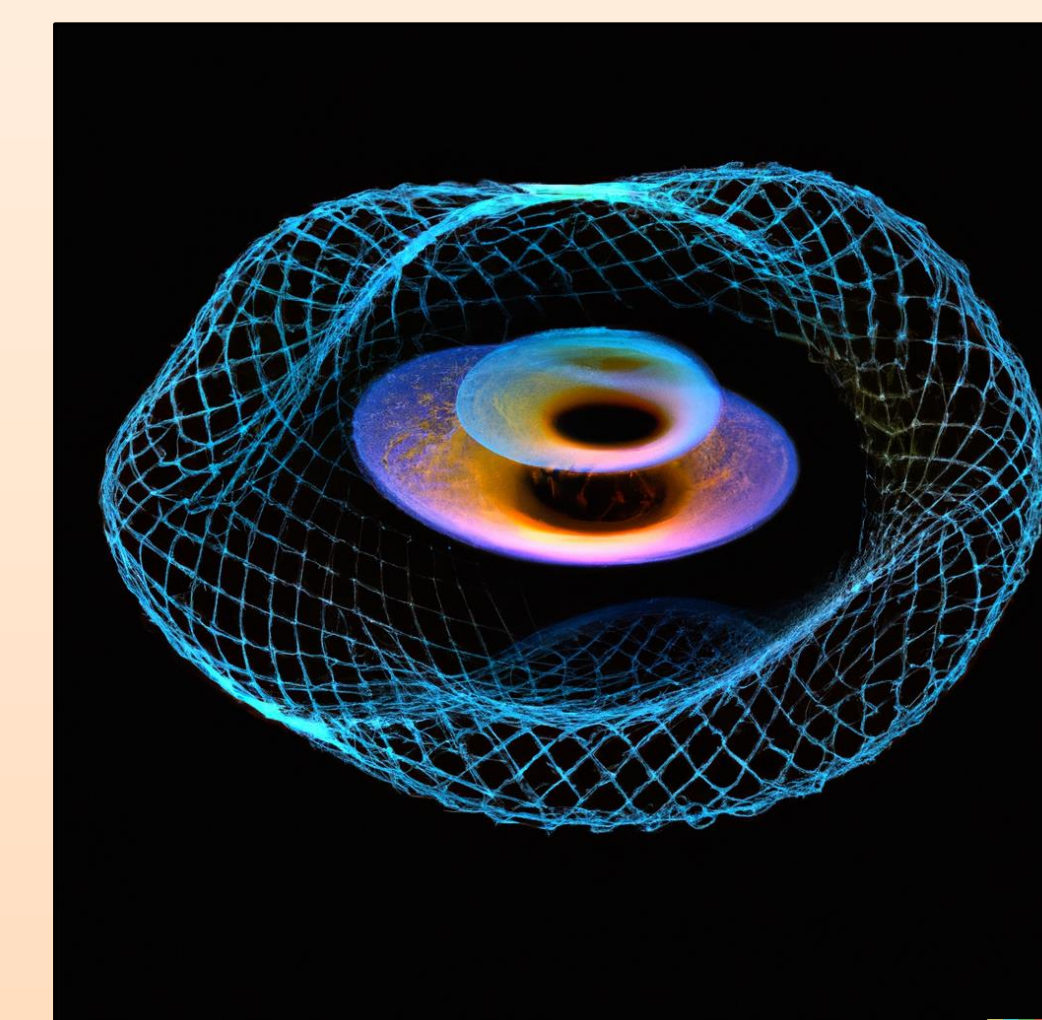
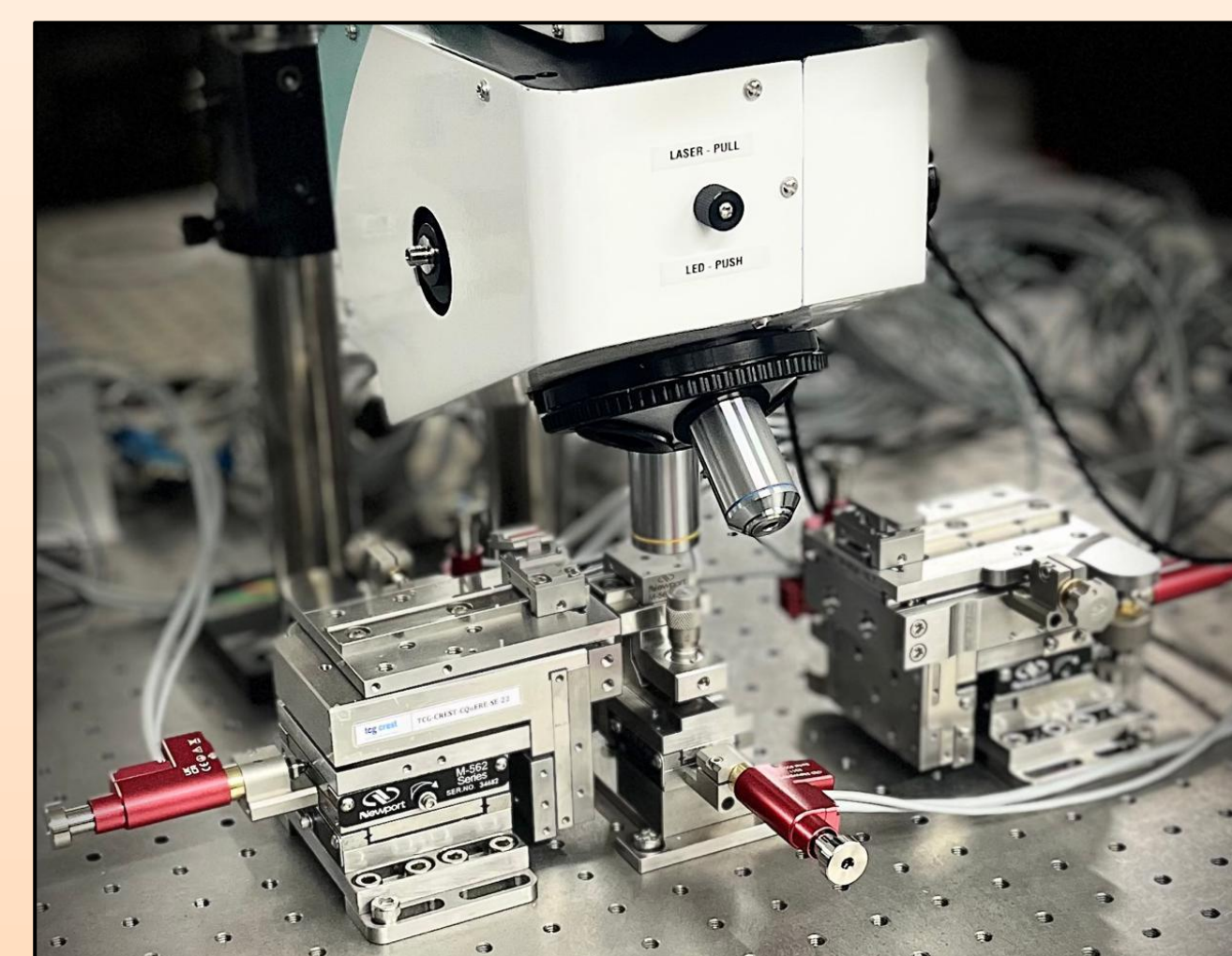
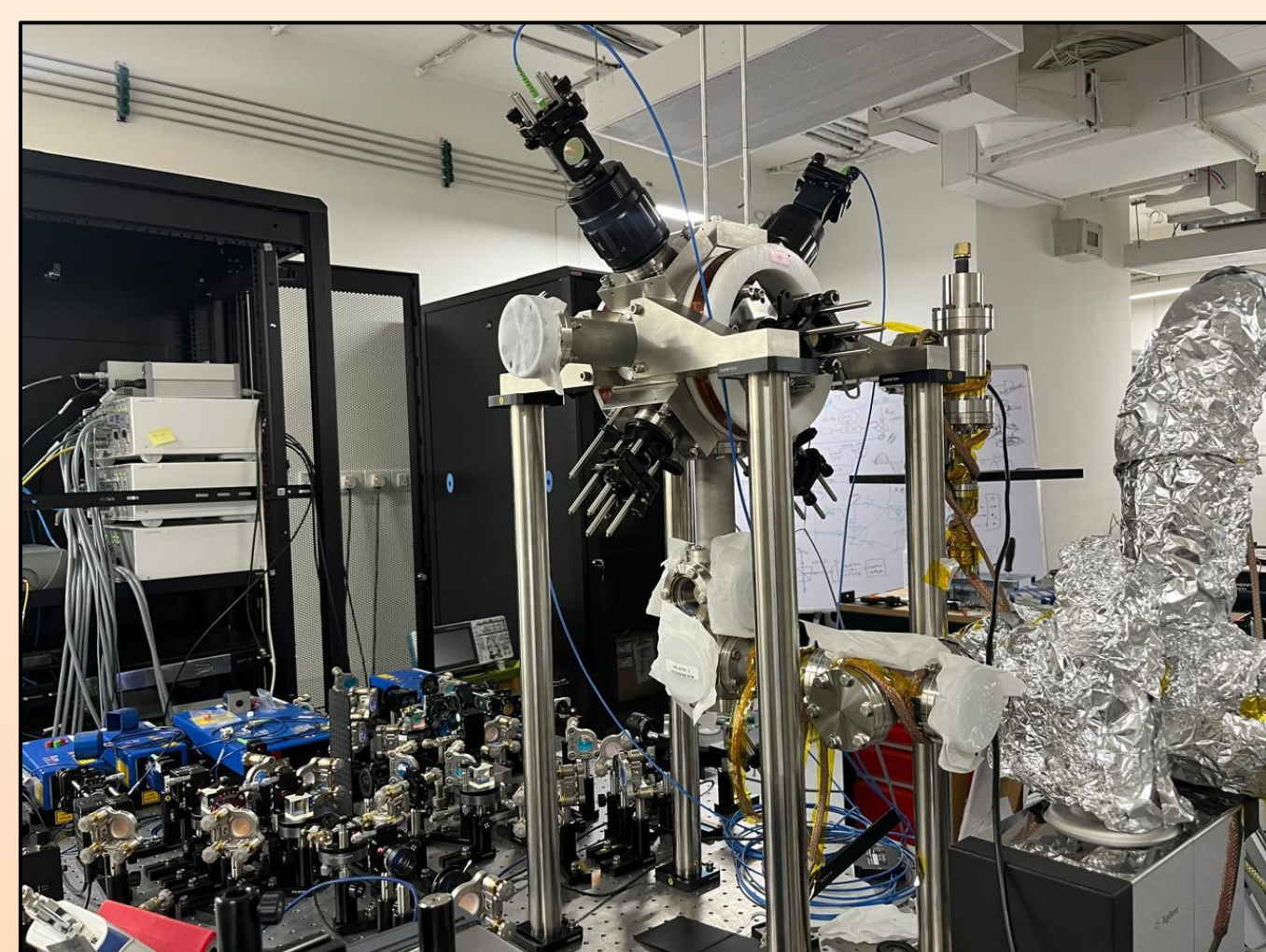


The International Year of Quantum Science & Technology (IYQ), 2025, at TCG CREST, Kolkata, India



The year-long program comprises of three mini conferences and a major conference in addition to two expert talks every month. The inaugural expert speaker will be [Prof. David Wineland](#) (Physics Nobel Laureate) on January 20, 2025.



THEME I : QUANTUM SENSING AND METROLOGY

Dates : March 31 – April 02, 2025

TOPICS:

- Novel phenomena for quantum sensing
- Sensors and devices for quantum metrology
- Atom-based quantum-enhanced sensors; cold atom interferometers, atomic clocks, atomic magnetometers, rydberg sensors
- Light-based sensors; quantum-enhanced imaging systems, quantum lidar, quantum radar
- Superconducting sensors
- Solid state quantum sensors; NV centers in diamond, quantum dots
- Quantum sensor-based microscopies and spectroscopies

INTERNATIONAL CONFERENCE ON QUANTUM INFORMATION SCIENCE AND TECHNOLOGY (ICQIST-2025)

Dates : December 08–11, 2025

TOPIC CATEGORIES:

- Foundations of quantum science
- Quantum computing and simulations
- Quantum algorithms
- Quantum communications
- Quantum information theory
- Quantum sensing and metrology
- Quantum control and quantum engineering
- Quantum machine learning

THEME II : QUANTUM INFORMATION AND COMMUNICATION

Dates : June 02–04, 2025

TOPICS:

- Fundamentals of quantum information
- Quantum entanglement
- Quantum cryptography
- Quantum networks and communication
- Quantum channels
- Quantum key distributions

STEERING COMMITTEE:

- | | |
|----------------------|---------------------|
| ▪ Aditi Sen De | ▪ Kae Nemoto* |
| ▪ Nicolas Gisin | ▪ Kenji Ohmori |
| ▪ Hartmut Haeflner | ▪ Ujjwal Sen |
| ▪ Guru Prasad Kar | ▪ Urbasi Sinha |
| ▪ Archan S Majumdar | ▪ Vlatko Vedral |
| ▪ Yasunobu Nakamura* | ▪ Harald Weinfurter |

*: To be confirmed

CONVENORS:

- Prof. Arun Kumar Pati
- Prof. Pankaj Agrawal

LOCAL ORGANIZING COMMITTEE:

- | | |
|--------------------------|----------------------|
| ▪ Dr. Aishik Acharya | ▪ Abhishek Bharadwaj |
| ▪ Dr. Shibdas Roy | ▪ Midhun Murali |
| ▪ Dr. Tanmoy Basu | ▪ Akankshya Dash |
| ▪ Dr. Snehal Mandal | ▪ Suprava Sahoo |
| ▪ Dr. Anju | ▪ Ayan Kumar Ghosh |
| ▪ Sudhindu Bikash Mandal | |

Organized by:

CQuERE
(Centre for Quantum Engineering, Research and Education), TCG
CREST, Kolkata, INDIA

For more details, please visit the website:

<http://www.tcgcrest.org/iyq2025>

For any queries, feel free to contact us through the email:

iyq.2025@tcgcrest.org

THEME III : QUANTUM COMPUTING AND ALGORITHMS

Dates : September 01–03, 2025

TOPICS:

- Fundamentals of quantum computation
- Quantum computing hardware
- Quantum error correction and fault tolerant era algorithms
- Dynamics of many body quantum systems
- Fundamentals of quantum algorithms
- Variational quantum eigensolver (VQE) algorithms
- Hybrid quantum algorithm