

Recruitment

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9 PhD positions available with funding in Relativistic Astrophysics - International Relativistic Astrophysics PhD Program

Job Description: PhD Admissions and Funding at the International Relativistic Astrophysics PhD Program Consortium (IRAP PhD).

The coordinating Institution is the University of Nice Sophia-Antipolis located in the French Riviera.

The Partners of the Consortium are:

UNIVERSITE DE NICE - SOPHIA ANTIPOLIS, France (Co-ordinating institution), SHANGHAI ASTRONOMICAL OBSERVATORY, China, FREE UNIVERSITY OF BERLIN, Germany, AEI - POTSDAM, Germany, TARTU OBSERVATORY, Estonia, STOCKHOLM UNIVERSITY, Sweden, UNIVERSITY OF FERRARA, Italy, UNIVERSITY OF ROME - LA SAPIENZA, Italy, BRAZILIAN CENTRE FOR PHYSICS RESEARCH, Brazil, OBSERVATORY OF THE CÔTE D'AZUR, France, INDIAN CENTRE FOR SPACE PHYSICS, India, INTERNATIONAL CENTER FOR RELATIVISTIC ASTROPHYSICS NETWORK, Italy, UNIVERSITY OF SAVOIE, France

Director of the course: Prof. Remo Ruffini

PhD students will receive a very competitive salary (gross salary 2800 Euros per month and a 7500 Euro installation grant for non-European students), computing facilities and support for travel, and comprehensive benefits including paid vacation, health care insurance and retirement benefits. To be eligible, applicants should have obtained a Masters degree in astronomy, astrophysics, theoretical physics or a related field. We encourage applications from the best candidates irrespective of nationality, gender or background. Student research will be carried out in the framework of the IRAP PhD Consortium.

Consult the web page : <http://www.irap-phd.eu> for details and application instructions. All inquiries should be directed to Prof. Pascal Chardonnet, Erasmus Mundus Joint Doctorate Coordinator: chardonnet@lapp.in2p3.fr.

Applicants are requested send a curriculum vitae, an application form, a list of all university courses taken and transcripts of grades obtained, brief statements of research interests and experience, and the contact information for at least two referees. Applications received by the deadline of February 19, 2012 will receive full consideration.



RICE Tenure Track Position in Experimental Heavy Ion Physics

The Department of Physics and Astronomy at Rice University invites applications for a tenure-track assistant professor position in experimental heavy ion physics. The successful candidate is expected to teach and to conduct a vigorous research program that will enhance Rice's on-going efforts involving the STAR experiment at RHIC and the CMS experiment at the LHC. A PhD in physics or related field is required.

Applicants should send a dossier that includes a curriculum vitae, statements of research and teaching interests, and a list of publications, and they should arrange for at least three letters of recommendation to be sent to

B. Paul Padley, Chair, Experimental Heavy Ion Search Committee, Department of Physics and Astronomy –MS 61, Rice University, 6100 Main Street, Houston, TX 77005 or by email as a single PDF file to vcall@rice.edu with the subject line "HI Search".

Applications may be considered until the position is filled, but those received by February 1, 2012 will be assured full consideration. The appointment is expected to begin July 2012. Rice University is an affirmative action/equal opportunity employer; women and under-represented minorities are strongly encouraged to apply.

Accelerators | Photon Science | Particle Physics

Deutsches Elektronen-Synchrotron
A Research Centre of the Helmholtz Association



POSTDOC IN NEUTRINO ASTROPHYSICS.

**DESY, Zeuthen location, is seeking:
Postdoc (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 neutrino astrophysics group is involved in operation of the IceCube neutrino telescope at the South Pole and in the analysis of its data. The research goals of the group range from neutrino astrophysics to the investigation of neutrino properties. The group is part of the Brandenburg-Berlin Cluster for astroparticle physics and the Helmholtz Alliance for Astroparticle Physics.

The position

The work will include the exploitation of IceCube for the study of neutrino oscillations and other medium-energy phenomena. This includes design studies for further low-energy extensions of IceCube. Additionally, the successful applicant will have the opportunity to do astrophysical or particle physics research exploiting the data of the IceCube neutrino telescope. The successful candidate will work in an international research environment.

Requirements

- PhD in physics or astronomy
- Experience in conducting modern experiments in particle or astroparticle-physics and their interpretation
- Working experience with modern software tools (C++)
- Hardware experience is an advantage
- Good command of English
- Applications should include a CV, a statement of research interests, a list of publications, and the names of 2 references.

For further information please contact Christian Spiering, +49 33762-77218, christian.spiering@desy.de.

The position is limited to 2 years with a possible extension up to 3 years. Salary and benefits are commensurate with those of public service organisations in Germany. 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.

Please send your application quoting the reference code, also by e-mail to:

Deutsches Elektronen-Synchrotron DESY

Human Resources Department | Code: 201/2011

Notkestraße 85 | 22607 Hamburg | Germany

Phone: +49 40 8998-1589 | E-mail: personal.abteilung@desy.de

Deadline for applications: until the position is filled

www.desy.de

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OPEN POSITIONS WITHIN THE OPAC PROJECT

The optimization of the performance of any particle accelerator critically depends on an in-depth understanding of the beam dynamics in the machine and the availability of simulation tools to study and continuously improve all accelerator components. It also requires a complete set of beam diagnostics methods to monitor all important machine and beam parameters with high precision and a powerful control and data acquisition system.

Within the oPAC project these aspects will be closely linked with the aim to optimize the performance of present and future accelerators that lie at the heart of many research infrastructures.

The network is currently aiming to recruit a pool of talented, energetic, strongly motivated, early stage researchers with a degree in physics, electrical engineering or a closely related field. Possibilities for enrolling into a PhD program exist. Women are especially encouraged to apply.

Deadline for applications:

March 9th 2012

Each researcher will benefit from a wide ranging training program that will take advantage of both local and network-wide activities, as well as of schools, conferences, and workshops. Excellent salaries will be offered. Most positions are for starting in summer 2012.

You will find more information about oPAC, all research projects and the application details at:

<http://www.liv.ac.uk/opac>

Contact and further detail:

Prof. Carsten P. Welsch
Cockcroft Institute of Accelerator
Science and Technology
University of Liverpool
Department of Physics
L69 7ZE Liverpool, UK
carsten.welsch@quasar-group.org



Diamond Light Source is the UK's national synchrotron science facility. Located at Harwell Science and Innovation Campus in Oxfordshire, we enable world-leading research across a wide range of scientific disciplines and industrial applications.

Postdoctoral Research Associate

Ref: DIA0679/TH

Salary: Circa £34k
Full time, 2 year fixed term

The Detector Group is responsible for the construction, installation, commissioning, and operation of the detector systems at Diamond. In order to provide the best detectors, the group is committed to a number of detector development and evaluation projects.

A Postdoctoral Research Associate is required to develop theoretical models of detectors and for their validation with appropriate experimental tests. Detector models are essential to determine the correct detector parameters for specific applications and to interpret the data provided by novel detector systems.

You will join a highly dynamic group working at the cutting edge of detector technology. The availability of a test beamline at Diamond allows the Detector Group to evaluate the performance of innovating detector technologies and their application to synchrotron X-ray experiments. Close cooperation with the Rutherford Appleton Laboratory enables access to other world-class facilities as well as the interaction with world-leading detector developers.

Candidates should have an appropriate PhD degree or equivalent qualification and knowledge of the principles of radiation-matter interaction. Experience in using Monte Carlo codes for the simulation of the interaction of radiation with matter e.g. MCNP, GEANT4 is desirable.

The position is offered for an initial appointment of two years. However there is the possibility of an extension.

Diamond is committed to equality of opportunities for all, and offer a competitive salary (dependent upon skills, qualifications and experience), comprehensive benefits, an index-linked pension scheme and flexible working hours.

For an application form and further information including work permit and visa requirements for non-EU nationals please visit our website at www.diamond.ac.uk or telephone our recruitment line on 01235 778218 or write to us at the address below, quoting the appropriate reference number.

Closing date: 19th February 2012.

www.diamond.ac.uk



diamond

Diamond Light Source Ltd, Diamond House, Harwell Science and Innovations Campus, Didcot, Oxfordshire OX11 0DE

Accelerators | Photon Science | Particle Physics

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ASTROPARTICLE PHYSICS.

**DESY, Zeuthen location, is seeking:
Postdoc (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 DESY neutrino astrophysics group in Zeuthen is involved in operation of the IceCube neutrino telescope at the South Pole and in the analysis of its data. The research goals of the group range from neutrino astrophysics to the investigation of neutrino properties. In addition the group is active in the development of novel detection technologies for neutrinos at highest energies. The group is part of the Brandenburg-Berlin Cluster for astroparticle physics and the Helmholtz Alliance for Astroparticle Physics which supports the opening of this position.

The position

- Detector R&D
- Detector and experiment simulation
- Data analysis
- Supervision of students

Requirements

- PhD in experimental particle physics or astroparticle physics
- Some experience in particle detector development and simulation
- Good programming skills (C, C++)
- Teamwork abilities
- Good knowledge of English

For further information please contact Rolf Nahnauer, +49 33762-77346, rolf.nahnauer@desy.de.

The position is limited to 2 years with a possible extension up to 5 years. Salary and benefits are commensurate with those of public service organisations in Germany. 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.

Please send your application quoting the reference code, also by e-mail to:

Deutsches Elektronen-Synchrotron DESY

Human Resources Department | Code: 202/2011

Notkestraße 85 | 22607 Hamburg | Germany

Phone: +49 40 8998-1589 | E-mail: personal.abteilung@desy.de

Deadline for applications: February 15th, 2012

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PHOTO INJECTOR.

**DESY, Zeuthen location, is seeking:
Several Postdocs (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 operation of Free-Electron Lasers like FLASH and the European XFEL requires electron sources with excellent beam quality. For the development of such electron guns a test facility for RF photo injectors, PITZ, is operated and upgraded at Zeuthen (near Berlin). Further improvement of the photo injector performance is foreseen with advanced photo cathode laser pulse shaping and new applications of the photo injector are studied in the frame of the new Accelerator R&D program supported by the German Federal Ministry of Education and Research.

The position

- Participation in the photo injector optimization at PITZ
- Beam dynamics simulations for special laser pulse shapes, applying the setups of PITZ and the European XFEL injector
- Participation in commissioning the upcoming photo cathode laser system with special pulse shaping and characterization of the upgraded electron source
- Simulation and experimental studies on the generation of ultra short bunches and particle driven plasma acceleration
- Participation in the shift operation at PITZ

Requirements

- University degree in physics or engineering including a PhD in physics
- Good knowledge and experience in accelerator physics and technology of high brightness electron beams or plasma physics
- Skills and experience in beam dynamics simulations, especially in the area of photo injectors are highly desirable
- Experience in laser pulse shaping techniques is of advantage

For further information please contact Dr. Mikhail Krasilnikov, phone: +49 33762-77213, mikhail.kraskilnikov@desy.de or Dr. Frank Stephan phone: +49 33762-77338, frank.stephan@desy.de.

The position is limited to 3 years.

Salary and benefits are commensurate with those of public service organisations in Germany. 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.

Please send your application quoting the reference code, also by e-mail to:

Deutsches Elektronen-Synchrotron DESY

Human Resources Department | Code: 183/2011

Notkestraße 85 | 22607 Hamburg | Germany

Phone: +49 40 8998-1589 | E-mail: personal.abteilung@desy.de

Deadline for applications: February 29th, 2012

www.desy.de

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www.helmholtz.de



Karlsruhe Institute of Technology (KIT) is the result of the merger of the University of Karlsruhe and the Research Centre Karlsruhe. It is a unique institution in Germany, which combines the mission of a university with that of a large-scale research centre of the Helmholtz Association. With 8000 employees and an annual budget of EUR 650 millions, KIT is one of the largest research and education institutions worldwide.

The Physics Department at the Karlsruhe Institute of Technology invites applications for the newly established position of a

Professor (W3) of Theoretical Astroparticle Physics

at the KIT-Centre Elementary Particle and Astroparticle Physics. The position should be filled as soon as possible.

We are looking for an expert in the area of theoretical astroparticle physics. Candidates with broad scientific competence and innovative research spanning the areas of astrophysics, elementary particle physics or cosmology will be considered.

The position offers an excellent research environment with opportunities for collaboration within the Department of Physics and with other structures of KIT. This includes the KIT Center of Elementary Particle and Astro-Particle Physics (KCETA), the Transregional Collaborative Research Center SFB/TR9 Computational Particle Physics and the Research Training Group GRK 1694 Elementary Particle Physics at Highest Energy and Precision. Further important assets are the Helmholtz Alliance for Astroparticle Physics and the Helmholtz Programme Astroparticle Physics, which should be strengthened by original contributions of the selected candidate.

Teaching duties include education of physics students as well as of students majoring in other natural sciences or engineering.

Applicants must have the degree of Habilitation or demonstrate equivalent scientific qualification as well as experience in teaching.

KIT is pursuing a gender equality policy. We encourage qualified women to apply. If qualified, handicapped applicants will be preferred.

Applications with standard documentation, including a summary of past teaching, a research plan as well as a list of the five most important publications, should be sent by **February 28th, 2012** to: **Karlsruher Institut für Technologie (KIT), Dekan der Fakultät für Physik, Campus Süd, 76128 Karlsruhe**

KIT - University of the State of Baden-Württemberg and
National Laboratory of the Helmholtz Association



**EUROPEAN
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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.

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POSTDOC RESEARCH POSITIONS

- DETECTOR SIMULATION
- NEUTRON OPTICS
- BEAM DIAGNOSTICS

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



Consortium for Construction, Equipment and Exploitation of the Synchrotron Light Laboratory

The ALBA synchrotron light source is opening three positions:

The Director of the Facility The Head of the Accelerator Division The Head of the Experimental Division

The Consortium CELLS – jointly owned by the Spanish and Catalan Administrations – is responsible for the operation and future development of ALBA, a 3 GeV third generation synchrotron light facility. At present, the construction is finished and the accelerator complex and the seven state of the art beamlines covering a variety of research fields are finalizing their commissioning. The first call for users is going on and the first users are expected for April 2012. Details may be found at www.cells.es.

ALBA is located in Cerdanyola del Vallès, at some 20 km from Barcelona, in a metropolitan region of about 4.5 million people, a zone of improving scientific and technological level, with several international schools, universities and scientific and technological parks and with very good international communications.

The Consortium is looking for:

- A Director of the facility. The Director is responsible for the scientific and technical exploitation of ALBA, for the definition of short and long term development strategies and must report to the Governing Bodies of the consortium (an Executive Commission and a Rector Council whose delegates are appointed by the Owner Administrations).
- A Head of the Accelerator Division. His/her responsibility is the proper working of the machine and the implementation of new elements in order to achieve the nominal parameters: 400 mA, 4.6 nm-rad emittance, high flux and good stability.
- A Head of the Experimental Division. His/her responsibility is to achieve the best performance of the beamlines in order to attract good research projects and prepare the second phase of the beam lines.

Candidates must have experience in research institutes or similar facilities, a solid experience with accelerators and synchrotron light research and have qualifications for Directorship. The working language at Alba is English. Knowledge of Spanish and or Catalan is an asset.

They will be offered a full time contract according to the Spanish law. Employment conditions and salaries can take into account the needs of professionals and their families. The incorporation date to the position is expected in summer 2012

Applications should be sent to the Chairman of the Executive Commission of ALBA; Carretera BP 1413 de Cerdanyola a Sant Cugat, km 3.3; E 08290 Cerdanyola del Vallès; Spain. Candidates should send a letter of motivation and their CV to the Chairman of the Executive Commission of ALBA Prof. Ramon Pascual (pascual@cells.es).

Deadline for receiving applications: 15th March 2012.



Scientist for sample environment techniques (f/m)

The European X-Ray Free-Electron Laser Facility GmbH (European XFEL GmbH) is a multi-national non-profit company. It will make available X-rays of unique quality for studies in physics, chemistry, life sciences, materials research and other disciplines.

For the development of sample environment techniques we are seeking to employ a (f/m)

Scientist for sample environment techniques

The position

- plan and perform R&D on methods and devices for sample environment at FEL sources
- design and specify fixed target manipulation systems and/or liquid jet sources

Requirements

- PhD degree in experimental physics or chemistry or equivalent academic experience
- previous post-doc or PhD experience in instrumentation and research for synchrotron or FEL-based spectroscopy or imaging
- experience in the preparation of surfaces or liquids in vacuum; experimental skill and experience in mechanics and basic electronics

For additional information please contact Joachim Schulz (joachim.schulz@xfel.eu).

Application: Please apply online via our homepage www.xfel.eu (reference number S-059).

Duration: This appointment is initially limited to three years.

Deadline for application: 15 February 2012

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

www.xfel.eu



Cornell Laboratory for
Accelerator-based Sciences
and Education (CLASSE)

Tenure-track Faculty Appointment in Experimental Physics – Cornell University

The Department of Physics at Cornell University invites applications for a tenure-track faculty appointment in experimental physics. We encourage applications in experimental particle physics, accelerator physics, and astrophysics. Candidates should complement the existing research program in the Laboratory for Elementary-Particle Physics; expanding the LHC component of the laboratory program is not a priority of this search. The search will focus at the assistant professor level, although more senior candidates may be considered. The successful candidate will be expected to conduct an outstanding research program and be an effective teacher in the undergraduate and graduate instructional program of the Physics Department.

Please send the application, including a curriculum vita, a publication list, and a statement of research interests, to <http://academicjobsonline.org/ajob/jobs/1299>.

Applicants should arrange to have three letters of reference sent to the same address. Applications completed by Jan. 31, 2012 will receive full consideration.

Cornell University is an Affirmative Action, Equal Opportunity Employer and Educator

brightrecruits.com



Nuclear Physicist

The International Atomic Energy Agency (IAEA), an independent United Nations organization headquartered in Vienna, Austria, with more than 150 Member States and a staff of 2300, serving as the global focal point for international cooperation in the safe and peaceful use of nuclear technology, is seeking a Nuclear Physicist for its Physics Section. This individual will be: (1) a planner and coordinator, who formulates, develops, organizes and implements the IAEA's activities on accelerators and nuclear instrumentation including related training and education; (2) a facilitator, who helps the Member States to establish cooperation among accelerator laboratories and nuclear education institutions, mainly in developing countries and main facilities and laboratories working on the application of accelerators; (3) a scientific secretary/technical expert, who plans and leads Technical Meetings; (4) a technical and project officer, who evaluates Technical Cooperation (TC) projects, and promotes, co-ordinates and evaluates moderately complex Research Projects (CRPs).

The successful candidate should have at the minimum:

- PhD in nuclear physics or a closely related field
- At least 7 years of relevant research experience; preferably 3 years at international level and proven ability in working with international projects or multinational teams
- Up-to-date knowledge of and experience in particle accelerators of various energy ranges and their use in research and industry
- Profound knowledge of particle and radiation detectors and their use in research and industry.

To apply for this position, please submit an on-line application at <http://www.iaea.org/About/Jobs> before 29th February 2012, selecting vacancy notice no. 2011/147.

Benefits: The IAEA offers a stimulating multicultural working environment in the beautiful and culturally rich city of Vienna, Austria. The post offers: tax free remuneration; rental subsidy; 6 weeks annual leave; medical insurance coverage; a staff retirement plan; full coverage of removal expenses for staff member, family, and personal effects; additional allowance for installation expenses; assistance with finding housing and schools in Vienna; financial assistance with the education of dependent children; and paid travel to the home country for the staff member and family every other year.

Our Goal: to facilitate the safe contribution of nuclear technologies to peace, health and prosperity throughout the world, while ensuring that no technology or material under our oversight or provided with our assistance is used to further any military purpose.



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At Tessella, we provide consultancy services and create software solutions for scientists and engineers. We are proud that our work makes the world a better place to live in, from developing smarter drug trials to minimizing risk in oil and gas exploration. Our staff are passionate about their work because they get to use their scientific knowledge alongside their software programming skills.

For details of our current roles, visit jobs.tessella.com



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The Institute of Particle Physics Research Scientist

Applications are invited for a position as a Research Scientist with the Institute of Particle Physics in Canada, IPP (<http://www.ipp.ca>). Candidates should preferably have at least three years of postdoctoral experience and a demonstrated record of accomplishment in experimental particle physics. The Research Scientist appointment is associated with an academic research position at a Canadian university and includes the right to hold research grants and to supervise graduate students. Such an appointment may be made permanent following a review after three years of employment.

The current program of IPP includes the following experiments:

- p-p collisions at the LHC (ATLAS);
- Long baseline neutrino studies at JPARC (T2K);
- Double-beta-decay searches with the SNO+ and EXO detectors;
- Dark Matter searches with the DEAP and PICASSO experiments;
- Precision pion decay studies at TRIUMF (PiENu);
- Very-high-energy gamma-ray astronomy (VERITAS).

The choice of experiment and university affiliation will be determined by mutual agreement between the candidate and the IPP. The position will be available as early as September 1, 2012.

Send curriculum vitae, statement of research interests and arrange for letters of recommendation from at least three referees, to be received by February 3, 2012 at:

Prof. W.Trischuk, Director
Institute of Particle Physics
Department of Physics
University of Toronto
60 Saint George Street,
Toronto, ON M5S 1A7
Canada
email: william@physics.utoronto.ca



INSTITUTE OF
PARTICLE
PHYSICS

All qualified candidates are encouraged to apply, however, in accordance with immigration regulations, Canadians and permanent residents will be given priority.