



Department of Physics
Integral University, Lucknow, Uttar Pradesh, India

Report on
Guest Lecture
On

High-Temperature Superconductors and Applications

On

17th November 2022

The novel materials' films can carry currents in the superconducting state that are significant enough to be used in many different devices. Possible applications of the high-temperature superconductors in thin-film or bulk form include the construction of computer parts (logic devices, memory elements, switches, and interconnects), oscillators, amplifiers, particle accelerators, highly sensitive devices for measuring magnetic fields, voltages or currents, magnets for medical magnetic-imaging devices, magnetic energy-storage systems, levitated passenger trains for high-speed travel, motors, generators, transformers, and transmission lines. The principal advantages of these superconducting devices would be their low power dissipation, high operating speed, and extreme sensitivity.

To make the students aware and spark an interest in the revolutionary field of room(high) temperature superconductors, the Department of Physics, Integral University, organized an online Guest Lectures on **“High-Temperature Superconductors and Applications”** on 17th November 2022 from 10:30 AM-11:30 Noon in room number NLT-5 and Auditorium Hall-

3. The event was attended by more than 300 students of various disciplines. The audience for the event was invited through the universities official communication email. The event was also streamed live through the official YouTube channel of the Physics Department, Integral University, Lucknow. The link for the video available on youtube is <https://www.youtube.com/watch?v=9pEzUHXOI80> where more than 100 participants watched live and remained present till the question-answer session.

The program started with the welcome address of the Guest Speaker, Dr. Zaheer Abbas, Assistant Professor, Physics Government Engineering College Jehanabad, Department of Science and Technology, Patna by Ms. Eram Fatima, Student of M.Sc. Physics, 2nd Year. After a brief introduction, she invited Dr. Zaheer Abbas to deliver his talk.

Dr. Zaheer Abbas started his lecture with a very basic understanding of the field and gradually covered almost all the aspects from conductors to superconductors and the devices which can be manufactured and utilized for various applications in near future. He also explained the phenomenon mathematically and graphically. He also emphasized that this is just the beginning of a life-changing science and technology and encouraged the students to make their career in this field as it has enormous potential in the years to come. At the end of the lecture, an online question-answer session was also organized where students put up their queries and Dr. Zaheer Abbas answered them to their satisfaction.

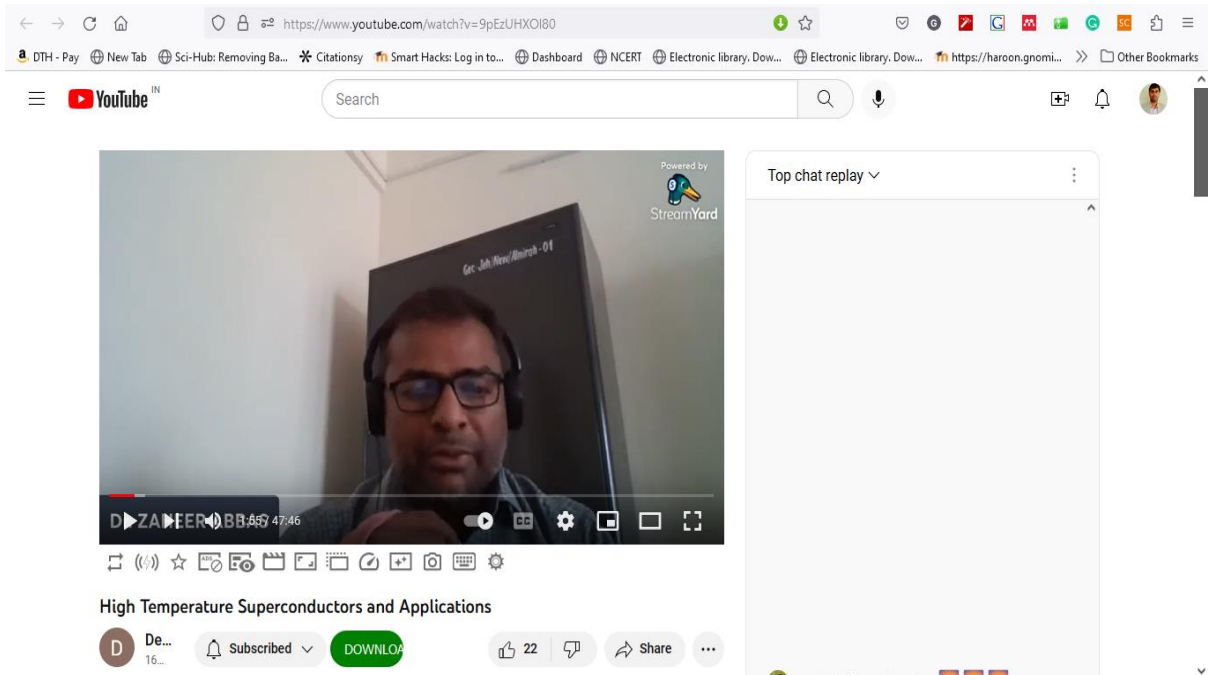
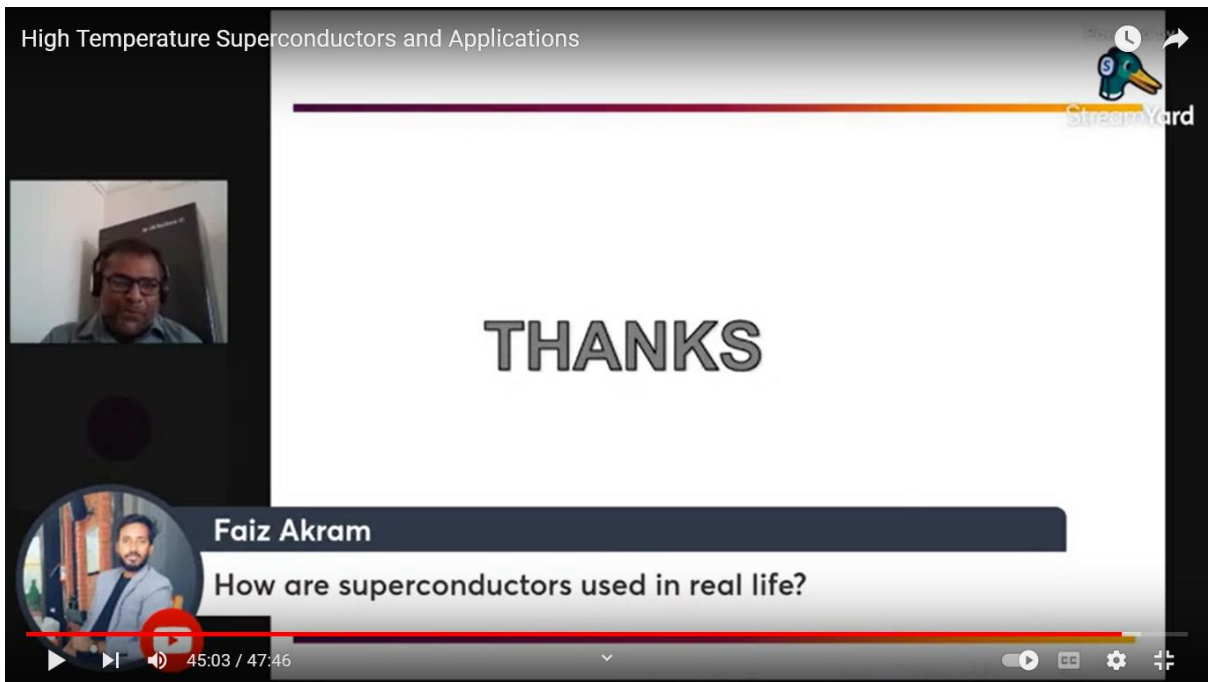
The program ended on a very high note with the Vote of Thanks by Ms. Nahin Fatima, a student of M.Sc. Physics, 1st year, where she expressed gratitude on the behalf of one and all to Dr. Zaheer Abbas for enlightening the Young Minds with his enthusiastic lecture. She also thanked the Management of Integral University for providing the opportunity and right platform to conduct a such scientific and informative lecture.

The program was coordinated by Dr. Haroon along with the technical aspects of the program. The faculty members were involved in managing the students and in other related activities.

Glimpses of the Guest Lecture:

Snaps of the online video on the departmental YouTube channel





Snaps of the participants attending the lecture in Hall-3



GPS Map Camera

Dashauli, Uttar Pradesh, India

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226026, India

Lat 26.958052°

Long 80.999875°

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GPS Map Camera

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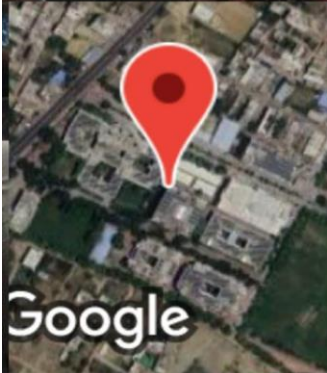
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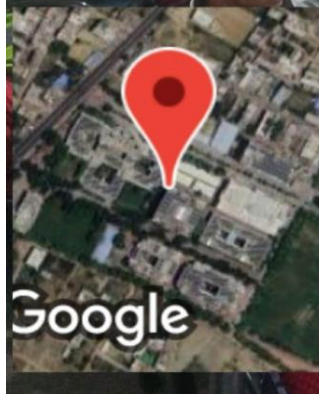
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