



The Strategic Helmholtz Alliance "Physics at the Terascale" (<http://www.terascale.de>) is a research network supported by the Helmholtz Association and comprises the research centres DESY and FZ Karlsruhe, 17 German Universities and the Max-Planck Institute for Physics. Within the framework of the worldwide investigation of the fundamental properties of matter using accelerators at the highest energies, the Alliance will sustainably concentrate and advance the expertise and strengths of the participating institutes.

The Strategic Helmholtz Alliance "Physics at the Terascale" invites applications for several postdoctoral fellowships in particle physics theory, experimental particle physics and detector development. The Alliance Fellowships are intended to further the careers of individuals of outstanding potential and offer the opportunity to pursue research for a period of up to five years. Applicants must have a Ph.D. and have proved their ability as an individual and independent researcher.

Particle Physics Theory

with a focus on the research areas

- Phenomenology beyond the Standard Model (in SUSY and non-SUSY theories, including also aspects of model building)
- Precision calculations and the development of dedicated higher-order Monte Carlo programs (Standard Model predictions, field-theoretical and calculational methods)
- Monte Carlo generators (multi-purpose Monte Carlo programs, including parton showering, hadronisation, etc.)

Applicants are encouraged to provide a preference list of up to three host institutes chosen from

RWTH Aachen (a, b)
University Bonn (a, c)
University Dortmund (a)
University Freiburg (a, b, c)
University Hamburg (a, b)
University Karlsruhe (a, b)
University Mainz (a, b)
University Würzburg (a, b)

where the corresponding research fields are indicated in parentheses. Applicants should arrange for two letters of recommendation to be sent to the address below. Preference will be given to applications received by **15 December 2007**.

Experimental Particle Physics

with a focus on analyses of data from the Large Hadron Collider LHC in the research areas

- Precision measurements of the top quark
- Search for the Higgs Boson at LHC
- Search for extensions of the Standard Model such as supersymmetry or large extra dimensions
- Development of experimental analysis techniques such as high-level graphical analysis tools, statistical tools and novel techniques for detector calibration
- Contributions to the development of Monte Carlo generators

Applicants are invited to provide a preference list of up to three host institutes chosen from

RWTH Aachen (a, d)
DESY (a)
University Freiburg (b, c)
University Hamburg (c, d)
University Karlsruhe (c)
University Mainz (c, d)
LMU München (b, c)
University Siegen (b, e)

where the corresponding research fields are indicated in parentheses. Please give the names of two persons who can provide further information about the candidate. Closing date for applications is **31 December 2007**.

Detector Development

with a focus on the research areas

RWTH Aachen: Research and development for the SLHC upgrade of the CMS tracker with a focus on electronics system design, in particular improved powering schemes. The fellow will work in the RWTH Aachen CMS group which played a key role in the development and construction of the CMS tracker.

University Göttingen: The fellow is expected to take a leading role in the development of modern particle physics detectors with an emphasis on the upgrade of the ATLAS pixel detector.

University Heidelberg: The Kirchhoff-Institut für Physik is seeking a research fellow to work on the upgrade of the ATLAS level-1 calorimeter trigger to cope with the conditions imposed by a possible LHC luminosity upgrade. Experience in trigger related studies is required.

Applicants are encouraged to indicate their preferred institute.

Please give the names of two persons who can provide further information about the candidate. Closing date for applications is **31 December 2007**.

Applications should include a letter of application, CV, academic records as well as a list of publications and should be addressed to Prof. Ian Brock (Scientific Manager of the HGF Alliance) DESY, Notkestrasse 85, D-22607 Hamburg, (Ian.Brock@desy.de).

The particle theory group of the Department of Physics at the University of Siegen has an opening for a

Helmholtz Research Fellow (Tenure Track) for Particle Physics Phenomenology

We are looking for a theoretical physicist with substantial postdoctoral expertise in high-energy collider physics, in particular in the phenomenology of electroweak interactions or of new physics beyond the Standard Model. The position is funded by the Helmholtz Alliance "Physics at the Terascale" until June 2012 and remunerated according to the TVL regulations for public sector employees. Based on an evaluation of the candidate's scientific record which is scheduled after three years, the position may subsequently become that of a permanent scientific employee of the University of Siegen.

The particle theory group at Siegen has interests in the areas of collider phenomenology, flavour physics, QCD and Monte Carlo development. The experimental particle physics group is involved in ATLAS and ILC. The university intends to increase the number of female scientists and encourages applications from women. Handicapped persons will be favoured in case of equal qualification.

Interested candidates should arrange for two letters of recommendation and submit their application including CV, list of publications, and a statement on past and future research, no later than **31 December 2007** to Prof. Ian Brock (Scientific Manager of the Helmholtz Alliance) DESY, Notkestrasse 85, D-22607 Hamburg, (Ian.Brock@desy.de).

For further information, please contact:
Prof. Wolfgang Kilian (kilian@hep.physik.uni-siegen.de)

The theoretical and experimental particle physics groups at the University of Wuppertal have an opening for a

Helmholtz Research Fellow for Monte Carlo Development

The candidate should participate in the development and verification of Monte Carlo generators for accelerator-based high-energy physics experiments. He/she should play a leading role in the planned Monte Carlo network in Germany and should have a thorough understanding of the theoretical basis of event generators as well as the experimental applications and demands. Significant experience in the use of Monte Carlo generators in particle physics is required. Demonstrated collaborations with experimental as well as theoretical physicists would be very welcome.

The salary will follow that of the TVL regulations for public sector employees at the level of E13. The candidate may be offered a permanent position after four years.

Interested candidates should arrange for two letters of recommendation and submit their application including CV, list of publications, and a statement on past and future research, no later than **31 December 2007** to Prof. Ian Brock (Scientific Manager of the Helmholtz Alliance) DESY, Notkestrasse 85, D-22607 Hamburg, (Ian.Brock@desy.de).

For further information, please contact:
Prof. Peter Mättig (peter.mattig@cern.ch) or
Prof. Robert Harlander (Robert.Harlander@physik.uni-wuppertal.de)

Detailed descriptions of the positions are available at <http://www.terascale.de> or from the Scientific Manager of the Helmholtz Alliance.