



9th International Workshop on Tracking Detector in High Energy Physics

November 24-26, 2026

Experimental High Energy Physics
National Centre for Physics, Islamabad

Introduction

The Experimental High Energy Physics (EHEP) department at the National Centre for Physics (NCP), Islamabad is organizing a workshop aimed at providing a platform for the Pakistani high-energy physics community, particularly young students and researchers, to learn and discuss the latest developments on tracking detector technologies and their applications in high-energy physics experiments.

The EHEP department is actively involved in the Phase-II upgrade project of the Compact Muon Solenoid (CMS) tracker. CMS is one of the experiments conducted at the Large Hadron Collider (LHC), the world's largest accelerator located at CERN. NCP is one of six certified centers for silicon sensors qualification and one of the eight centers for silicon module assembly and testing. It is also the only center responsible for TB2S ladder assembly and qualification within the CMS tracker collaboration.

The CMS tracker will precisely measure the trajectories and momenta of charged particles resulting from proton-proton collisions at the center of the CMS experiment. This workshop will also delve into recent progress and future prospects of tracking detectors.

Topics Covered

- Silicon Detectors: Physics and Principle
- Tracking Detectors at LHC and their Performance
- CMS Phase-2 Tracker Upgrade Project
- CMS Tracker Mechanics and Ladder Assembly
- Silicon Strip and Pixel Detectors
- CMS Tracker 2S Detector Assembly and Testing
- Gas Electron Multiplier as a Tracking Detector
- Resistive Plate Chambers as a Tracking Detector

Special Activities

- Popular talk on Tracking Detectors
- Exp. HEP labs visit
- Demonstration on Silicon Detector Assembly

Participation

The graduate/undergraduate students, faculty members, scientists, engineers from universities and R&D organizations are encouraged to apply. Partial travel support may be provided to selected candidates.

Directors

Muhammad Aftab Rafiq (NCP, Pakistan)
Ashfaq Ahmad (NCP, Pakistan)

Advisory Committee

Duccio Abbaneo (CERN, Switzerland)
Andrea Venturi (INFN, Italy)
Ulrich Heintz (Brown, USA)

Tentative Speakers

Francesco Moscatelli (INFN, Italy)
Christophe Delaere (UCL, Belgium)
Leticia Braga Da Ros (DESY, Germany)
Oliver Pooth (RWTH, Germany)
Viktor Veszpremi (Wigner RCP, Hungary)
Sally Seidel (University of New Mexico, USA)
Ashfaq Ahmad (NCP, Pakistan)
Imran Malik Awan (NCP, Pakistan)
Stefan Maier (KIT, Germany)
Saleh Muhammad (NCP, Pakistan)
M. Irfan Asghar (NCP, Pakistan)
Imdad Ali (NCP, Pakistan)

Scientific Committee

Saleh Muhammad
Imran Malik Awan
Muhammad Irfan Asghar

Organizing Committee

Muhammad Kamran Saadat
Malik Zia-ud-Din Kasi
Ali Ahmad
Tanzeel Murtaza

Registration Fee

Students: 2000 PKR

Faculty/Professionals : 5000 PKR

APPLICATION DEADLINE

September 20, 2026

<https://www.ncp.edu.pk/iwtd-2026.php>