Bengaluru)
- DR. N. RAO (IIT Madras)
- MR. HITESH MISTRY (GE Research, Bengaluru)

### **Morning Session: - 01**

- **Dr. Shraman N Goswami** (Honeywell, Bengaluru) an industrial expert has briefly explained about the history and overview of Gas turbine technologies.
- He has also given the brief introduction about the industry-oriented gas turbine engines and Aviation related Gas turbine engines.
- He also short listed the challenges facing by the application of Gas turbine engines in reference with efficiency, Sustainable energy and future developments of Gas turbine engines.

### **Morning Session: - 02**

- **Dr. Chetan Mistry** (IIT Kharagpur) an IIT Professor has given the brief introduction about the Fundamentals of diffuser, airfoil nomenclature and turbomachinery.
- He also explicated the Aerodynamic design of compressor fan and types of airfoils used in compressor blades.
- Further he described about the industry-oriented gas turbine engine design and development of high efficiency engines by using the different combinations of compressor blades, controlling boundary layer and tip clearance.

### **Morning Session: - 03**

- Once again in his 2<sup>nd</sup> session of the day **Dr. Chetan Mistry**, has explained about the Axial turbine aerodynamics and advance methods.
- In this session he has also explicated the turbine blade geometry and fundamental velocity triangles for the different types of turbine and compressor blades.
- At the end of the session, he clearly disclosed the major different functioning of turbine and compressor blades.

### **Afternoon session: - 01**

- After the lunch break, **Dr. N. Rao** (IIT Madras) an IIT Professor has briefed about the CFD Applications in Gas turbine engines.
- In continuation with this he has also explained about the advanced developments in Turbofan Engines in future. Such as introduction of Geared Turbofan engine into the aviation market.
- In addition to this he also encouraged the students to work on projects which are sustainable development, accurate, quick and stable.

### Afternoon session: - 02

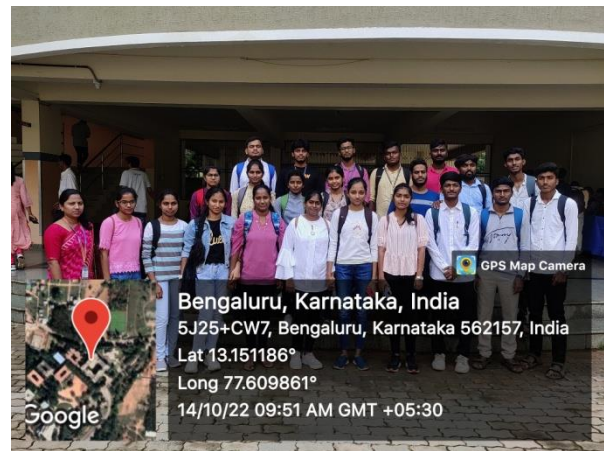
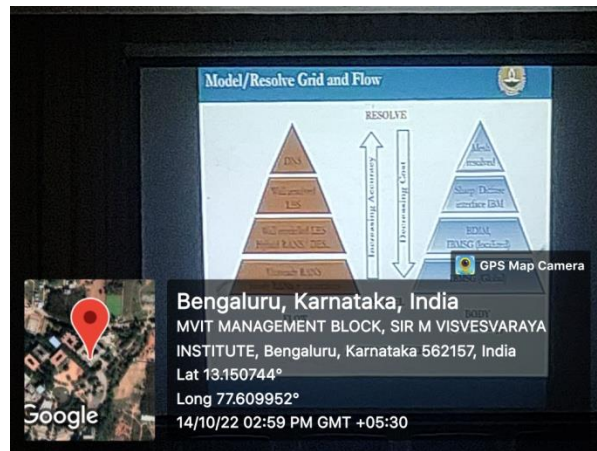
- In this session **Dr. Kalicharan Nayak** (Rolls Royce, Bengaluru) an industrial expert has given the brief introduction about the Aerothermal challenges of Gas turbine engines and solutions to overcome those challenges.
- In addition to this he has also briefed about the indigenous development of Gas turbine in India in future.

### Afternoon session: - 03

- In this last session of day **Mr. Hitesh Mistry** (GE Research, Bengaluru) an industrial expert explained about the Digital twin technology for turbomachinery.
- The virtual monitoring and maintenance of Gas turbine engines through digital technology.

### Conclusion:

It was a wonderful and learning experience for us while attending the **STUDENT SEMINAR SERIES BY ASME GT INDIA GROUP**, On topic “**GAS TURBINE TECHNOLOGIES-FUNDAMENTALS AND ADVANCEMENTS**”. We had got an opportunity to interact with industrial experts and IIT professors throughout the sessions to clarify our doubts. We would like to thank **SMVIT** Bangalore for giving us this opportunity and we would like to thank honourable Principal and Management of SJCIT, **Dr. Deepa M S** (prof & Head of Department Aeronautical Engineering S.J.C Institute of Technology) for giving us permission to Attend this knowledgeable student seminar series.



### FACULTY CO-ORDINATOR'S

**Prof. Vidyashree K R**

**Prof. Srinivasa G M**