Mahatma Phule Shikshan Sanstha's

KARMAVEER BHAURAO PATIL COLLEGE,
URUN-ISLAMPUR

Department of Physics

Activity

Online Lecture on Quantum Mechanics

Date: 08/09/2025

Notice

All the student of B.Sc. are here by informed that the Department of Physics conduct the activity on Online Lecture on Quantum Mechanics dated 09/08/2025.

All the student are requested to attend lecture on time.

Time: 06:30 pm

Head
Department of Physics
Karmaveer Bhaurao Patil College
Urun-Islampur, Dist-Sangli-415409

Head of Department

Mahatma Phule Shikshan Sanstha's

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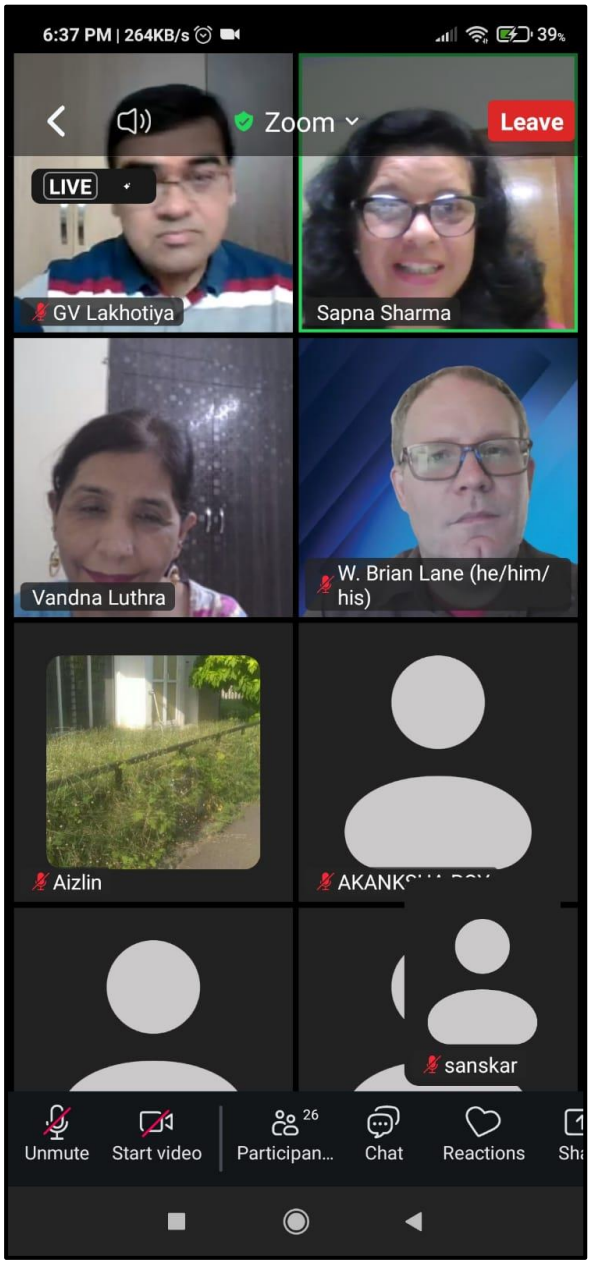
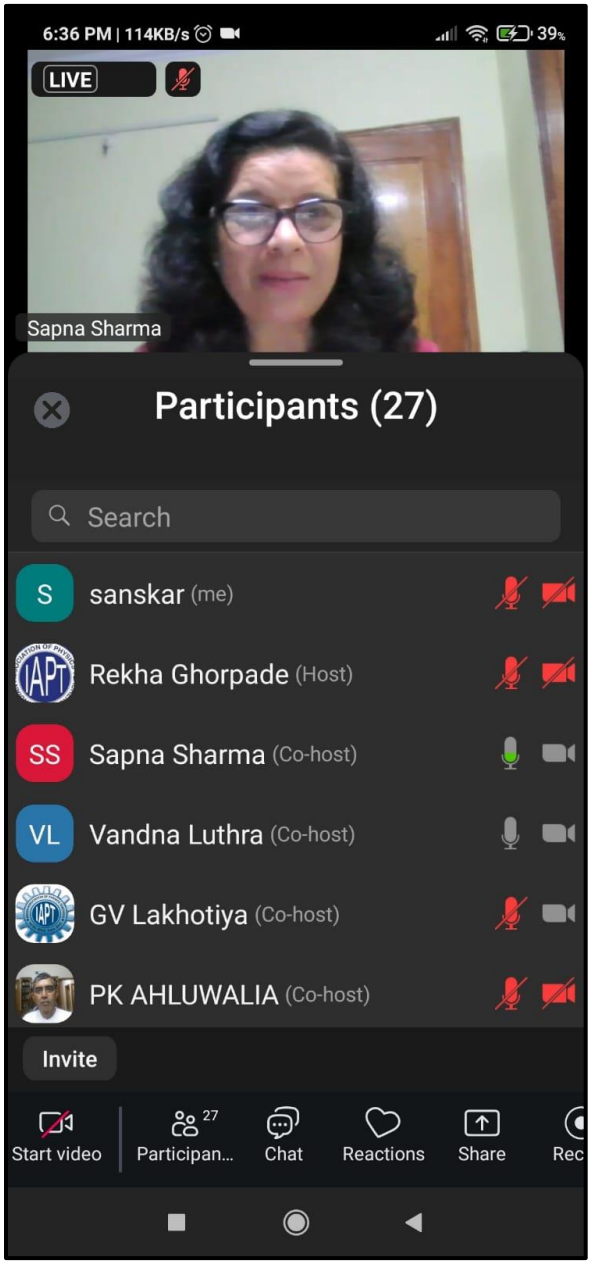
Photo Gallery





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Date: 09/08/2025

Activity Title: Online Lecture on Quantum Mechanics

Target Audience: B.Sc. III

❖ **Objective of the Activity:**

The primary objective of organizing this lecture was to engage undergraduate students with current trends and research approaches in quantum mechanics education. The session aimed to:

- Familiarize students with pedagogical research in quantum science.
- Highlight innovative teaching-learning methods in quantum mechanics.
- Inspire students to appreciate the role of education research in improving conceptual understanding.
- Provide exposure to international perspectives in physics education.

❖ **Summary of the Lecture:**

The session was delivered by Prof. Brian Lane from the University of North Florida, an expert in Physics Education Research (PER). Prof. Lane discussed key findings from his investigations into how students learn quantum mechanics and the challenges they face in grasping abstract quantum concepts.

He emphasized the importance of research-based instructional strategies, active learning environments, and the development of conceptual frameworks to enhance quantum learning outcomes. Examples from classroom interventions and student response analyses were shared to demonstrate the impact of evidence-based teaching methods.

The lecture also included an interactive Q&A session, during which students actively engaged with Prof. Lane, discussing topics such as wave-particle duality, quantum measurement, and modern teaching tools used in physics education research.

❖ **Outcomes:**

- Students gained valuable insights into the intersection of quantum physics and educational research**.**
- The session broadened participants' perspectives on how quantum mechanics can be taught effectively**.**
- Encouraged students to think critically about their own learning processes and difficulties in the subject.
- Strengthened the department's academic collaboration with international educators and the IAPT network.

❖ **Feedback:**

- The feedback from students was highly positive.
- Many appreciated the clarity and enthusiasm of the speaker.
- Participants found the integration of teaching research and physics content refreshing and relevant.
- Several students expressed interest in exploring Physics Education Research (PER) as a future academic path.
- Suggestions included organizing more such lectures from international experts and follow-up workshops for hands-on learning.

❖ **Conclusion:**

The online lecture was a resounding success and contributed meaningfully to the celebration of the International Year of Quantum Science and Technology (IYQ 2025)**.** It enhanced students' understanding of quantum mechanics pedagogy and motivated them to adopt a deeper, research-oriented approach to learning physics. The Department of Physics extends gratitude to IAPT RC-23 for facilitating this enriching academic event and to Prof. Brian Lane for his insightful presentation.