



# 4th International Workshop on Physics with Trapped Charged Particles — (IWPTCP 2026) —



November 25–27, 2026



Inter-University Accelerator Centre  
New Delhi, India

The International Workshop on Physics with Trapped Charged Particles (IWPTCP 2026) will focus on the use of ion and electron traps for advancing fundamental physics, precision spectroscopy, quantum computing, and quantum information science. The workshop will cover recent developments in trapped ions and electrons as promising platforms for scalable quantum computing, quantum simulation, high-fidelity quantum control, and precision measurements. It will also highlight research in highly charged ions, quantum electrodynamics (QED), antimatter, frequency standards, and atomic collisions. The workshop aims to bring together leading experimentalists and theoreticians from India and abroad to discuss the latest advances, exchange ideas, and promote collaborations that will drive future developments in quantum technologies and fundamental physics.

## Topics of Interest



Highly Charged Ions in Ion Traps



Ion /electron Trap Based Quantum Computing



Radioactive Isotopes in Traps



Ion-atom-molecular Collisions



Electron Collisions



Radiative Lifetime of Atomic Metastable States



Precision Spectroscopy and Frequency Standards



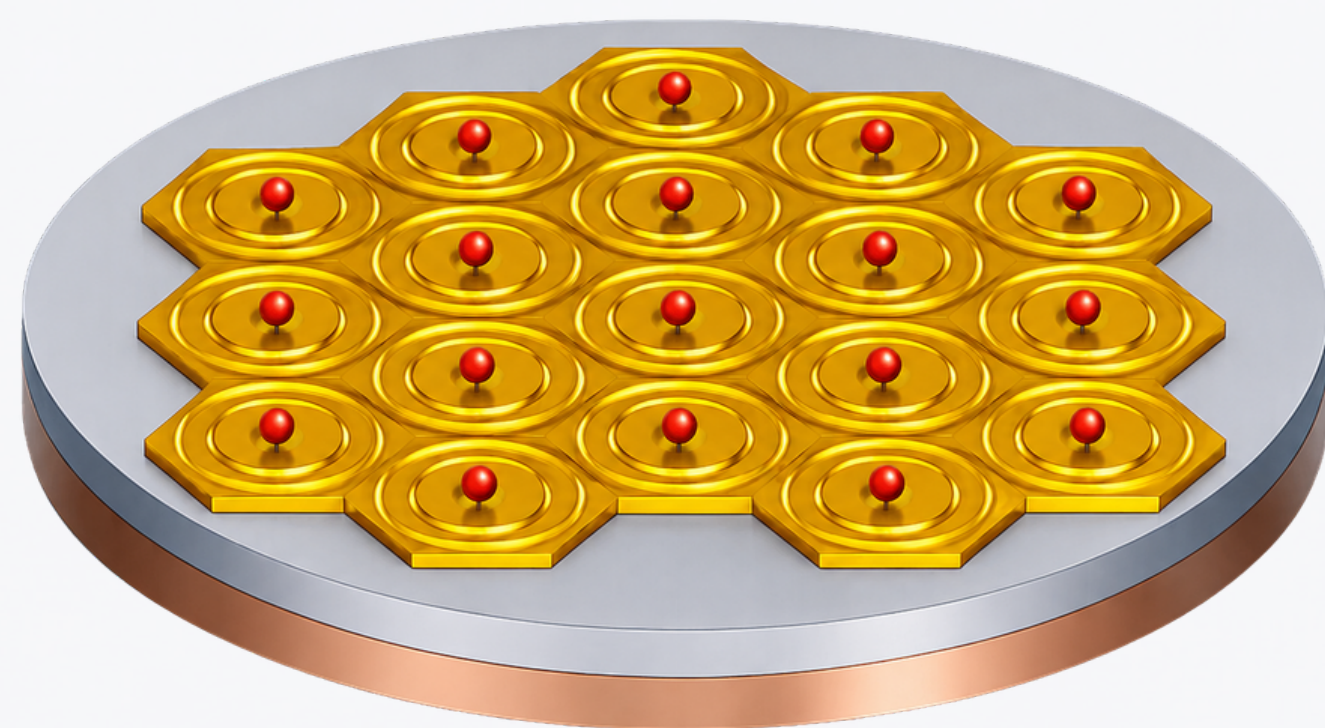
Fundamental  
Physics



Precision  
Spectroscopy



Quantum  
Computing



## Organizing Committee

Sugam Kumar  
IUAC, New Delhi

C.P. Safvan  
IUAC, New Delhi

Deepak Swami  
IUAC, New Delhi

Veena C.P.  
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Akhil Jhingan  
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Kedar Mal  
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Registration Deadline : September 10, 2026



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## List of Expected Invited Speakers

|    |                                                                   |    |                                                                 |
|----|-------------------------------------------------------------------|----|-----------------------------------------------------------------|
| 1  | Prof. Sadiq Rangwala, Raman Research Institute, Bangalore, India  | 13 | Prof. Christian Ospelkaus, Leibniz University Hannover, Germany |
| 2  | Prof. Umesh Khadane, IIST Thiruvananthapuram, India               | 14 | Prof, Stefan Ulmer, University of Dusseldorf, Germany           |
| 3  | Prof. G. Aravind, Indian Institute of Technology, Madras, India   | 15 | Prof. Ferdinand Schmidt-Kaler, University of Mainz, Germany     |
| 4  | Dr. Subhadeep De, IUCAA, Pune                                     | 16 | Prof. Rainer Blatt, University of Innsbruck, Austria            |
| 5  | Dr. Parnika Das, VECC Kolkata, India                              | 17 | Prof. Jose Paulo Santos, NOVA University, Lisbon                |
| 6  | Prof. Manas Mukherjee, Centre for Quantum Technologies, Singapore | 18 | Prof. Hartmut Haeffner, UC Berkley, USA                         |
| 7  | Dr. S. Sunil Kumar, IISER Tirupati, India                         | 19 | Dr. Monz Thomas, University of Innsbruck, Austria               |
| 8  | Dr. Sugam Kumar, IUAC New Delhi, India                            | 20 | Dr. Sven Sturm, MPIK Heidelberg, Germany                        |
| 9  | Prof. Umakant Rapole, IISER Pune, India                           | 21 | Dr. Irene Marzoli, University of Camerino, Italy                |
| 10 | Prof. Jonathan Home, ETH Zurich, Switzerland                      | 22 | Prof. Jose Luis Verdu Galiana, University of Sussex, UK         |
| 11 | Prof. Wolfgang Quint, GSI, Germany                                | 23 | Dr. Stefan Ringleb, University of Jena, Germany                 |
| 12 | Dr. Manuel Vogel, GSI, Germany                                    | 24 | Dr. Stefan Stahl, Stahl Electronics, Germany                    |



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