



# International School on Physics & Allied Disciplines

April 14 – 18, 2025  
Islamabad, Pakistan



**National Centre for Physics**  
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The National Centre for Physics (NCP), Islamabad, Pakistan, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy and The European Organization for Nuclear Research (CERN), Switzerland are jointly organizing the International School on Physics & Allied Disciplines (ISPAD) in Islamabad, Pakistan from April 14 - 18, 2025.

## Introduction

The ISPAD event is organized regularly at NCP since 2009. The main idea of organizing this event is to bring together the researchers to share scientific knowledge and to provide the opportunities for international collaborations. Around 200 local students, researchers, university faculty and many foreign invited speakers and participants are expected to participate in this event.

## Format

Each year, the topics (technical activities) of the school are chosen keeping in view the present and future research interests of NCP, universities and national R&D institutions. The School will consist of plenary, parallel and poster sessions as well as tutorials and structured discussions. The plenary sessions provide overviews of advances while the parallel sessions cover the recent research on the specific topics

## Topics and Coordinators

### A. High Energy Physics (HEP): Theory & Experiment

Phenomenology of Particles in and beyond the Standard Model, Flavor Physics, Quark Gluon Plasma, Statistical Concepts in High Energy Physics, Collider Physics, Silicon and Gaseous Detectors in High Energy Physics.

**Coordinators:** Waqar Ahmad (NCP), Saleh Muhammad (NCP), Wajid Ali Khan (NCP), M. Irfan Asghar (NCP), Ishtiaq Ahmad (NCP), Shahin Iqbal (NCP)

### B. Applications of Accelerators in Industry (AAI)

Radioactive Ion Beams, Ion beam and Medical Accelerators and their Applications, Synchrotron Radiation, Spallation Neutron Sources & their Applications, Defects Engineering using Ion Beam, LINAC, Particle Matter Interaction, Ion Beam Analysis.

**Coordinators:** Turab Ali (NCP), Naveed Zafar Ali (NCP), Kashif Shahzad (NCP), Javed Hussain (NCP), Muhammad Shahid (PNRA)

### C. Plasma Physics (PP): Theory & Applications

Space, Astrophysical and Basic Plasmas; Fusion Plasma; Laser Plasma; Quantum Plasma; Plasma Applications; Plasma Modeling and Simulation.

**Coordinators:** Ali Ahmad (NCP), Shahid Ali (NCP), Shabbir Ahmed (NCP), Waqas Masood (CIIT), Shahzad Mahmood (PINSTECH), Aman-ur-Rehman (PIEAS)

## Participation

Active graduate & postgraduate students, post-doctoral researchers, faculty and research scientists are encouraged to participate. Applicants with oral or poster presentation will be preferred. Best posters will be awarded. A limited number of travel grants may be provided to the foreign participants, especially those from the developing countries of the region.

## How to apply

The online registration form can be accessed at: <http://www.ncp.edu.pk/ispad-2025.php>. The application form should be submitted by **Jan 30, 2025 by foreign participants** and **Feb 28, 2025 by local participants**. Selection will be made by the Scientific Committee of ISPAD-2025. Foreign applicants are required to attach/provide scans of the first two relevant pages of their passports valid at least six months after the ISPAD-2025 event. These documents to be submitted through email ([ispad@ncp.edu.pk](mailto:ispad@ncp.edu.pk)) before the registration deadline.

## Registration Fee

**Students:** Rs. 5,000/-

**Professionals:** Rs. 10,000/-

Selected applicants will be required to pay a registration fee via online payment. There is no registration fee for the invited speakers and foreign participants.

**Accommodation Charges:** Rs. 1,000/- per night (including meals)

## Sponsors

- The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy
- The European Organization for Nuclear Research (CERN), Switzerland

## Directors

Qaisar Ahsan (NCP, Pakistan)

Joseph Niemela (ICTP, Italy)

## Scientific Committee

Muhammad Aftab Rafiq

(Scientific Secretary) (NCP)

E-mail: [aftab.rafiq@ncp.edu.pk](mailto:aftab.rafiq@ncp.edu.pk)

Mohsin Siddiq (NCP)

Ashfaq Ahmad (NCP)

Muhammad Usman (NCP)

## International Advisory Committee

Atsushi Fukuyama (Japan)

Dimitri Batani (France)

Ioannis Kourakis (UAE)

Jose Tito Mendonca (Portugal)

Luca Volpe (Spain)

Naeem A. Tahir (Germany)

Barry C. Sanders (Canada)

Natko Skukan (IAEA)

## Key Speakers (Tentative)

### High Energy Physics

Gautier Hamel de Monchenault  
(France)

Thomas Muller (Germany)

Urs Wiedemann (Switzerland)

Mingshui Chen (China)

Micheal Tytgat (Belgium)

Dustin Keller (USA)

Andreas Mussgüller (Germany)

Marco Ruggiene (Spain)

Gabriel Wong (UK)

Zulkaida Akbara (Indonesia)

### Applications of Accelerators in Industry

Natko Skukan (IAEA)

Jianzhong Zheng (China)

Guinyun Kin (South Korea)

M. Sorokin (Russia)

Ayano Makinaga (Japan)

I. H. Sarpun (Turkey)

Ilkay Turk Cakir (Turkey)

Oliver Kirstein (Sweden)

Thomas Osipowicz (Singapore)

### Plasma Physics

Atsushi Fukuyama (Japan)

Sharmin Sultana (Bangladesh)

Muhammad Nur (Indonesia)

Dimitri Batani (France)

Stefaan Poedts (Belgium)

Ioannis Kourakis (UAE)

Bengt Eliasson (UK)

Chao Shen (China)

Zhandos Moldabekov (Germany)

Naeem Tahir (Germany)

Luca Volpe (Spain)

Martin Storey (Australia)

## Organizing Committee

Muhammad Usman

Waheed Mumtaz

Kashif Sarfraz

Tanzeel Murtaza

## Application Deadline

**Jan 30, 2025**

For Foreign Participants

**Feb 28, 2025**

For Local Participants