

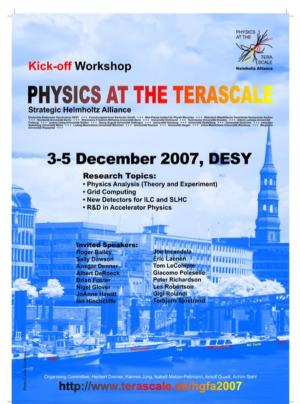
PHYSICS AT THE TERASCALE

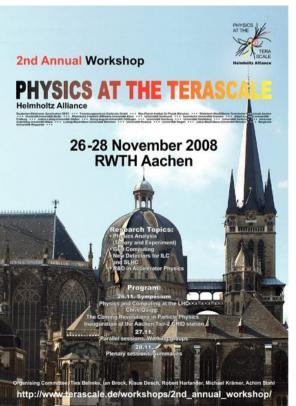


Helmholtz Alliance

Status of the Alliance Annual Workshop 28/11/2008

Ian C. Brock





Outline

- Activities in 2008
- Working Groups
- Alliance positions
- Alliance online Web, Wiki, Indico, News
- Plans for 2009
- Conclusions

A pleasure to see so many (young) people here!

- Physics Analysis
 - Schools in 2008:
 - Monte Carlo 3/08
 - Statistics 9/08
 - PDF 11/08
 - Workshops
 - Statistics 6/08
 - Discussion Days
 - MC 9/08
- T. Schörner-Sadenius talk

- Heraeus Seminar
 - Bad Honnef 4/08
- VTI Seminars
- LHC-D Workshops
 - Top 2/08
 - QCD/EW 5/08
 - Parallel sessions here

Detector

- Karlsruhe workshop 4/08
 - Infrastructure in VLDT labs
 - Ideas for future (common) projects
- Questionnaires on ideas/wishes distributed
- Parallel Session here
 - In several areas, more going on with Alliance personnel/infrastructure than we knew about
 - Group leaders let your people know who is paying them!
- L. Feld talk

Grid

- Karlsruhe workshop 2/08
 - Alliance projects discussed
- GridKa school 9/08
 - Alliance contributions
- NAF tutorials (ATLAS) 5/08, 9/08
- NAF User Committee set up
 - Representatives from ATLAS, CMS, LHCb, ILC and DESY IT
- NAF Users Meeting here
- G. Duckeck + W. Ehrenfeld talks

Accelerator

- School 3/08
- PhD students started work on Alliance projects
- Parallel session here
- Lectures in Göttingen SS08

Alliance Working Groups

- LHC-D Working Groups
 - Higgs
 - SUSY and BSM
 - Top
 - EW and QCD
 - Flavour
- All except flavour held parallel sessions here and report later

- 6 working groups founded (2 in VTI)
 - Higgs Central Jet Veto
 - Higgs with heavy flavours
 - BSM
 - m₁₁
 - SUSY
 - Heavy quark production

Alliance Working Groups

New Groups?

- Ideas very welcome (bottom up)
- b + τ tagging?
- Alignment?
- •
- Contact analysis project board and/or management
- Some support for travel etc. available

Criteria:

- In general between experiments and/or between theory and experiment
- Pure theory within VTI
- One experiment within FSP

LHC Collaborations Rules

- ATLAS started enforcing strict rules on what is allowed to be shown at such workshops
- 4 Higgs talks cancelled!
- 4 SUSY/BSM talks cancelled!
- Top session talks edited/censored!

 Conflicts with declared aims of Alliance to encourage discussions between experiments and theory

LHC Collaborations Rules

- Discussed in Institute Assembly yesterday
 - Should working groups discuss only concepts?
 - Can/should we make talks available via Indico?
 - What do we do about the DPG?
- No real solution yet.
- Needs discussion within (and between) the collaborations, in order to arrive at a satisfactory solution.
- If students & post-docs cannot present and discuss what they have been working on for the last 6 months, interest in meetings such as this one declines and we cannot expect to achieve a fruitful collaboration between the experiments and theory.

Young Investigator Groups

- Karlsruhe (Monte Carlo)
 - S. Gieseke as of 1/1/2008
- Dresden (Experiment)
 - A. Straessner as of 15/9/2008
- HU Berlin (Phenomenology)
 - P. Uwer as of 1/11/2008
- Wuppertal (Experiment)
 - W. Wagner as 1/12/2008
- 1 Accelerator + 1 more Phenomenology group planned

Tenure-track Positions

- Analysis Centre
 - Head T. Schörner-Sadenius as of 1.10.2008
 - Monte Carlo Z. Nagy as of 1.9.2008
- Wuppertal
 - M. Worek as of 1.12.2008
- Siegen
 - Not filled yet
- Recent call to see if partners have further such possibilities

Alliance Fellows

- Theory all positions filled
 - Aachen
 - Aachen/Bonn
 - Bonn
 - Dortmund
 - Freiburg (as of 1.1.2009)
 - Hamburg
 - Karlsruhe
 - Mainz
 - Würzburg







Alliance Fellows

- Physics Analysis filled
 - DESY
 - Freiburg
 - Hamburg
 - Karlsruhe
 - Mainz
 - Siegen → Freiburg
- Detector filled
 - Aachen
 - Heidelberg













YIGs and Fellows

- First meeting of YIGs and Fellows on Wednesday
- Elected representative in Analysis Project Board – Anna Kulesza, Aachen

Grid Positions

- DESY mostly filled
- FZK filled
- Aachen filled
- Freiburg being filled
- Göttingen → DESY interviewing
- Karlsruhe filled
- München filled
- Wuppertal filled as of 1/09

Detector Positions

- Bonn
 - 3 engineers/physicists filled
- DESY
 - 2 engineers filled
 - Test-beam filled/covered
- Heidelberg
 - 2 positions still open

- Aachen, Hamburg, Gießen, Karlsruhe, Siegen filled
- Technicians mostly filled
- PhDs filled or a few postponed by 1 year

Other Positions

Outreach

K. Voss – LHC Communicator as of

1.4.2008







U. Bilow – Master Classes as of 11.8.2008

Just Advertised

- Statistics position in Analysis Centre
- Fellows
 - Physics Analysis
 - Aachen, München
 - Detector
 - Göttingen
- Detector
 - 2 Physicists/Engineers
 - Heidelberg
 - 1 Physicist
 - Bonn



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-Institut für Physik. 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.



Scientist

The Analysis Centre of the Helmholtz Alliance "Physics at the Terascale" at DESY, Hamburg site, is seeking a scientist to join the Statistics Tools group of the centre.

The Analysis Centre supports physicists at Gorman Institutes working on analyses at ATLAS, CMS and ILC. The centre contains three min branches: Monite Carlo Generators, Perion Distribution Functions and Statistics Tools. A major goal of the statistics tools group is to produce support and education for all kinds of statistics—related tasks and questions in high-perior byhistys data analysis.

The successful candidate is supposed to strengthen the activities of the group by

- contributing to the development of statistics tools,
- Implementing existing tools into software frameworks like ROOT,
 taking part in the organisation of meetings, workshops and schools and
- helping to provide user support and web documentation.

The candidate is also expected to carry out research within one of the Alliance projects for about $50\,\%$ of his or her time.

The position requires

- a Ph.D. in physics,
- Interest and experience in the development of statistics tools and
- programming, software maintenance and analysis experience (e. g. C++, Fortran, ROOT).

The position is initially limited until 30 June 2012, the nominal end of the Helmholtz Alliance funding period. For further information please contact Dr. Thomas Schörner-Sadenius (Thomas.Schoerner@desy.de).



GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

Physicist 'Detector Development with the ATLAS Experiment'

The University of Göttingen offers a full-time position for a research assistant/post-doc (salary level TVL E13) beginning as soon as possible. The position is available for an initial period of two years with a possible

The post-doc will be member of the recently formed particle physics group to work on the ATLAS experiment at the Large Hadron Collider at CERN. The ATLAS experiment is designed to search for physics phenomen responsible for electroweak symmetry breaking and to study a variety of subjects related to physics at the TaV scale. The successful applicant is expected to participate in the supervision of students, in the start-up of the new particle physics group in Göttingen, in the research activities of the group and to play a leading role in detector development in the context of the Heinholtz Alliance, in particular in the ATLAS plast

For further information please contact Prof. Arnulf Quadt (aquadt@uni-goettingen.de).



Physicist "Physics Data Analysis with the CMS Experiment"

The applicant is expected to contribute to physics data analysis within the CMS experiment, and to the Visual Physics Analysis project being developed at the RWTH Aachen. The position is funded by the Helmholtz Alliance "Physics at the Terrascale" for a period of 3.5 years.

For further information please contact Prof. Martin Erdmann (+49-241-8027317, erdmann@physik.rwth-aachen.de).



Physicist "Physics Data Analysis with the ATLAS Experiment"

The Faculty of Physics at LMU Munich has an immediate opening for a physicist on the search for signals of new physics beyond the Standard Model within the ATLAS experiment. The LMU ATLAS group is contributing to the muon spectrometer, Grid computing and the preparation of the data enalysis. The appointee is expected to establish a strong research programme involving diploma and Ph.D. students with particular emphasis on searches for Higgs Bosons or supersymmetric particles and to contribute actively to a successful start-up phase of the ATLAS experiment.

The position is partially funded by the Strategic Helmholtz Alliance "Physics at the Terascale" and the salary follows the standard for public employment (TVL E13). The position is vacant and initially limited to two years with the possibility of an extension. Candidates should hold a Ph.D. in excentmental particle ohvsics.

For further information please contact Prof. Dorothee Schalle (dorothee schalle@physik.uni-muenchen.de).



Two Physicists/Engineers

The Heldelberg ASIC Laboratory located in the Kirchhoff-Institut für Physisk at the Ruprechk-Kards-Universitäl Heldelberg mill extend its social wis at the Ruprechk-Kards-Universitäl Heldelberg mill extend its social was upport scientists and Ph.D. students in the area of analogue and mixed-signal VLSI component and system design and test. The institute and openings for two Physicialsts/Engineers for the design of Intograted micro-electronics, in particular analogue and mixed-alphanal circuits. An archive-electronics in particular analogue and this middle particular analogue as well as experience in the design and testing of complex electronic circuits employing ASICs and FFGAs. Practical experience in electronic circuit design and construction is required. Bell positions are located in the existing ASIC laboratory for microelectronics. They are immediately available and with be limited until 30 June 2012.

For further information please contact Prof. Karlheinz Meier (meierk@klp.unl-heidelberg.de).

Applications (preferably by email) including a letter of application, CV, academic record as well as a list of publications and the names of three persons who can provide further information about the candidate should be addressed to:

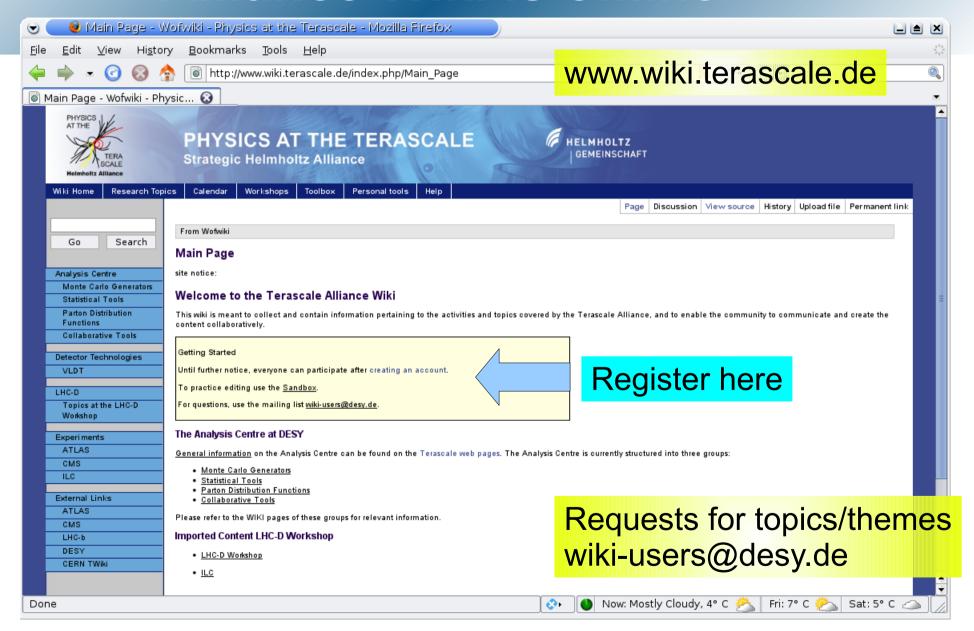
Prof. Ian Brock (Scientific Manager of the Helmholtz Alliance)

DESY, Notkestraße 85, 22607 Hamburg, Germany (lan.Brock@desy.de).

For all positions, salary and benefits are commensurate with those of public service organisations in Germany. Handicapped persons will be given preference to other equally qualified applicants. DESY and the universities are equal opportunity, affirmative action employers and encourage applications from women.

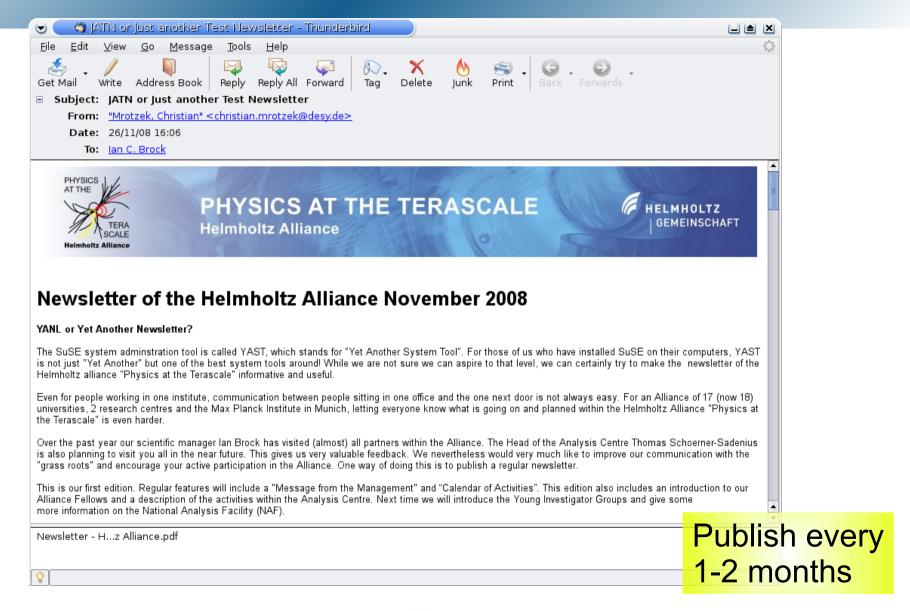
Closing date for all applications is 31 December 2008.

Alliance Wiki is online!



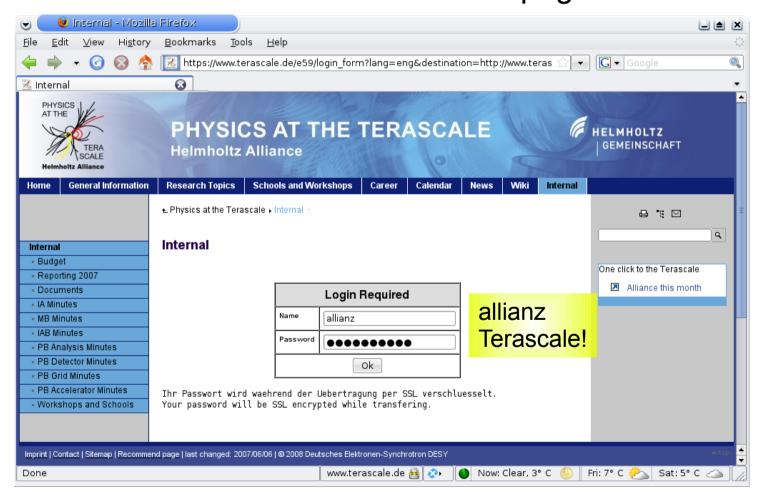
Alliance Newsletter





Internal Alliance Information

 Annual reports, minutes of all meetings, Alliance budget etc. accessible via Internal Section of Homepage:



Physics Analysis

- Schools
 - Computer Algebra
 29/3 3/4/2009
 - Fitting 30/3 1/4/2009
 - MC 20/4 24/4/2009
- Discussion days/weeks
- Many more ideas for Analysis Centre activities
- T. Schörner-Sadenius

Grid

- Workshop Jan/Feb 09
 München
- GridKa School
- Detector
 - Workshop 30-31/3
 Heidelberg or Bonn
- Accelerator
 - School 9/09

Other Ideas?

For calendar subscribe to Alliance Indico

https://indico.desy.de/categoryDisplay.py/ical?categId=106

Annual Workshop 2009

- Mid-term review of Alliance around end of 2009
- Annual workshop important to review progress
- Dates?
 - During semester (Nov 2009)
 - Outside semester (Oct 2009 / Feb 2010)
- Days?
 - Wed-Fri, Thu-Sat?
- Where?
 - DESY

KET Jahrestreffen 20/11 – 21/11/2009

ATLAS Week 1/12 – 4/12/2009

CMS Week 7/12 - 11/12/2009

Doodle for group leaders in next week

Conclusions

- Alliance complements and does not complete with FSPs ATLAS and CMS
- Filling positions somewhat slower than planned, but generally going very well
 - Grid and detector positions are hardest to fill
- Educational activities extremely successful
 - Make sure schools clearly define targeted participants
- Alliance making very good progress
 - Critical review of scientific achievements for mid-term review next year

Who's Who in the Helmholtz Alliance?

Management

Scientific Coordinators

Scientific Manager

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Klaus Desch

Joachim Mnich

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Gregor Herten Freiburg

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DEŞY

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Dieter Zeppenfeld Karlsruhe

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Scientific Coordinators

Scientific Manager

Administrative Coordinator

Project Board Chairs

International Advisory Board

Kors Bos

Jim Brau

Brian Foster

Peter Jenni

Dieter Schlatter

Bernhard Spaan

James Stirling

Tejinder Virdee

Sakue Yamada

Who's Who in the Helmholtz Alliance?

Project Boards

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Klaus Mönig	DESY	Karlheinz Meier	Heidelberg
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Markus Schumacher	Freiburg	Felix Sefkow	DESY
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Thomas Schörner	DESY	Stefan Tapprogge	Mainz
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			9

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Günter Quast (Chair)

Christian Zeitnitz

Jörg Rosbach

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Who's Who in the Helmholtz Alliance?

Institute Assembly					
DESY	Ingrid Gregor Sven Moch	FZK	Andreas Heiss Holger Marten		
Aachen	Michael Krämer Achim Stahl	Heidelberg	Karlheinz Meier Hans-Christian Schultz-Coulon		
Berlin	Thomas Lohse Peter Uwer	Karlsruhe	Thomas Müller Dieter Zeppenfeld		
Bonn	Klaus Desch Herbi Dreiner	Mainz	Stefan Tapprogge Stefan Weinzierl		
Dortmund	Claus Gößling Gudrun Hiller	München	Guenter Duckeck Dorothee Schaile		
Dresden	Michael Kobel Dominik Stöckinger	Rostock	Henning Schröder Roland Waldi		
Freiburg	Gregor Herten Jürgen Reuter	Siegen	Wolfgang Kilian Ivor Fleck		
Giessen	Michael Düren Hasko Stenzel	Würzburg	Werner Porod Thomas Trefzger		
Göttingen	Markus Klute Arnulf Quadt	Wuppertal	Robert Harlander Christian Zeitnitz		
Hamburg	Robert Klanner Bernd Kniehl	Regensburg	Vladimir Braun		
MPI München	Siggi Bethke Frank Simon				

Young Investigator Groups

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Wolfgang Wagner Wuppertal wagner@ekp.uni-karlsruhe.de

Fellows Theory

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