

ATLAS/CMS/LPCC MC generators & future challenges

Introduction to the workshop

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CMS: Piergiulio Lenzi, Sanjay Padhi

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Workshop aims

- ▶ **Encouraging and providing a forum for direct exchange of views and requirements between MC authors and experimentalists**
 - **in both directions!**
 - Experiments: MC requirements for LHC programme; MC targets during shutdown; recommended setups/syst treatments; issues with current MC implementations/physics content; ...
 - MC authors: how do experiments use MC?; needs for data to constrain/drive model developments; more?!
- ▶ Keeping everyone informed about latest developments in MC simulation technology
 - **both techniques and specific generator codes**
- ▶ Tutorials on new generators: **aMC@NLO (this morning)**, **Sherpa-NLO (tomorrow morning)**

Aim to decide on some concrete aims for the next meeting: work on experiment and theory sides... and *together!*

Timetable

<https://indico.cern.ch/conferenceOtherViews.py?view=standard&confId=212260>

- ▶ **Monday 19th:**
 - 0900–1230: **aMC@NLO tutorial**
 - 1230–1800: **Latest status of NLO/multileg techniques and generators**
- ▶ **Tuesday 20th:**
 - 0900–1230: **Sherpa+NLO tutorial**
 - 1230–1800: **Issues with showers, matching, and heavy flavour**
- ▶ **Wednesday 21st:**
 - 0900–1000: **Soft QCD and MC tuning**
 - 1000–1630: **Electroweak effects, SM interference in Higgs, BSM**

End with outlook and discussion on next steps and aims for the next
~ 6 months

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Let's get started