



First School on Advanced Topics in Particle Physics and Cosmology

September 02-20, 2019

National Centre for Physics

QAU Campus, Shahdara Valley Road, Islamabad, Pakistan

Overview:

The NCP Physics Education Program is designed to enhance physics literacy in Pakistan. In line with this program, this course is designed to familiarize postgraduate students to contemporary topics in particle physics research focusing on known gaps in their knowledge. The course will consist of a series of pedagogical lectures along with exercises/assignments with the aim to introduce local research students to a wider range of advanced topics that are not covered during their course work at their home institutions. The main emphasis of the lectures is on learning the theoretical and computational tools needed for phenomenology-oriented research in high-energy physics. It is hoped that by attending this course, the participants will be able to enhance their knowledge base needed for future research. Participants of this course will automatically be registered for the International Workshop on Heavy Quark Physics (23-26 Sep 2019, NCP).

Topics:

- An overview of Quantum Electrodynamics
- Standard Model and GUTs
- Quantum Chromodynamics
- Supersymmetry
- Effective Field Theories
- Soft Collinear Effective Theory
- QCD Factorization
- Heavy Flavor Physics
- Inflationary Cosmology
- Computational Tools

Eligibility Criterion:

Postgraduate students working in the field of particle physics who have studied an introductory course on quantum field theory are encouraged to apply.

How to Apply:

Registration form can be downloaded from: <http://www.ncp.edu.pk/atppc-2019.php>. There is a registration fee of Rs 2000. Partial travel support may be reimbursed at the end of this course. Accommodation will be provided only for out-station participants. Meals including tea will be served to the participants. There is no cost for housing and meals.

Program Directors

Hafeez Hoorani (DG NCP)
Mohsin Siddiq (Director TPD, NCP)

Scientific Organizers:

Ishtiaq Ahmed (NCP)
Rizwan Khalid (NUST)
Mansoor ur Rehman (QAU)
Naeem Shahid (NCP)

Speakers

Ishtiaq Ahmed (NCP)
Jamil Aslam (QAU)
Saadi Ishaq (IHEP, China)
Muhammad Junaid (NCP)
Rizwan Khalid (NUST)
Wajid Ali Khan (NCP)
Tajdar Mufti (LUMS)
Ali Paracha (NUST)
Wajid Ali Khan (NCP)
Babar Qureshi (SMS)
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School Coordinator

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Application Deadline

July 22, 2019

For further Information, Please Contact:

Activity Secretariat: caad@ncp.edu.pk

Collaborations & Academic Activities Department (CAAD)

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