

Recruitment

FOR ADVERTISING ENQUIRIES, CONTACT *CERN COURIER* RECRUITMENT/CLASSIFIED, IOP PUBLISHING, TEMPLE CIRCUS, TEMPLE WAY, BRISTOL BS1 6HG, UK.
TEL +44 (0)117 930 1264 FAX +44 (0)117 930 1178 E-MAIL SALES@CERNCOURIER.COM
PLEASE CONTACT US FOR INFORMATION ABOUT RATES, COLOUR OPTIONS, PUBLICATION DATES AND DEADLINES.



Postdoctoral Research Positions LIGO Laboratory

**California Institute of Technology (Caltech)
Massachusetts Institute of Technology (MIT)**

The Laser Interferometer Gravitational-Wave Observatory (LIGO) has as its goal the development of gravitational wave astronomy. The LIGO Laboratory is managed by Caltech and MIT, and is funded by the National Science Foundation. It operates observatory sites equipped with laser interferometric detectors at Hanford, Washington and Livingston, Louisiana. The initial LIGO detectors have exceeded their design sensitivity and data sets spanning almost two years of coincidence operation have been collected. Analysis is ongoing, with extensive participation by the LIGO Scientific Collaboration (LSC). A major upgrade (Advanced LIGO) is now underway which will increase the sensitivity of the detectors by tenfold. In addition, a vigorous R&D program supports the development of enhancements to the detectors as well as future capabilities.

The LIGO Laboratory may have one or possibly more postdoctoral research positions at Caltech, MIT and at the two LIGO observatory sites beginning in Fall 2013, pending availability of funds. Hires will be made based on the availability of funding. Successful applicants will be involved in the operation of LIGO itself, analysis of data, both for diagnostic purposes and astrophysics searches, as well as the R&D program for future detector improvements. Expertise related to astrophysics, modeling, data analysis, electronics, laser optics, vibration isolation and control systems is desirable. Most importantly, candidates should be broadly trained physicists, willing to learn new experimental and analytical techniques, and ready to share in the excitement of building, operating and observing with a gravitational-wave observatory. Appointments at the post-doctoral level will initially be for one-year with the possibility of renewal for up to two subsequent years.

Applications for post-doctoral research positions with LIGO Laboratory should indicate which LIGO site (Caltech, MIT, Hanford, or Livingston) is preferred by the applicant. Applications should be sent to HR@ligo.caltech.edu (Electronic Portable Document Format (PDF) submittals are preferred).

Applications should include curriculum vitae, list of publications (with referred articles noted), and the names, addresses, email addresses and telephone numbers of three or more references. Applicants should request that three or more letters of recommendations be sent directly to HR@ligo.caltech.edu (Electronic Portable Document Format (PDF) submittals are preferred). Consideration of applications will begin January 1, 2013 and will continue until all positions have been filled.

*Caltech and MIT are Affirmative Action/Equal Opportunity Employers
Women, Minorities, Veterans and Disabled Persons are encouraged to apply
More information about LIGO available at www.ligo.caltech.edu*



**EUROPEAN
SPALLATION
SOURCE**

European Spallation Source AB is preparing to construct a world-leading European materials research centre in Lund, Sweden. ESS is partnered by a large number of European countries.

Be part of the future!

We are looking for a highly qualified:

**MECHANICAL ENGINEER
NEUTRON SCATTERING INSTRUMENTS**

See all our positions at: www.ess.se/careers



cerncourier.com



**NATIONAL TAIWAN UNIVERSITY
Leung Center for Cosmology
and Particle Astrophysics**

Distinguished Junior Fellowship

The Leung Center for Cosmology and Particle Astrophysics (LeCosPA) of National Taiwan University is pleased to announce the availability of several Post-Doctoral Fellow or Assistant Fellow positions in theoretical and experimental cosmology and particle astrophysics, depending on the seniority and qualification of the candidate. Candidates with exceeding qualification will be further offered as LeCosPA Distinguished Junior Fellows with competitive salary.

LeCosPA was founded in 2007 with the aspiration of contributing to cosmology and particle astrophysics in Asia and the world. Its theoretical studies include dark energy, dark matter, large-scale structure, cosmic neutrinos, and quantum gravity. The experimental investigations include the balloon-borne ANITA project in Antarctica and the ground-based ARA Observatory at South Pole in search of GZK neutrinos, and a satellite GRB telescope UFFO that will slew in to the burst event within 1sec.

These positions are available on September 1, 2013. Interested applicant should email his/her application with curriculum vitae, research statement, publication list and three letters of recommendation before December 1, 2012 to

Ms. Yen-Ling Lee ntulecospa@ntu.edu.tw

For more information about LeCosPA, please visit its website at <http://lecospa.ntu.edu.tw/>

Three letters of recommendation should be addressed to
**Prof. Pisin Chen, Director
Leung Center for Cosmology and Particle Astrophysics
National Taiwan University**

Accelerators | Photon Science | Particle Physics
Deutsches Elektronen-Synchrotron
A Research Centre of the Helmholtz Association



PARTICLE PHYSICS.

DESY has openings for: DESY-Fellowships (m/f)

DESY

DESY is one of the world's leading centres for the investigation of the structure of matter. DESY develops, runs and uses accelerators and detectors for photon science and particle physics.

The position

Fellows in experimental particle physics are invited to participate in DESY's particle physics research.

- Analysis and detector-upgrade in the LHC experiments ATLAS and CMS
- Preparation of the International Linear Collider ILC (accelerator and experiments)
- Cooperation in the Analysis Centre of the Helmholtz Alliance "Physics at the Terascale"
- Participation in experiments like ALPS and OLYMPUS
- Cooperation in the BELLE II experiments
- Analysis of HERA data

Requirements

- Ph.D. completed within the last 4 years
- Experience in experimental particle physics

DESY-Fellowships are awarded for a duration of 2 years with the possibility of prolongation by one additional year.

Please submit your application including a resume and the usual documents (curriculum vitae, list of publications and copies of university degrees) to the DESY human resources department. Please arrange for three letters of reference to be sent before the application deadline to the DESY human resource department.

Salary and benefits are commensurate with those of public service organisations in Germany. Classification is based upon qualifications and assigned duties. DESY operates flexible work schemes. Handicapped persons will be given preference to other equally qualified applicants. DESY is an equal opportunity, affirmative action employer and encourages applications from women. There is a bilingual kindergarten on the DESY site.

Please send your application quoting the reference code, also by E-Mail to:

Deutsches Elektronen-Synchrotron DESY

Human Resources Department | Code: EM100/2012

Notkestraße 85 | 22607 Hamburg | Germany | Phone: +49 40 8998-3392 |

E-Mail: personal.abteilung@desy.de

Deadline for applications: 30 September 2012

www.desy.de

The Helmholtz Association is Germany's largest scientific organisation.
www.helmholtz.de



RUPRECHT-KARLS-
UNIVERSITÄT
HEIDELBERG



The **Heidelberg Graduate School of Fundamental Physics (HGSFP)** at the Department of Physics and Astronomy at Heidelberg University, a school funded by the German Excellence Initiative, invites applications for

Doctoral Fellowships

in the following areas of modern fundamental physics: (a) Astronomy and Cosmic Physics, (b) Quantum Dynamics and Complex Quantum Systems, (c) Fundamental Interactions and Cosmology, (d) Complex Classical Systems, (e) Mathematical Physics, and (f) Environmental Physics. Thesis research topics cover areas such as experimental and theoretical astrophysics, cosmology, accelerator based particle physics, precision measurements in physics, study of quantum systems – many body as well as small systems, low as well as high temperature physics, atomic, molecular and optical physics, mathematical physics and string theory. In addition, fundamental problems in biophysics, e.g. in material science aspects of cell biology, and in environmental physics are studied. The HGSFP combines doctoral projects at the forefront of international research in the areas mentioned above with a rich and thorough teaching programme. Further information can be found on the School's web site: <http://www.fundamental-physics.uni-hd.de>.

The branch Astronomy & Cosmic Physics is the International Max Planck Research School (IMPRS) for Astronomy and Cosmic Physics at the University of Heidelberg (<http://www.mpia.de/imprs-hd>). Students accepted into the Graduate School will automatically be members of the IMPRS-HD and conversely. Admission in the IMPRS for Precision Tests of Fundamental Symmetries (www.mpi-hd.mpg.de/imprs-ptfs), or the IMPRS for Quantum Dynamics in Physics, Chemistry and Biology (<http://www.mpi-hd.mpg.de/imprs-qd>), is also possible. The IMPRS offer doctoral positions and fellowships as well, and are combined efforts of Heidelberg University with the Max Planck Institutes for Astronomy and Nuclear Physics, which form an integral part of the exciting and broad research environment in Heidelberg.

Highly qualified and motivated national and international students are invited to apply. Applicants should preferably hold a Master of Science or equivalent degree in physics. Excellent candidates holding a four year bachelor degree and proof of research experience may also be considered. At equal level of qualification, preference will be given to disabled candidates. Female students are particularly encouraged to apply.

Applicants have to initiate their application registering via a web form available at <http://www.fundamental-physics.uni-hd.de/fellowships>. Applications should reach us by December 1, 2012.



**TECHNISCHE
UNIVERSITÄT
DRESDEN**

DRESDEN
concept



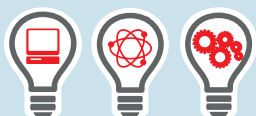
At the **Faculty of Science** in the **Institute for Nuclear and Particle Physics** we have an opening for a

Member of academic staff for Experimental Particle Physics (E 13 TV-L)

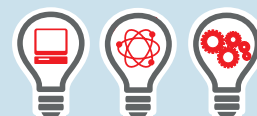
on a fixed-term position for an initial period until 31.12.2014. The contract may be extended by a second period until 31.12.2017. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The ATLAS group at the TU Dresden is involved in the upgrade of the readout electronics of the ATLAS Liquid Argon Calorimeters and is developing high-bandwidth, parallel-processing modules for new readout and trigger concepts in the High Luminosity phase of the Large Hadron Collider. Core activities are FPGA-based solutions for signal filtering, signal extraction, fast data processing and transfer, and interfaces based on standardized, fast networks. Furthermore, their impact on future physics analyses is investigated and interplay with the Dresden physics activities in the fields of heavy Higgs boson searches in Tau-Lepton final states or Vector Boson Scattering is possible. The successful candidate is expected to play an important role in these activities and to strengthen our existing upgrade efforts. The position also involves teaching in physics related subjects at the University level. In particular, in the summer terms, the selected candidate will be responsible for the lecture series on Modern Physics for engineering students (in English language) and the organization of the corresponding laboratory course as part of the Boston University International Program. The candidates should have a Ph.D. in Experimental High Energy Physics or equivalent experience. Further details available online at: <http://www.verw.tu-dresden.de/StellAus/einzelstelle.asp?id=2177&lang=en>

The quality of life in the Dresden region is unequalled in Europe.

Please find more information at: <http://home.meinStadt.de/dresden/attraktivitaets-ranking>



brightrecruits.com



Connecting motivated jobseekers with high-profile employers

RUPRECHT-KARLS-
UNIVERSITÄT
HEIDELBERG

6 Junior Research Positions in Experimental, Theoretical and Astrophysics

The Department of Physics and Astronomy at Heidelberg University invites applications for 6 junior research group leaders in experimental or theoretical physics or astrophysics. The positions are open in the context of the **Heidelberg Graduate School of Fundamental Physics**, granted in the framework of the "Excellence Initiative" of the German Federal and State Governments. The areas of research in fundamental physics at Heidelberg University encompass particle physics and cosmology, astronomy and cosmic physics, quantum dynamics and complex quantum systems, complex classical systems, mathematical physics and environmental physics.

Applicants must hold a Ph.D. and have a strong international research record in one of the six research directions of the school, to complement existing expertise. Successful candidates will be supported in building up independent research groups including associated doctoral positions and significant startup funding for experimental groups. They are expected to supervise doctoral projects in their field and contribute to the Graduate School's teaching programme.

Heidelberg University is an equal opportunity, affirmative action employer and encourages applications from female scientists.

The positions are limited to 5 years. Applications including the usual professional documentation should be sent until **15th October 2012** to the Spokesperson of the Graduate School, **Prof. Dr. Markus Oberthaler, Heidelberg Graduate School of Fundamental Physics, Central Office, INF 226, 69120 Heidelberg, Germany.**

European XFEL SEIZE THE CHANCE

European XFEL is a multi-national non-profit company that is currently building an X-ray free-electron laser facility that will open up new areas of scientific research. When this facility is completed in 2015, its ultrashort X-ray flashes and unique research opportunities will attract scientists from all over the world to conduct ground-breaking experiments. We are a rapidly growing team made of people from more than 20 countries. Join us now!

EXCITING OPPORTUNITIES

Find out more about our exciting opportunities for scientists, engineers and graduate students. Help develop X-ray instrumentation and other systems. Help create a research facility of superlatives that will provide X-rays of unique quality for cutting-edge research in physics, chemistry, the life sciences and materials science.

WORKING AT EUROPEAN XFEL

English is the working language. We offer salary and benefits similar to those of public service organisations in Germany, a free-of-charge company pension scheme, generous relocation package and support, international allowance for non-German candidates hired from abroad, training opportunities etc.

JOIN OUR NETWORK

Join our network of international research institutions, programmes and collaborations. Discuss problems and solutions with colleagues from all over the world.

COME TO HAMBURG

Economically and culturally, Hamburg is the centre of Northern Germany. With its long history in trade, Hamburg has always been an outward-looking city and one of Germany's gateways to the world. Work and live in Hamburg, one of the most beautiful and interesting cities in Europe!

European XFEL GmbH, Albert-Einstein-Ring 19, 22761 Hamburg, Germany
Mailing address: Notkestr. 85, 22607 Hamburg, Germany

www.xfel.eu

KSETA Karlsruhe School of Elementary Particle and Astroparticle Physics: Science and Technology



**KSETA has open positions
for doctoral researchers in
elementary particle physics,
astroparticle physics and
advanced technologies**

*deeper into your expertise
broader across related areas
better using personal skills*

Our goals are your benefits

The Graduate School KSETA has been established in the framework of the German Excellence Initiative; it will be in full operation from November 2012. We offer an inspiring interdisciplinary environment, international networking with research visits abroad, tailor-made course programs and career promotion.

Partner network:

- CERN (Switzerland)
- Fermilab and LBNL (USA)
- KEK (Japan)
- UNSAM and ITeDA (Argentina)

Visit www.kseta.kit.edu



Chief Scientist to lead a new laboratory in Nuclear Physics, RIKEN, JAPAN

RIKEN invites applications for the position of Chief Scientist (Laboratory Director) to lead a new laboratory in experimental nuclear physics using the RI Beam Factory (RIBF) of RIKEN Nishina Center for Accelerator-Based Science.

The present position is a permanent appointment, subject to RIKEN's mandatory retirement age of 60. RIKEN expects that the successful applicant will be able to take up this position on April 1st, 2013.

Applicants should send a full curriculum vitae and photograph; list of publications; one copy each of five key publications; a statement (about five pages A4 sized paper) explaining former research experience, and proposals for research at RIKEN; and the names and addresses of three referees.

All applications should reach RIKEN by September 24th, 2012.

Applicants should address all correspondence to: Dr. Hiroyoshi Sakurai, Chair of the Chief Scientist Search Committee, RIKEN Nishina Center for Accelerator-Based Science, 2-1 Hirosawa, Wako, Saitama 351-0198, JAPAN (E-mail address: sakurai@ribf.riken.jp)

For more information, please visit:

http://www.riken.jp/engn/r-world/info/recruit/k120924_e_rnc.html



RUPRECHT-KARLS-
UNIVERSITÄT
HEIDELBERG



The **Department of Physics and Astronomy at the University of Heidelberg** invites applications to fill – at the earliest possible date – a faculty position of

Professor (W3) in Experimental Physics

With this appointment, the Department intends to strengthen its research profile in the field of precision measurements in particle physics.

The successful candidate should have international standing in measuring the properties of heavy quarks and hadronic bound states. Experience with hadron colliders and interest in collaboration within the current LHCb experiment are desirable.

The professorship will be at the „Physikalisches Institut“ of the Department of Physics and Astronomy. The teaching duties involve courses in experimental physics at all levels. Prerequisites for appointment are a university degree and (in accordance with Article 47, paragraph 2 of the Higher Education Law of the State of Baden-Württemberg) a Habilitation, a successfully evaluated junior professorship, or an equivalent qualification.

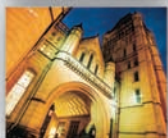
The Ruprecht-Karls-University in Heidelberg seeks to increase the proportion of female faculty and, for this reason, especially welcomes applications from women. Handicapped persons with the same qualifications will be given preference.

Qualified candidates are invited to submit their application until the 31st October 2012 with the usual documents and a research plan to the **Dean, Department of Physics and Astronomy, Im Neuenheimer Feld 226, D-69120 Heidelberg, Germany.**

The Cockcroft Institute ... Innovating amazing beams of particles and light... to interrogate nature

Apply Now

Cockcroft Post Doctoral Fellows for investigations in an advanced Free Electron Laser test facility CLARA at Daresbury Laboratory, UK and in superconducting microwave beam electrodynamics in the European Spallation Source (ESS) at Lund, Sweden



The Cockcroft Institute, a unique collaboration between the Universities of Liverpool, Manchester, Lancaster, the Science and Technology Facilities Council and industry, brings together the best accelerator scientists, engineers, educators and industrialists to conceive, design, construct and use innovative instruments of discovery and to lead the UK's participation in flagship international experiments. It has major collaborations with CERN, DESY, RIKEN, Jefferson Lab, FNAL, LBNL, SLAC, VECC and world leading universities such as UC Berkeley, Stanford, Cornell, MIT, Cambridge, Imperial College, Strathclyde and IISc (Bangalore). The Institute has been involved in the development of the UK's first Free Electron Laser (FEL) on the ALICE accelerator test facility and is contributing towards development of an advanced FEL test facility (CLARA) to advance worldwide FEL research. The institute is also in collaboration with the ESS at Lund, Sweden in studying various accelerator structures and radiofrequency sources.

As founding members of the Cockcroft Institute, the Universities of Liverpool and Manchester are seeking to appoint two post-doctoral research associates to contribute to the ongoing development of CLARA and ESS. The CLARA FEL research involves investigations of novel concepts for the production of ultra-short FEL pulses of varying colours for the next generation of FELs. There will also be opportunities to take part in experiments aimed at optimising and enhancing the ALICE FEL performance. The ESS research associate will use state-of-the-art computer codes for modelling rf cavities and studying beam dynamics in multi-cavity systems. Both posts will involve analysis, simulation and experimental research in close collaboration with institute members in other universities as well as in Daresbury and Rutherford Appleton Laboratories.

Applicants must have a Ph.D. in accelerator physics, particle physics, electrical engineering or a related discipline. Informal inquiries about the institute may be made to Professor Swapan Chattopadhyay (swapan@cockcroft.ac.uk), about the ESS position to Professor Roger Jones (r.m.jones@cockcroft.ac.uk) and about the CLARA FEL position to Dr. David Newton (D.Newton@liverpool.ac.uk).





Science & Technology Facilities Council

The Science & Technology Facilities Council (STFC) is the UK's provider of large scale inter-disciplinary research infrastructures and their supporting technologies, which enable UK researchers to investigate the world we live in and understand the building blocks of the universe.

Experimental Scientist

Full time fixed term for 2 years
(Reference IRC62488)

We are looking for an Experimental Scientist to develop high brightness laser driven X-ray sources. The vacancy is a 2 year fixed term post funded through the Centre for Advanced Laser Technology Group (CALTA) to examine and develop potential X-ray sources for imaging applications requiring high penetration. The Vulcan and Gemini lasers can deliver ultra-high intensity interactions, which produce bursts of highly energetic electrons. As these electrons propagate through matter they radiate bright beams of 0.1-2 MeV X-rays in a highly directional cone. You will be involved in modelling (using PIC and Monte-Carlo simulation packages) and conducting full experimental investigations with both the Vulcan and Gemini laser systems to determine the optimum conditions for producing such penetrating beams. As well as optimising the source, detector developments concentrating on producing high quality images in terms of resolution, contrast and sensitivity will also be undertaken.

Closing date: 12 September 2012

Instrumental Scientist (Muon Spectroscopy)

Permanent (Reference IRC61268)

The ISIS Muon Group operates three muon spectrometers for condensed matter and molecular studies using the muon spin rotation/relaxation/resonance technique. These spectrometers are used by researchers from around the world for muon measurements in the areas of magnetism, superconductivity, charge transport, molecular and chemical studies, and modelling hydrogen behaviour in, for example, semiconductors or proton conductors. We are seeking an instrument scientist to join the Muon Group. You will be involved in providing experimental support for visiting researchers using the ISIS muon facilities and will be concerned with the on-going development of these facilities.

Closing date: 1 October 2012

Both roles are paying between £26,610 - £37,534 dependent on skills and experience and are based at the STFCs Rutherford Appleton Laboratory.

For more information on the Science & Technology Facilities Council please visit www.stfc.ac.uk. Applications are handled by the RCUK Shared Services Centre; to apply please visit our job board at www.topcareer.jobs. If you are unable to apply online please contact us on 01793 867003.

NO AGENCIES

www.stfc.ac.uk



IceCube Computing Facilities Manager

The **University of Wisconsin-Madison** is seeking candidates to manage the computing facilities for the IceCube project. UW-Madison is responsible to the National Science Foundation and the IceCube Collaboration for maintenance and operations of the IceCube Neutrino Observatory, a kilometer-scale neutrino detector at the South Pole. The collaboration includes scientists from over thirty research institutions worldwide who collectively participate in studies of high-energy neutrinos from cosmic sources and a range of scientific topics in Astroparticle Physics.

The IceCube Computing Facilities Manager is responsible for computing facilities located within the Wisconsin IceCube Particle Astrophysics Center (WIPAC), other UW-Madison campus locations, and at the South Pole. The manager also has responsibility to the IceCube Collaboration to provide timely access to IceCube data and upgrades to computing systems.

The IceCube data center includes approximately 3 PB of disk storage, over 1500 CPUs, and various tape storage facilities, including a 1.2 PB HSM. Computing systems at the South Pole consist of ~200 servers in various configurations for data reduction and storage.

A master's degree or higher in Physics, Computer Science, Electrical Engineering, or related field will be considered, Ph.D. is preferred.

Highly qualified candidates will have at least five years of direct experience managing large computing facilities used in a collaborative scientific research environment.

Pay range is USD \$90,000 – \$130,000 depending on qualifications, plus excellent benefits.

To view the full Position Vacancy Listing (PVL), go to http://www.ohr.wisc.edu/pvl/pv_073267.html

Applicants should email their CV and cover letter referring to: PVL #73267 to hr@icecube.wisc.edu.



**EXTRAORDINARY
JOB
OPPORTUNITIES**

Unique opportunity to be involved in defining and implementing the state-of-the-art laser technology and construction of a new EU science facility.



www.eli-beams.eu/cooperation/jobs/