

# National Workshop on Ion Beam Applications



02-03 June, 2016

Organized by

National Centre for Physics, Islamabad

## Introduction

A two-day “National workshop on Ion Beam Applications” is being organized at the National Centre for Physics (NCP) Islamabad from 02-03 June 2016. Pelletron Tandem Accelerator being the first of its type in Pakistan offers research opportunity in vast areas: ranging from material science; semiconductor industry; nuclear science research; environment and biological sciences; nano-technology; radiation hardness testing of satellite electronic components.

Primarily, the focus of users meeting on Ion Beam Applications is to raise awareness among young scientists, researchers and engineers both from academia and Industry. Moreover, this platform will also enhance the ability and expertise of respective users starting from data acquisition and its refinement alongwith hands on tutorials on operational hardware namely Ion sources (SNICS & (Alphatross); Operation and Control of Tandem Accelerator; Ion Beam Analysis (IBA); Theory & Data Acquisition; IBA Data Analysis using XRUMP & SIMNRA.

## Topics

- Depth profiling of polycrystalline multilayers (Rutherford Back Scattering-RBS).
- Assessment of Crystalline quality rendering strain free surface (RBS/Channeling)
- Precise estimation of elemental composition (Elastic Recoil Detection Analysis-ERDA)
- Detection and monitoring of trace elements in sample matrix (PIXE).
- Analysis of light elements at the verge of detection limit. (PIGE)
- Diverse Industrial application (namely pharmaceutical, petrochemical, food, agricultural and mining industries.)
- Ion beam modification and analysis of thin films for various technological applications.
- Charged particle activation (CPA) and nuclear reaction study.

## Participation

Research students, post-doctoral researchers, faculty members, scientists and engineers are encouraged to apply for participation. The travel expenses of the participants shall be borne by the parent institutes. Partial travel assistance may be provided to selected outstation student participants on merit basis.

## Registration Fee

Local Students: Pak Rs. 1500/-

Outstation Students: Pak Rs. 2000/-

Employees: Pak Rs. 3000/-

## How to apply

Application Form can be accessed at: <http://www.ncp.edu.pk/wiba-2016.php>. Application Form should be submitted on or before May 25, 2016.

**For further Information, Please Contact:**

Collaborations & Academic Activities Department (CAAD)

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## Directors

Ishaq Ahmad (NCP)

Ghulam Murtaza (GCU Lahore)

## Speakers

Baddar Sulaiman (PINSTECH)

Shoab Ahmad (PAEC)

Ghulam Husnain (NCP)

Muhammad Usman (NCP)

M. Ehsan Shafiq (GCU, Lahore)

Force Tefo Thema (South Africa)

Atta Ullah Shah (NILOPE)

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## Management Committee

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Inam ur Rehman

Abdul Hamid

**APPLICATION  
DEADLINE  
25 May, 2016**