

Recruitment

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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 physics and 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. A major upgrade (Advanced LIGO) has just been completed and the new LIGO detector has just begun a series of observing runs to search for gravitational waves. A vigorous LIGO Laboratory R&D program supports the development of enhancements to the LIGO detector as well as astrophysical data analysis, and development of future detector technologies.

The LIGO Laboratory anticipates having one or possibly more postdoctoral research positions at one or more of the LIGO sites – Caltech, MIT and at the two LIGO Observatories in Hanford, WA and Livingston, LA – beginning in Fall 2016. Hires will be made based on the availability of funding. Successful applicants will be involved in the operation of LIGO itself, analysis of LIGO data, both for diagnostic purposes and astrophysics searches, as well as the R&D program for future detector improvements. We seek candidates across a broad range of disciplines. Expertise related to astrophysics, modeling, data analysis, electronics, laser and quantum 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). Caltech and MIT are Affirmative Action/Equal Opportunity employers. Women, minorities, veterans, and disabled persons are encouraged to apply.

Applications should include curriculum vitae, list of publications (with refereed 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 December 1, 2015 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*

POSTDOCTORAL FELLOWS

**Kavli Institute for the Physics and Mathematics of
the Universe, The University of Tokyo, Japan**



The "Kavli Institute for the Physics and Mathematics of the Universe" (Kavli IPMU) is an international research institute with English as its official language established in October 2007. The goal of the institute is to discover the fundamental laws of nature and to understand the universe from the synergistic perspectives of mathematics, statistics, theoretical and experimental physics, and astronomy. We are particularly interested in candidates with broad interests and a willingness to interact with people across disciplines.

We intend to offer more than a dozen postdocs with three-year terms. We seek to build a diverse, highly interactive membership, and female and international applicants are strongly encouraged. We have generous travel support for our postdocs, and encourage full-time members to be away from the Institute for between 1 and 3 months every year.

The focus of Kavli IPMU includes but is not limited to: all areas of mathematics (e.g. algebra, geometry, analysis, and statistics); string theory and mathematical physics; particle theory, collider phenomenology; beyond the standard model physics phenomenology; cosmology and astrophysics theory; astronomy and observational cosmology; and particle and underground experiments. We are leading efforts on

the XMASS dark matter experiment, the KamLAND-Zen neutrino experiment, the Hyper Suprime-Cam (HSC) project for weak lensing surveys and Prime Focus Spectrograph (PFS) for the dark energy at the Subaru Telescope, GADZOOKS! at Super-Kamiokande, the Belle II experiment, T2K long baseline neutrino experiment, SDSS-IV for a survey of galaxies, POLARBEAR CMB B-mode polarization measurement, and R&D for future large neutrino detectors and the LiteBIRD satellite.

We have embarked on a new frontier field of statistical computational cosmology. We plan to develop applications to statistically extract cosmological parameters from a huge dataset from the Subaru wide field survey. We have a few positions for this project which is supported by CREST from Japan Science and Technology Agency (JST).

The search is open until filled, but for full considerations please submit the applications and letters on the application form by Dec 1, 2015

Further information can be found here:

<http://www.ipmu.jp/job-opportunities>

For inquiries please contact: application-inquiry@ipmu.jp

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



ACCELERATOR CONTROLS.

DESY, Hamburg location, is seeking: Scientist (f/m) Software Architect

DESY

DESY is one of the world's leading research centres for photon science, particle and astroparticle physics as well as accelerator physics.

The group MCS runs, maintains and develops the control systems of all accelerators operated by DESY. The MCS accelerator control systems implement a multi-layer, distributed and network-based system architecture. The MCS team develops accelerator-specific system and application software based on various programming languages and operation systems.

The position

- Participation in further development and maintenance of existing accelerator control systems at DESY
- Participation in development of novel concepts for accelerator control systems
- Leading role in daily operations

Requirements

- Graduate degree (Physics, Computer Science or similar fields)
- Highly advanced and up-to-date programming skills (C/C++, Java)
- Highly advanced knowledge of IT-systems
- Longtime experiences in the field of accelerator control or industrial process control systems
- Teamwork ability
- Willingness to take responsibility

For further information please contact Mr Reinhard Bacher +49-40-8998-3056.

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.

We are looking forward to your application quoting the reference code preferably via our electronic application System: Online-Application or by email recruitment@desy.de

Deutsches Elektronen-Synchrotron DESY

Human Resources Department | Code: EM120/2015

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

Deadline for applications: 15 November 2015

www.desy.de

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



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FACULTY POSITION IN THEORETICAL HIGH ENERGY PHYSICS

Department of Physics and Astronomy Purdue University

The Department of Physics and Astronomy at Purdue (www.physics.purdue.edu) seeks applications for a faculty position at the level of Assistant Professor in the field of theoretical high-energy physics. The areas of current interest in the Department include string theory and applications, phenomenology of and beyond the standard model, and theoretical cosmology. Candidates are required to have a doctoral degree in physics or related field and a documented record of research accomplishments. Candidates are expected to develop a vigorous research program, supervise graduate students, and teach undergraduate and graduate level courses. Applicants should send a curriculum vitae, publication list, a brief statement of present and future research plans, a statement of teaching philosophy and arrange for three letters of recommendation. Electronic submission is preferred: <https://www.physics.purdue.edu/searches/app/>.

Questions regarding the position and search should be directed to either **Martin Kruczenski** (markru@purdue.edu) or **Sergei Khlebnikov** (skhlebe@purdue.edu).

Applications completed by December 18, 2015 will be given full consideration, although the search will continue until the position is filled. A background check is required for employment in this position.

Purdue University is an EEO/AA employer. All individuals, including minorities, women, individuals with disabilities, and protected veterans are encouraged to apply.



PhD Scholarships

within the International Max Planck Research School
 for Quantum Dynamics in Physics, Chemistry and Biology

The International Max Planck Research School for Quantum Dynamics in Physics, Chemistry and Biology (IMPRS-QD) is a graduate school offering a doctoral degree program in these disciplines. The IMPRS-QD is a joint initiative of the Max Planck Institute for Nuclear Physics (MPIK), the Heidelberg University, the German Cancer Research Center (DKFZ), the Max Planck Institute for Medical Research (all in Heidelberg) and the Heavy Ion Research Center (GSI) in Darmstadt.

Membership in the Heidelberg Graduate School of Fundamental Physics is envisaged. Further information may be found on the school's website <http://www.mpi-hd.mpg.de/imprs-qd/>.

Applications of students from all countries are welcome. To be eligible for PhD studies at the University of Heidelberg, applicants should have a Master of Science degree (or equivalent). Applicants who do not have a Master thesis may be accepted if they can prove their ability to carry out independent research projects. International applicants whose mother-tongue is not English or German have to provide a proof of English proficiency. At equal level of qualification, candidates with disabilities are given preference. Women are encouraged to apply.

Interested students are asked to apply via web form at: <http://www.mpi-hd.mpg.de/imprs-qd/appladmiss.html>.

The application deadline is 21 November 2015.



Open Positions in the OMA project

Cancer is a major social problem and it is the main cause of death between the ages 45-65 years. Radiotherapy plays an essential role in the treatment of cancer.

The Optimization of Medical Accelerators (OMA) is the aim of a new European research and training network.

OMA addresses the challenges in treatment facility design and optimization, numerical simulations for the development of advanced treatment schemes, and in beam imaging and treatment monitoring.

The network is currently offering Fellowships to 15 talented, energetic, highly motivated early career researchers that will be employed by the different beneficiary partners across Europe. Possibilities for enrolling into a PhD programme exist.

Each researcher will benefit from a wide ranging training that will take advantage of both local and network-wide activities. Excellent salaries will be offered. Most positions are for starting on 1st October 2016.

Application deadline:
28th February 2016

Contact and further detail:
Prof. Dr. Carsten P. Welsch
Cockcroft Institute/University of Liverpool
WA4 4AD Warrington, UK
carsten.welsch@cockcroft.ac.uk

www.oma-project.eu

