



National Centre for Physics

Islamabad, Pakistan

International Scientific Spring

March 07-11, 2016



The National Center for Physics (NCP), Islamabad, Pakistan and The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy are jointly organizing the International Scientific Spring (ISS) in Islamabad, Pakistan from March 7 - 11, 2016. The ISS-2016 (ICTP-SM-15/10) will be directed by H. R. Hoorani (NCP) and J. Niemela (ICTP).

Introduction

The International Scientific Spring (ISS) which was started in 2009, has become a regular annual scientific activity of the NCP. Since 2012, AS-ICTP, Italy has become a partner of NCP for organizing this scientific event in Islamabad, Pakistan. Now both these Centres organize a few scientific activities jointly in NCP every year including the ISS and the regional activities of ICTP. Over three hundred young Pakistani M.Phil/Ph.D students, researchers, university faculty and many foreign invited speakers and participants take part in the deliberations of ISS. The idea of holding the International Scientific Spring (ISS) at NCP is to provide a platform for the local and the foreign participants to exchange scientific knowledge and to generate enthusiasm for science and discovery.

Format

Each year, the topics (technical activities) of International Scientific Spring (ISS) are chosen keeping in view the present and future research interests of NCP, universities and national R&D institutions in Pakistan. The ISS consists of plenary and parallel 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 chosen areas for general audience while the lectures/talks in parallel sessions cover the recent research on the specific topics.

Topics and Coordinators

- A. **Atomic, Molecular and Optical Physics**
Lasers, Synchrotron Radiation, Opto-electronics
Coordinators: M. Aslam Baig, Farhan Saif, Raheel Ali
- B. **Condensed Matter and Nano Sciences**
Lower dimensional materials (0, 1 & 2D materials, multi-layers and thin films), Functional Nanostructures (synthesis, characterization and applications), Nano-material characterization using advanced techniques
Coordinators: S. Khurshid Hasanain, Sara Qaisar, G. H. Jaffary
- C. **Particle Physics & Cosmology**
Phenomenology of elementary particles, Flavor physics, B-meson physics, Neutrino physics, Inflation gravity waves, Black hole physics, Dark matter, Si detectors in particle physics
Coordinators: Ashfaq Ahmad, Rizwan Khalid, Jamil Aslam
- D. **Plasma Physics**
Basic plasma physics, Space plasmas, Quantum plasmas, Non Maxwellian plasmas, Laser induced plasmas
Coordinators: Mohsin Siddiq, Shahid Ali, Waqas Masood

Participation

Active graduate & post graduate students, post-doctoral researchers, faculty and research scientists who have published research work in recognized international journals during the last three years are encouraged to apply for participation and presentation (oral or poster). Participants from the region as well as developing / developed countries are also welcome to attend. All activities will be conducted in English. Local hospitality will be provided to the selected 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 few travel grants may also be provided to the foreign participants, especially from the developing countries in the region.

How to apply

Online Registration Form can be accessed at: <http://www.ncp.edu.pk:8080/CAAD/>. Application Form should be submitted on or before **December 10, 2015** for foreign participants and **December 20, 2015** for local participants. Selection will be made by the Technical Committee of ISS-2016. Foreign applicants are required to attach/provide first two relevant pages of their passport valid up to at least six months after the ISS-2016 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 registration fee (local student: Rs. 1000/-; out-station student: Rs. 1500/-; employed person: Rs. 2000/-). There is no registration fee for invited speakers and foreign participants.

Sponsors

Commission on Science and Technology for Sustainable Development in the South (COMSATS)
For further Information, Please Contact: Activity Secretariat: caad@ncp.edu.pk
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Tel: +92-51-2077350, Fax: +92-51-2077342 Website: www.ncp.edu.pk



Directors

Hafeez R. Hoorani (NCP, Pakistan)
Joseph Niemela (ICTP, Italy)

International Advisory Committee

A. Baraldi (Italy)
T. Camporesi (Switzerland)
B. Eliasson (UK)
F. Gianotti (Switzerland)
K. Oh (South Korea)
T. Rehman (USA)
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Key Speakers

D. Abbaneo (Switzerland)
S. Suzer (Turkey)
E. Bjork (Sweden)
P. Eklund (Sweden)
F. Gerigk (Switzerland)
T. S. Kasirga (Turkey)
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V. Shvartsman (Germany)
W. Tawfik (Saudi Arabia)

Scientific Secretary

S. Khurshid Hasanain (NCP)

**Application
Deadline**

**Foreign Participants
December 10, 2015**

**Local Participants
December 20, 2015**