

## Department of Physics

MVJ College of Engineering, Bangalore

### Report on Guest Lecture on Cryogenics

Date: 9th June 2025

Time: 10:00 AM – 12:00 Noon

Venue: MVJ College of Engineering Auditorium

Target Audience: First Year Engineering Students (ECE, ME, CH, CV, EEE)

#### Event Overview

The Department of Physics at MVJ College of Engineering organised an insightful and engaging guest lecture on 'Cryogenics and Its Applications' on 9th June 2025, delivered by Prof. Srinivasa Kasthuriangan, Professor at the Indian Institute of Science (IISc), Bangalore. The session was attended by around 500 first-year students from Electronics and Communication (ECE), Mechanical (ME), Chemical (CH), and Civil (CV) streams, and was held in the college auditorium from 10:00 AM to 12:00 PM.



Prof. Srinivasa Kasturiangan addressing the students

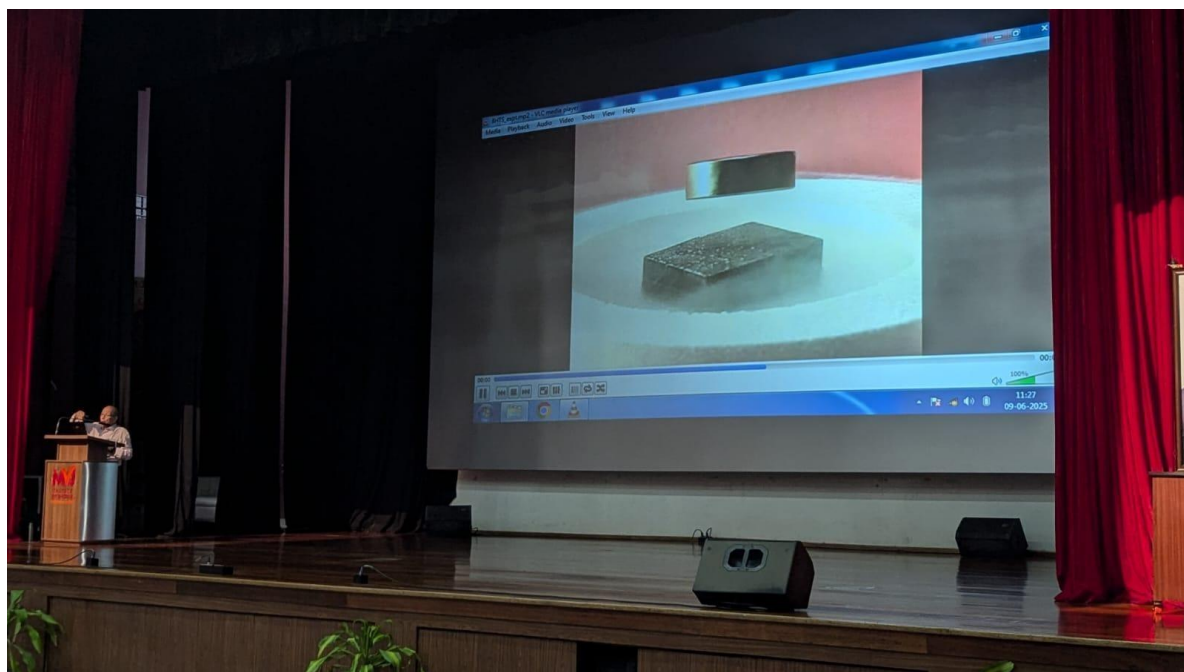
#### Lecture Highlights

Prof. Kasthuriangan, an eminent expert in the field of low-temperature physics, began the lecture by introducing the fundamental concepts of cryogenics, elaborating

on the relationship between pressure and temperature, and explaining the properties of various cryogenic gases. He then discussed the techniques used to achieve extremely low temperatures, setting the foundation for understanding the behaviour of materials in such conditions.

A significant portion of the lecture focused on superconductivity at cryogenic temperatures, its underlying principles, and its transformative potential in modern technology. Prof. Kasturirengan also introduced the students to the world of quantum physics, explaining quantum bits (qubits), quantum chips, and the critical role of cryogenics in enabling such advanced technologies.

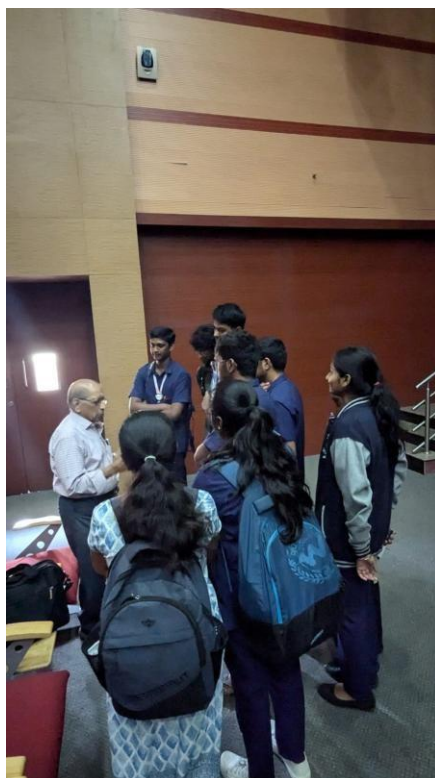
Further, the session highlighted practical applications of cryogenics in magnetic levitation and its relevance in fields such as mechanical engineering, civil infrastructure, and space technology. The lecture was made even more engaging through video demonstrations, showcasing real-world cryogenic experiments and their diverse applications.



Students watching a cryogenic applications video demonstration

### **Student Engagement Session**

After the lecture, a student-guest interaction session was held where Prof. Kasturirengan encouraged questions and offered insights on research, scientific curiosity, and academic focus. Students actively participated and received guidance on building a strong scientific foundation.



Student interacting with the guest during the Q&A session

### **Physics Club Activity and Awards**

The Physics Club of MVJ College of Engineering conducted a student competition as part of the event. The winners were felicitated on stage by Prof. Kasturirengan. This added a celebratory note to the academic session, recognising the efforts and talents of the participating students.



Winners of the student competitions being awarded by Prof. Kasturirengan

**Conclusion**

The event was a grand success and was appreciated by students and faculty alike for its depth, clarity, and inspirational value. It provided valuable exposure to advanced concepts and real-world applications of physics, motivating students to explore and innovate within their respective fields.