

**GRK 2044 - Mass and symmetries after
the Discovery of the Higgs particle at the LHC**

1st Annual Meeting of the GRK 2044



28. - 30. September 2015

at the "Schwarzwaldhotel", 77723 Gengenbach

<http://www.grk2044.uni-freiburg.de/qualification/fallworkshop2015>



DFG Deutsche
Forschungsgemeinschaft

Monday, September 28th

09.30 - 10.30 Arrival and Coffee

10.30 - 11.00 **Daniel Büscher**
Suche nach dem Standardmodell-Higgs-Boson im Zerfallskanal $H \rightarrow b b$ mit dem ATLAS-Experiment

11.00 - 11.30 **Hannah Arnold**
Status of the search for a heavy, CP-odd Higgs boson A decaying to ZH in the $Z \rightarrow \ell\ell$ and $h \rightarrow bb$ decay channel in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector

11.30 - 12.00 **Fabio Cardillo**
A model-independent general search at the ATLAS Experiment in pp collisions at 8 TeV

12.00 - 12.30 **Phuong Dang**
Prospects for measuring $H \rightarrow WW \rightarrow l\nu l\nu$ decays in the gluon-fusion channel using LHC Run 2 data collected with the ATLAS detector

12.30 - 14.00 Lunch break

14.00 - 15.45 **Lecture: Peter Fischer**
Part I - Basics of Noise

15.45 - 16.15 Coffee break

16.15 - 18.00 **Lecture: Eric Laenen**
Part I - QCD 1

18.00 - 20.00 Dinner

20.00 - open end Meeting of the PhD-students /Meeting of the faculty members

Tuesday, September 29th

08.00 - 09.00 Breakfast

09.00 - 10.45 **Lecture: Peter Fischer**
Part II - Noise and Spatial Resolution

10.45 - 11.15 Coffee break

11.15 - 11.45 **Christopher Regali**
HEPGen++ Event Generator for Exclusive Processes

11.45 - 12.15 **Manfredi Ronzani**
Search for squarks and gluinos in final state with jets and missing transverse momentum with the ATLAS detector

12.15 - 14.00 Lunch break

14.00 - 15.45 **Lecture: Matthias Bartelmann**
Part I - Cosmology

15.45 - 16.15 Coffee break

16.15 - open end Excursion through the vineyards of Gengenbach and Wine Tasting

Wednesday, September 30th

08.00 - 09.00 Breakfast

09.00 - 10.45 **Lecture: Eric Laenen**
Part II - QCD

10.45 - 12.45 Poster Session with accompanying coffee break

12.45 - 14.00 Lunch

14.00 - 15.45 **Lecture: Matthias Bartelmann**
Part II - Cosmology

15.45 -16.15 Coffee break

16.15 - 16.45 **Dirk Sammel**
Study of the CP properties of the Higgs boson using Optimal Observables in the Vector Boson Fusion production mode and the decay into two tau leptons

16.45 - 17.15 **Tobias Szameitat**
Monte Carlo Studies for the COMPASS Experiment with Geant4

17.15 - 17.45 **Discussion forum for Doctoral Researchers and Faculty members**

17.50 - 18.00 **Concluding Remarks**

18.00 **Departure**

Postersession Wednesday, September 29th from 10.45 - 12.45h

1.	Anger, Felix	<i>Towards NLO QCD radiative corrections for the associated production of heavy quarks and vector bosons</i>
2.	Boggia, Michele	<i>Singlet extension of the minimal Higgs sector</i>
3.	Burgard, Carsten	<i>Measuring Higgs boson parameters within the framework of Effective Field Theories</i>
4.	Gonella, Giulia	<i>Electron charge mis-identification in the context of same-charge WW scattering at ATLAS</i>
5.	Gorzellik, Matthias	<i>Towards numerical triggers: A cross section measurement of exclusive π^0 production</i>
6.	Jörg, Philipp	<i>The DVCS physics program at COMPASS</i>
7.	Lüdtke, Christian	<i>Optimising the sensitivity of the search for top-squarks in fully hadronic final states at the ATLAS detector</i>
8.	Mogg, Philipp	<i>Looking for SUSY signals from stop decays at ATLAS using 13 TeV data</i>
9.	Rotzinger, Martin	<i>Higgs Phenomenology - An Effective Field Theory Approach</i>