

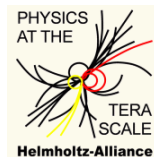
# MCnet & Terascale Alliance Monte Carlo Summer School 2013

Steffen Schumann

II. Physikalisches Institut, Universität Göttingen



Mariaspring  
Göttingen/Germany



# Who we are and what we do

## • MCnet ITN

- EU funded Initial Training Network
- dedicated to developing and supporting general-purpose Monte Carlo event generators throughout the LHC era
- Herwig++, MadGraph, Pythia, Sherpa, Ariadne, Rivet, FeynRules, ...
- research and training
- annual schools, fellowships, short term student programme



## Monte Carlo training studentships



**3-6 month** fully funded studentships for current PhD students at one of the MCnet nodes. An excellent opportunity to really understand and improve the Monte Carlos you use!

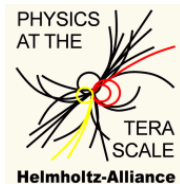
**Application rounds every 3 months.**



# Who we are and what we do

## • Helmholtz-Alliance Physics at the Terascale

- 2007-2012 national funding structure
- bundles German activities in the field of high-energy collider physics
- training and research in all fields of HEP
- infrastructure kept, DESY as the leading institution
- schools & dedicated workshops, e.g. annual MC school



**Monte Carlo School 2012**

**12-15 March 2012**  
plus one day of HEP- and CMS-specific MC exercises on Friday, 16 March  
**DESY, Hamburg**

The 2012 Monte Carlo school aims mainly at PhD students and young postdocs willing to learn about the basics of Monte Carlo generators. It focuses on simulating Higgs and beyond the Standard Model signals, as well as the accurate description of backgrounds by higher order matching and multi-jet merging. Lectures and tutorials will be given on the following subjects:

- Monte Carlo Methods and Event Generators
- Basics of Particle Detectors, Hadronization and the Underlying Event
- Higgs Physics in and beyond the Standard Model
- HIGGS Matching and Multi-jet Merging
- Simulating New Physics Signals and Backgrounds

<http://www.terascale.de/mc2012>

# What to expect from the school

- **general & specialized lectures**

- Introduction to MC generators (P. Richardson)
- Statistics (K. Kröninger)
- QCD NLO calculations (R. Frederix)
- Matching & Merging (F. Krauss)
- LHC perspectives (A. de Roeck)
- Predictive Analytics (M. Baehr)

- **hands-on tutorials**

- try out & compare your favourite generators
- Herwig++, Pythia, Sherpa, Rivet

- **plenty of room for discussion, interaction**

- ~ active participation strongly desired, please ask your lecturers and tutors
- ~ student poster session on Tue
- ~ there will also be a student session on Friday



# and beyond physics ...



BBQ tonight

sightseeing in Göttingen on Wed

“Gauss in Göttingen” (90min)

“Aula & Karzer” (45min)

~> please sign up!

school dinner down town

