



Advanced School on Radiative Corrections for the LHC Saha Institute of Nuclear Physics, Kolkata, India April 4 - 11, 2011

The era of the Large Hadron Collider (LHC) at CERN has begun. While the LHC detectors measure fundamental scattering reactions with unprecedented experimental precision, the interpretation of these high-quality data demands an equally high precision in the theoretical predictions. In order to connect the observed phenomena with the underlying theoretical models, a precise understanding of the involved processes at the quantum level is essential. The main objective of the Advanced School is to develop expertise in the field of radiative corrections which is at the forefront of current research.

Topics:

- Standard methods for loop calculations
- D-dimensional unitarity, recursion relations
- QCD corrections and LHC phenomenology
- Soft gluon resummation
- Multi-gluon amplitudes from AdS/CFT
- Modern software tools

Lecturers:

- Rahul Basu (IMSc)
- Keith Ellis (Fermilab)
- Rajesh Gopakumar (HRI)
- Andreas Nyffeler (HRI)
- Suvrat Raju (HRI)
- V. Ravindran (HRI)
- Giulia Zanderighi (Oxford)

There will also be tutorials and computer hands-on sessions. The target audience for the school are senior Ph.D students, post-doctoral fellows and young researchers. It is assumed that the participants have already attended courses on Quantum Field Theory and Particle Physics.

Local hospitality and travel allowance will be provided as per rule to all participants. The Advanced School is the first part of the International Centre for Theoretical Sciences program on **Radiative Corrections for the LHC** and serves as a preparation for the second part: the 10th **International Symposium on Radiative Corrections (RADCOR 2011)** which will be held at Mamallapuram during September 26-30, 2011. Further informations can be found at the webpage:

<http://www.icts.res.in/program/ASRC2011>

wherein online application should be submitted by **December 15, 2010**.

Organizers: Rahul Basu, Prakash Mathews, Andreas Nyffeler, V. Ravindran

Contact: Prakash Mathews (SINP, Kolkata),

Email: RADCOR.School@saha.ac.in