



4th International Workshop on Ion Beam Applications

03 - 05 October, 2022

Organized by: **Experimental Physics Directorate (CoE Physics)**
National Centre for Physics, Islamabad



Introduction

A three-day “International workshop on Ion Beam Applications” is being organized at National Centre for Physics (NCP) from October 03-05, 2022, and is being supported by NCGSA, IST, Pakistan, (AS-ICTP), Trieste, Italy and IAEA, Vienna. The workshop is planned around the Pelletron Tandem Accelerator facility and implanter being installed at NCP, which offer research opportunities in vast scientific areas, such as material science; gemstone industry, solar cells, environmental and biological sciences, nano-technology, material modification, dopant implantation, defects engineering etc. In the same context, national and international users’ workshops were successfully organized in previous years as well. The present event is the continuation in this series.

International and national experts on Ion Beam Applications will deliver series of lectures and hands-on training to raise awareness among young scientists, researchers and engineers, both from academia and industry. In-addition, this platform will also enhance the ability and expertise of respective users starting from data acquisition and its refinement along with operational hardware related to Ion sources (SNICS & Alphasross) & Operation/Control of Tandem Accelerator. Moreover, this platform will also enhance the ability and expertise of the attendees in using ion beams instead of radiations to navigate through their specific scientific problems.

Topics

- Materials` analysis by particle based characterization techniques
- Ion beam induced defects in nanostructure materials and bulk materials
- Detection and monitoring of major or trace elements in sample matrix like Pollution in workplace, enviromentalheavy or toxic elements in blood, soils and plants, ore using PIXE technique(GUPIX).
- Analysis of light elements at the verge of detection limit (PIGE)
- Solar cells, including perovskite ; Thickness, depth profilinig, interface diffusion, homogeneity of thin and multilayer films (RBS); (XRUMP & SIMNRA).
- Ion beam modification and analysis of nanomaterials and thin films for various technological applications
- Charged particle activation (CPA) and nuclear reaction study
- Low/High energy ion implantation/irradiation

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.

How to apply

Application Form can be accessed at <http://www.ncp.edu.pk/iwiba-2022.php>

For further Information, Please Contact

Collaborations & Academic Activities Directorate (CAAD). NCP

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Directors

Ishaq Ahmad (NCP. Pakistan)
Shah Rukh K.T (PNRA. Pakistan)

Speakers

Tieshan Wang (China)
L. POPA-SIMIL (USA)
Karen Cloete (South Africa)
Muhammad Usman (Pakistan)
Muhammad Shahid (Pakistan)
Javed Hussain (Pakistan)
Mazhar Hussain (Pakistan)

Technical Committee

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Skukan Natko (IAEA)
Peng Lv (China)
Nouman Amjad (Pak)
Ghulam Murtaza (GCUL, Pak)
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Registration Fee

Local Students: Pak Rs. 2000/-
Outstation Students: Pak Rs. 3000/-
Employees: Pak Rs. 5000/-

**APPLICATION
DEADLINE**

September 16, 2022

