



**THINK TANK ON PHYSICS@LHC  
DECEMBER 5-9, 2011  
VENUE: SARISKA PALACE, SARISKA, RAJASTHAN  
WORKSHOP THEME: MONTE CARLO AT NLO AND JET PHYSICS  
CO-HOSTED BY  
REGIONAL CENTRE FOR ACCELERATOR BASED PARTICLE PHYSICS  
(RECAPP), HARISH CHANDRA RESEARCH INSTITUTE, ALLAHABAD  
AND  
SGTB KHALSA COLLEGE, UNIVERSITY OF DELHI**

*Following the series of RECAPP workshops and lecture courses, a five days workshop is being organized on physics and techniques used in modern Monte Carlo event generators. The workshop is aimed at advanced doctoral students, postdoctoral fellows and event generator practitioners. The meeting would largely comprise of a set of lecture courses accompanied by some hands-on tutorial sessions. Other than these, no formal lectures/seminars are planned, although participants are encouraged to actively participate in brainstorming sessions. Participation is by invitation only.*

**Topics to be covered in the Workshop:**

OCD at NLO and accurate Monte Carlo event generators  
Jet physics: from algorithms to Jetography  
Automatic NLO computations: MadLoop and MadFKS  
Interfacing NLO computations with parton showers

Fabio Maltoni, CP3, Louvain, Belgium  
Matteo Cacciari, LPTHE, Paris, France  
Rikkert Frederix, Univ. of Zurich, Switzerland  
Paolo Torrielli, EPFL, Lausanne, Switzerland

Hands on sessions on MadGraph, MC@NLO, and FastJet coordinated by the invited speakers

*The participant is expected to be familiar with*

- Higher order effects in perturbative QCD (KLN theorem, soft gluon resummation etc.) and/or*
- Parton level Monte Carlo simulation in Fortran/C++ and working knowledge of Pythia (enough to handle plotting of one dim. distribution of kinematic observables).*

*Local hospitality will be provided to all participants at Sariska Palace <http://www.thesariskapalace.in>. Participants are expected to arrive the venue on Dec. 4<sup>th</sup> (Sunday) and stay throughout the entire duration of the workshop. Those interested may apply to [lhc.thinktank@gmail.com](mailto:lhc.thinktank@gmail.com) latest by **September 23, 2011**. A PhD student is required to arrange for a recommendation letter from his/ her supervisor.*

**Conveners:**  
Debajyoti Choudhury (Department of Physics, DU)  
Sukanta Dutta (SGTB Khalsa College, DU)  
Biswarup Mukhopadhyaya (RECAPP, HRI, Allahabad)

**Local Organizing Committee:**  
P. Arun  
Mamta Dahiya  
Jaswinder Singh (Principal & Chair, SGTB-KC)  
Nimmi Singh