



# 10<sup>th</sup> International Scientific School

(March 12-16, 2018)

Organized by: National Centre for Physics, Islamabad, Pakistan

Co-sponsored by: *The Abdus Salam International Centre for Theoretical Physics (AS-ICTP)*, Trieste, Italy



The National Centre for Physics (NCP), Islamabad, Pakistan and International Centre for Theoretical Physics (ICTP), Trieste, Italy are jointly organizing the International Scientific School (ISS) in Islamabad, Pakistan from March 12 - 16, 2018. The ISS-2018 will be directed by H. R. Hoorani (NCP) and Joseph Niemela (ICTP).

## Introduction

International Scientific Spring (ISS), initiated in 2009, has become a major annual scientific activity of NCP. Since 2012, ICTP, Italy has become a partner of NCP for organizing this scientific event in Islamabad, Pakistan. It was re-named as a school in 2015 to reflect its emphasis on developing the potential of young participants. The idea of holding the ISS at NCP is to provide a platform for local and foreign participants to exchange scientific knowledge and to generate enthusiasm for science and innovation. Participants taking part in the deliberations of ISS include around 300 young Pakistani M.Phil./Ph.D. students, researchers, university faculty and many distinguished foreign invited speakers.

## Format

Each year, the scientific topics of ISS are chosen with a focus on the present and future research interests of NCP, universities and national R&D institutions. The ISS consists of plenary, parallel and poster sessions as well as tutorials and structured discussions relevant to various technical activities in the chosen topics. The plenary lectures contain mostly overviews of advances in the topical areas, meant to be accessible to a general academic audience, while the lectures/talks in parallel sessions cover recent research in each specific topic.

## Topics and Coordinators

### A. *Plasma Physics: Theory and Applications (PP)*

*Basic Plasma Physics, Coherent Nonlinear Phenomena, Quantum Plasmas, Computational Plasma Physics, Experimental Techniques, Fusion Plasma Physics*

*Coordinators: Mohsin Siddiq (NCP), Waqas Masood (CIIT), Shabbir Ahmed (NCP)*

### B. *Radiation – Matter Interaction (RMI)*

*Computer Simulation of Radiation-Solid Interactions, Ion implantation, Radiation Induced Defects in Solids, Medical Radioisotopes Production with Ion Beams, Advanced Materials Analysis using Lasers, Synchrotron Radiation or Ion Beam, Heavy Ion Particle Induced X-Ray Emission (PIXE), Laser Induced Breakdown Spectroscopy (LIBS), Higher Harmonics Generation and Laser Based Mass Spectroscopic Elemental Analysis etc.*

*Coordinators: M. Aslam Baig (NCP), Ishaq Ahmed (NCP), M. Usman (NCP), Raheel Ali (QAU), Rizwan Ahmed (NCP)*

### C. *Earth Systems (ES)*

*Seismology, Seismic Hazard Assessment, Earthquake Transients and Mechanics of Active Deformation, Atmospheric Physics and Climate Change, Hydrology, Earthquake Forecasting, Management of Marine, Coastal and Inland Environment, Pollution, Earthquake Engineering, Remote Sensing and GIS*

*Coordinators: Talat Iqbal (CES), M. Ali Shah (MSSP), Khawaja M. Asim (CES), Fehmeeda Khanam (MSSP)*

## Participation

Active graduate & post graduate students, post-doctoral researchers, faculty and research scientists who have also published research work in recognized international journals during the last three years will be encouraged to participate (oral or poster presentation). Local hospitality will be provided to the participants. As a rule, travel expenses of the participants should be borne by their home institutes. However, partial travel assistance may be provided to selected local participants residing outside Islamabad. A limited number of travel grants may also 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/iss-2018.php>. The Application Form should be submitted by **30<sup>th</sup> November, 2017 for foreign participants** and by **31<sup>st</sup> December, 2017 for local participants**. Selection will be made by the Technical Committee of ISS-2018. Foreign applicants are required to attach/provide scans of the first two relevant pages of their passports valid up to at least six months after the ISS-2018 event. These documents may be submitted to the activity secretariat by email or fax before the deadline for registration. Selected applicants will be required to pay a registration fee (employed person: PKR. 2000/-, students: PKR. 1500/-). There is no registration fee for the invited speakers and foreign participants.

## Sponsors

- Commission on Science and Technology for Sustainable Development in the South (COMSATS)
- Organization of Islamic Cooperation's (OIC) Standing Committee on Scientific and Technological Cooperation (COMSTECH)
- Pakistan Science Foundation (PSF)

**For further information, please contact:**

Activity Secretariat: [caad@ncp.edu.pk](mailto:caad@ncp.edu.pk)

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## Directors

*Hafeez R. Hoorani (NCP, Pakistan)*

*Joseph Niemela (ICTP, Italy)*

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## Key Speakers

*Abdelkrim Aoudia (Italy)*

*Atsushi Fukuyama (Japan)*

*Engang Fu (China)*

*Friedemann Freund (USA)*

*Jae Koo Lee (South Korea)*

*Kyunghwan Oh (South Korea)*

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*Ze Wang (China)*

## Scientific Secretary

*Dr. Muhammad Aslam Baig*

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**Application  
Deadline**

**Nov. 30, 2017**

*For Foreign Participants*

**Dec. 31, 2017**

*For Local Participants*