

**International Conference and Exposium on Quantum Sensing and Metrology (ICEQSM-2025)**

**Tentative Schedule**

**Day 01 (September 10, 2025)**

Time	Program	Parallel Session
8:30 am onwards	Registration	
9:30 am – 10:00 am	Inauguration	
10:00 am – 10:30 am	Chief Guest	
10:30 am – 11:00 am	High Tea	
	<i>Session Chair: Bhanu Das</i>	
11:00 am – 11:45 am	Plenary Lecture (Ron Folman) <i>Experiments at the Interface of General Relativity and Quantum Mechanics</i>	
11:45 am – 12:15 pm	Keynote Talk (Manas Mukherjee) <i>Trapped ion quantum processor: a role in quantum networking</i>	
12:15 pm – 1:00 pm	Technical Session (Industry) <i>12:15 pm - 12:40 pm: DSS 12:40 pm - 12:55 pm: TOPTICA/SIMCO GLOBAL 12:55 pm - 1:05 pm: New Age Instruments &amp; Materials</i>	
1:00 pm – 2:00 pm	Lunch	
2:00 pm – 3:00 pm	Panel Discussion	
	<i>Session Chair: Bhupen Deb</i>	<i>Session Chair: Prasanta Karmakar</i>
3:00 pm – 3:30 pm	Invited Talk (Bijoy Krishna Das) <i>Silicon Photonics Technology for Chip-Scale Quantum Information Processing: Prospect and Challenges</i>	Invited Talk (S Shanthi) <i>Superconducting nanowire based single photon detectors</i>
3:30 pm – 4:00 pm	Invited Talk (Vidya Praveen Bhallamudi) <i>Single-Photon and Superradiant Emission from NV Centers in Diamond</i>	Invited Talk (Arup Samanta) <i>Ultra-Sensitive Short-Wave Infrared Single-Photon Detection Using Dopant-Atom-Based Silicon Single-Electron Transistor</i>
4:00 pm – 4:30 pm	High Tea	
	<i>Session Chair: Bijoy Krishna Das</i>	<i>Session Chair: Ajay Tripathi</i>
4:30 pm – 5:00 pm	Keynote Talk (Arka Majumdar) <i>Programmable Quantum Nanophotonics</i>	5:00 pm – 5:20 pm, CT-1 (Prashant Raj Patro) <i>CT-1, Efficient feature extraction from brain neuronal activity with a diamond magnetometer</i>
5:00 pm – 5:30 pm	Invited Talk (Arijit Sharma) <i>Progress towards a trapped ion-based all-optical, portable atomic clock</i>	5:20 pm – 5:40 pm, CT-2 (Shreyash Biradar) <i>CT-2, Robust two channel control for NV and P1 centers for enhancing DNP and probing charge dynamics</i>
5:30 pm – 6:00 pm	Invited Talk (Ashok Mahapatra) <i>Precision magnetometry based on magnetoelectric effect in thermal atomic vapour</i>	5:40 pm – 6:10 pm, CT-3 (Samim Akhtar) <i>CT-3, Optical Manipulation of Atomic Coherent Signal Using Vector Vortex Beam for Quantum Information Science</i>
6:00 pm – 6:30 pm	Invited Talk (B K Sahoo) <i>Understanding roles of atomic many-body methods to improve uncertainties of atomic clock candidates and probing fundamental physics</i>	
6:30 pm – 7:00 pm	Invited Talk (Sourav Dutta) <i>Observation of quantum interference in Doppler-free two-photon spectroscopy: implications for secondary portable optical clocks</i>	
7:30 pm onwards	Dinner	

\* CT – Contributory Talk

## Day 02 (September 11, 2025)

Time	Program	Parallel Session
9:00 am onwards	Registration <i>Session Chair: Amitava Sen Gupta</i>	
9:30 am – 10:15 am	Plenary Lecture (Ian Petersen) <i>Memory Decoherence in Linear and Finite Level Quantum Systems</i>	
10:15 am – 10:45 am	Keynote Talk (Hidehiro Yonezawa) <i>Demonstration of Quantum Estimation in Optical Systems</i>	
10:45 am – 11:15 am	High Tea	
	<i>Session Chair: Shrabana Chakrabarti</i>	<i>Session Chair: Rajalakshmi G</i>
11:15 am – 11:45 am	Invited Talk (Joyee Ghosh) <i>Entangled/Correlated Photons (for Discrete Variable) and Squeezed Light (for Continuous Variable) applications in Quantum Sensing</i>	Invited Talk (Pratap Raychaudhari) <i>Zero Point Fluctuations of vortices in a very weakly pinned superconducting thin film</i>
11:45 am – 12:15 pm	Invited Talk (Bikash Ghosal) <i>India's First Indigenous Space-Qualified Rubidium Frequency Standard: Principles, Design, and In-Orbit Performance in satellite navigation</i>	Invited Talk (Kaushalya Jhuria) <i>Telecom band quantum emitters in silicon</i>
12:15 pm – 1:00 pm	<b>Technical Session (Industry)</b> 12:15 pm - 12:30 pm: LABINDIA INSTRUMENTS 12:30 pm - 12:40 pm: HORIBA 12:40 pm - 12:50 pm: YOKOGAWA 12:50 pm - 1:00 pm: ONu Labs	
1:00 pm – 2:00 pm	Lunch	
2:00 pm – 3:00 pm	Panel Discussion	
	<i>Session Chair: Pankaj Agrawal</i>	<i>Session Chair: Sankar De</i>
3:00 pm – 3:30 pm	Keynote Talk (Guofeng Zhang) <i>Optimal Control of Flying Qubits</i>	3:00 pm – 3:20 pm, CT-1 (Aparajita Das) CT-1, Electric Field Sensing via Multi-Photon Rydberg Electromagnetically Induced Transparency in Cesium Vapor for L-Band Quantum Radar Receiver Applications
3:30 pm – 4:00 pm	Keynote Talk (Animesh Datta) <i>A tensor network approach to sensing quantum light-matter interactions</i>	3:20 pm – 3:40 pm, CT-2 (Indrajit Nandi) CT-2, Dual-species optical dipole trap to explore fundamental interactions 3:40 pm – 4:00 pm, CT-3 (Sankar Davuluri) CT-3, Quantum lidar
4:00 pm – 4:30 pm	High Tea	
	<i>Session Chair: Amlan Chakrabarti</i>	
4:30 pm – 5:00 pm	Invited Talk (Poonam Arora) <i>Defining Time: Quantum Advances in the Realization of the SI Second</i>	
5:00 pm – 5:30 pm	Invited Talk (Ajay Tripathi) <i>Understanding Electromagnetic Induced Resonances in Rb87 Vapor</i>	
7:30 pm onwards	Gala Dinner	

\* CT – Contributory Talk

## Day 03 (September 12, 2025)

Time	Program	Parallel Session
9:00 am onwards	Registration	
	<i>Session Chair: Tapobrata Som</i>	
9:30 am – 10:15 am	Plenary Lecture (Howard Wiseman) <i>Optimized mitigation of random-telegraph-noise dephasing by spectator-qubit sensing and control</i>	
10:15 am – 10:45 am	Keynote Talk (Luiz Davidovich) <i>Quantum Metrology for Open Systems: Entanglement-Enhanced Quantum Sensors for the Estimation of Noise Parameters</i>	
10:45 am – 11:15 am	High Tea	
	<i>Session Chair: Chiranjib Mitra</i>	<i>Session Chair: Ashok Vudayagiri</i>
11:15 am – 11:45 am	Invited Talk (Kasturi Saha) <i>3D magnetic field imaging with a quantum diamond microscope</i>	Invited Talk (Akshay Singh) <i>2D Materials for Quantum Technologies</i>
11:45 am – 12:15 pm	Invited Talk (Rajalakshmi G) <i>Atomic Magnetic Field Sensors and Their Applications</i>	Invited Talk (S K Dubey) <i>Rydberg atoms based SI-traceable field probes and communications receivers</i>
12:15 pm – 1:00 pm	<b>Technical Session (Industry)</b> 12:15 pm - 12:30 pm: Quantum AI Global 12:30 pm - 12:50 pm: Wiley Editorial Talks 12:50 pm - 1:00 pm: AUGSENSELAB	
1:00 pm – 2:00 pm	Lunch	
2:00 pm – 4:00 pm	Poster Session	
4:00 pm – 4:30 pm	High Tea	
	<i>Session Chair: Vidya Praveen Bhallamudi</i>	
4:30 pm – 5:00 pm	Keynote Talk (Kensuke Kobayashi) <i>Exploring Condensed Matter Physics with a Quantum Spin Microscope</i>	
5:00 pm – 5:30 pm	Keynote Talk (Daniel Moraru) <i>Fabrication and characterization of silicon-on-insulator nanoscale devices for single-electron tunneling functionalities mediated by dopants</i>	<i>Session Chair: Brajesh Kumar Mani</i>
5:30 pm – 6:00 pm	Invited Talk (Subhasis Panja) <i>Frequency Stabilized RF sources for Modulating Optical Frequencies to be used for Laser cooling of Yb ions</i>	5:00 pm – 5:20 pm, CT-1 (Sankar De) <i>CT-1, Correlated vortex generation in coherent medium</i> 5:20 pm – 5:40 pm, CT-2 (Sudha) <i>CT-2, Noise resilience of Dicke superposition state probes in phase estimation tasks</i>
6:00 pm – 6:30 pm	Invited Talk (Phani Kumar Peddibhotia) <i>Magnetometry with Diamond Quantum Sensors</i>	5:40 pm – 6:10 pm, CT-3 (Avijit Misra) <i>CT-3, Estimating resonant dipole-dipole interaction in multiatom networks in cavities</i> 6:10 pm – 6:30 pm, CT-4 (Avirup Chakraborty) <i>CT-4, Quantum-RAM-Implementation Using Multiple Interacting Rydberg-Blockaded EIT Systems</i>
7:30 pm onwards	Dinner	

\* CT – Contributory Talk

## Day 04 (September 13, 2025)

Time	Program	Parallel Session
	<i>Session Chair: Pratap Raychaudhari</i>	
9:45 am – 10:15 am	Invited Talk (Umakant D Rapol) <i>Atom Interferometry and Gravimetry</i>	
10:15 am – 10:45 am	Keynote Talk (Areeya Chantasri) <i>Experimental parameter tracking for continuous quantum measurement via sequential Monte-Carlo estimation</i>	
10:45 am – 11:00 am	High Tea	
	<i>Session Chair: B K Sahoo</i>	
11:00 am – 11:45 am	Plenary Lecture by Dmitry Budker <i>Spin-based quantum sensors for fundamental science and applications</i>	
11:45 am – 12:15 pm	Invited Talk (Ashok Vudayagiri) <i>Compact four-grating Magneto Optic Trap for laser cooling</i>	
12:15 pm – 1:00 pm	<b>Technical Session (Industry)</b> 12:15 pm - 12:25 pm: VVDN TECHNOLOGIES 12:25 pm - 12:35 pm: Tarsons 12:35 pm - 12:45 pm: GUARDINGER ADVANCED TECHNOLOGIES	
1:00 pm – 2:00 pm	Lunch	
2:00 pm – 3:00 pm	Panel Discussion	
	<i>Session Chair: Umakant D Rapol</i>	
3:00 pm – 3:30 pm	Keynote Talk (Dominik Bucher) <i>Optically addressable spin systems in diamond and proteins for sensing and imaging</i>	
		<i>Session Chair: Bikash Ghosal</i>
3:30 pm – 4:00 pm	Invited Talk (Syamsundar De) <i>Quantum Enhanced Sensing in Nonlinear Interferometry: Toward Its Practical Implementation in Thin-film Lithium Niobate Platform</i>	3:30 pm – 3:50 pm, CT-1 (Archita Sahu) <i>CT-1, Progress towards dual species atomic clock</i> 3:50 pm – 4:10 pm, CT-2 (Palki Gakkhar) <i>CT-2, Highly Charged Ions Based Optical Clocks for Probing Alpha Variation</i> 4:10 pm – 4:30 pm, CT-3 (Rakiba Rahaman) <i>CT-3, Surface Plasmon Polariton Mediated Dual Bandpass Filter in an Electromagnetically Induced Transparency Medium.</i>
4:00 pm – 4:30 pm	Invited Talk (Goutam Pramanik) <i>Optically Active Color Centres in Diamond</i>	
4:30 pm – 5:00 pm	Invited Talk (Brajesh Kumar Mani) <i>Probing Atomic Clocks' Candidates using Precision Structure Calculations Magnetic Field Sensors and Their Applications</i>	
5:00 pm – 6:00 pm	Valedictory Session	
6:00 pm onwards	High Tea	

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