

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 UNIVERSITIY, 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.org> 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 28, 2011 will receive full consideration.



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Tenure-Track Position in Experimental Nuclear Physics (ENP)

The Department of Physics at **The George Washington University** invites applications for the above position at the assistant/associate professor level. The incumbent must maintain vigorous, externally-funded research. Current research includes Compton scattering, meson photoproduction, few-nucleon photodisintegration, structure of the nucleon, and fundamental symmetries, however, applicants doing research in any ENP area are urged to apply. A Ph.D. (or equivalent) and two years of post-doctoral experience are required. Excellence in teaching and communication is expected.

Application Procedure: Applications must include a CV and statements describing research, teaching and overall goals. At least three reference letters should also be submitted. Applications should be sent to Professor William Briscoe, Chair, Search Committee, Department of Physics, The George Washington University, Washington, DC, 20052, USA. Review will begin on Feb 1, 2011. Only complete applications will be considered. Applications from women and underrepresented minorities are strongly encouraged.

The George Washington University is an Equal Opportunity/Affirmative Action Employer.



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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.

INSTRUMENTATION DIVISION HEAD AT BROOKHAVEN NATIONAL LABORATORY (BNL)

BNL seeks a distinguished scientist to head a Division charged with developing state-of-the-art instrumentation for the diverse experimental research programs at BNL. The Division's current expertise spans semiconductor, gas and noble liquid detectors, low-noise microelectronics, lasers and optical metrology, and micro/nano-fabrication.

The Division currently comprises 42 FTE, including 14 Ph.D. scientists and 12 engineers, with an annual budget around \$8M, including support from BNL overhead funds. The Division Head is expected to: integrate, prioritize and manage the diverse R&D efforts; collaborate with Laboratory scientists to provide and execute a vision matched to BNL's overall research strategies; and attract, retain and foster the development of a team of innovative specialists matched to that vision.

Qualified candidates should have a doctorate or equivalent degree in physics or electronics; at least ten years of research experience beyond that degree; an active internationally recognized research program overlapping some of the Division's core technologies; and demonstrated experience in leading highly successful, integrated R&D teams.

For more information and how to apply, go to www.bnl.gov/HR, and select "Job Opportunities," referring to job #15619 listed under Management. BNL is an AA/EOE employer committed to developing a diverse workforce.



www.bnl.gov



Bruker BioSpin, as part of an important development of its Power Electronics branch (ultra-stabilised power supplies and radio-frequency power amplifiers), is recruiting for a permanent position:

A sales engineer (M/F)

The main missions are:

- to promote power electronics products with our existing and prospective customers,
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- to contribute to the preparation of commercial and marketing documents.

A significant presence in the field will be required, all over the world, but mainly in France and Europe.

The future employee will work as part of a team of four people and will report to the Business Development Director.

Profile required: higher education qualification in Electronics and/or Physics. A very good knowledge of the accelerators world is necessary. Specific training will be given after recruitment. Perfect mastery of English (written and spoken). Availability. Good personal presentation and people skills. Stable. Good ability to resist pressure. Charisma. Post based in Wissembourg. A great deal of travelling is involved (70% of the time).

Motivating remuneration depending on the successful applicant's profile: fixed amount + variable amount + numerous social and other benefits.

Please send your letter of application with your CV, preferably by e-mail, to drh@bruker.fr, or to this address:

BRUKER – Service Ressources Humaines –
34, rue de l'Industrie – B.P. 10 002 – 67 166
WISSEMBOURG

think forward



TEXAS A&M
UNIVERSITY

Nuclear Physics Senior Faculty Position *Department of Physics and Astronomy*

The Department of Physics and Astronomy at Texas A&M University is seeking a highly accomplished experimental nuclear physicist to join the department under the auspices of the newly established Nuclear Solutions Institute. This new institute combines basic and applied nuclear science with nuclear security technology and policy; it already encompasses a broad spectrum of faculty members drawn from across the university.

The successful candidate for this position will assume a tenured position at the full professor level in the Department of Physics and Astronomy, with a joint appointment in the Cyclotron Institute and the Nuclear Solutions Institute. He/she will be expected to lead a vigorous basic research program based at the Cyclotron Institute and employing the facilities there, which include two cyclotrons – a newly refurbished K150 and a superconducting K500 – together with a wide variety of modern experimental equipment. An upgrade project, now underway and planned to be completed in 2012, will utilize the two accelerators to make radioactive beams available to all target locations.

Interested parties with a Ph.D. or equivalent in nuclear science or a related field should send a CV and a statement of research accomplishments via e-mail to seniorsearch@comp.tamu.edu. We also encourage informal enquiries, which can be addressed to the head of the search committee, John Hardy, at hardy@comp.tamu.edu or at +1 (979) 845-1411.

Texas A&M University is an equal opportunity and affirmative action employer. The university is dedicated to the goal of a culturally diverse, pluralistic faculty and staff and encourages applications from women, minorities, individuals with disabilities, and veterans. The university is particularly responsive to the needs of dual-career couples.



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The European X-Ray Free Electron Laser Facility (XFEL) 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 others. Located in the Hamburg area, Germany, it will comprise scientific instruments for a wide range of experimental techniques. Construction of the European XFEL is underway, its commissioning is scheduled for 2014. We are currently looking to fill the following positions:

Physicist for calculations of photon fields (f/m) Reference number: S-036

The position

As a member of the Theory Group you will work in close interaction with the Group Leader assisting him in his tasks, including simulations of FEL and spontaneous radiation (SR) from the baseline European XFEL setup. SR simulations will be performed first and will require:

- cooperating in the development of a novel, well-documented software tool for SR studies accounting for the unique characteristics of the baseline European XFEL setup
- taking part in the creation and testing of particle tracker, electromagnetic solver, post-processor, as well as in the development and optimization of parallelization procedures
- integrating the different elements into a single package
- performing numerical and analytical studies on the characteristics of spontaneous radiation using existing software and, in the future, the newly developed software, partly in cooperation with other Work Packages

Requirements

- background in electrodynamics and accelerator physics
- knowledge of radiation from relativistic electrons in undulators and of FEL physics
- background in statistical and Fourier optics is considered an asset
- experience in programming in C and C++, knowledge of Matlab
- ability to work in Linux/Windows environments

For additional information please contact Gianluca Geloni (gianluca.geloni@xfel.eu).

Software developer for DAQ and control (m/f) Reference number: S-035

The position

- development of DAQ control software for detectors and beam line devices
- participation in development of the data handling and processing framework software following the DAQ layer
- commissioning of detector and beam line software developed
- identifying requirements and deriving specifications in collaboration with other system developers

Requirements

- Master degree in computer science or physics or an equivalent qualification
- in-depth knowledge of and experience in programming (C, C++, Java) and scripting (Python) languages
- experience in software development in a hardware-near environment
- familiarity with techniques used to measure performance and identify malfunctions of systems developed
- familiarity with Qt or PyQt for GUI application building
- capability of working within a team environment of mixed discipline and mixed nationalities

For additional information please contact Christopher Youngman (christopher.youngman@xfel.eu).

Duration: Both appointments are initially limited to 3 years.

Application: Please apply online via www.xfel.eu, stating the desired position and relevant reference number, and providing a motivational cover letter next to a CV in English, a list of publications and references, respectively, in one single pdf-file.

Salary and benefits are similar to those of public service organisations in Germany. Handicapped persons will be given preference over other equally qualified applicants. The European XFEL GmbH is an equal opportunity and affirmative action employer and encourages applications from women. English is working language; knowledge in German is considered an asset. The European XFEL GmbH intends to achieve a widely international staff. Non-German candidates hired from abroad receive an international allowance.

■ ■ ■ **Deadline for application: 28 February 2011**

Optoelectronics Development Engineer and Drawing and Design Officer – Germany

A German DPSS laser manufacturer is looking to recruit two Development Engineers with a background in Optoelectronics, Photonics or Laser Development. Additionally a role is open for a Senior Drawing and Design Officer with experience in CAD Construction and Precision Engineering to lead the technical Drawing and Design office.

These are full time roles based in Dortmund, Germany - Fluency in English essential, German is highly desirable.

Ideal candidates for the Development Engineer positions will have at least 5 years commercial experience in the Optoelectronics, Photonics or Laser sector. Reporting to the Director of Engineering you will have a Bachelors degree or higher in physics or related discipline and be familiar with optical ray tracing software, such as OSLO, Non-Linear Crystal simulation such as SLNO and similar software packages. One of these positions will have particular emphasis in deep UV optical engineering. Your role will be to undertake specific theoretical analysis to ensure that the designs developed are manufacturable. You will undertake laboratory experiments to evaluate critical theoretical parameters and provide regular technical reporting following company prescribed methodology.

The Senior Drawing and Design Officer will have a Bachelors degree or higher in Mechanical Engineering and 10+ years commercial experience in CAD Construction and Precision Engineering. You will have excellent knowledge of Solid Works 2007/2010, Illustrator and finite element method/analysis (FEM / FEA). Your role will be to ensure best designs are utilized considering cost/ease of manufacture, mechanical stability, long term reliability, cost and synergies with existing designs. You should have solid understanding of the special issues around precision engineering, such as production, thermal expansion effects in the sub-micron range, addition and propagation of such error-prone effects and how to eliminate these. You will be able to handle complicated designs and draw them using CAD facilities.

To apply please send your resume to david@system-uk.com or call David Lawson on **0044 (0) 121 616 5066**

MICHIGAN STATE UNIVERSITY

FACULTY POSITIONS IN ACCELERATOR PHYSICS AND ENGINEERING

Michigan State University (MSU) invites applications for two vacant faculty positions at NSCL in the area of Accelerator Science. Faculty are expected to develop and lead world-class research programs, teach, supervise student research projects, and participate in the design and implementation of the Facility for Rare Isotope Beams (FRIB). Each position can be filled at the assistant, associate, or full professor level, with a competitive salary.

NSCL and FRIB offer challenges and opportunities in a variety of state-of-the-art accelerator and particle beam systems, including:

- beam dynamics, electromagnetic calculations and accelerator design
- superconducting RF R&D and system design
- high-performance ECR ion source development
- beam instrumentation, diagnostics, and controls
- innovative concepts in particle beams and accelerators
- electrical, mechanical and cryogenic engineering

Special attention will be given to candidates whose research relates to superconducting accelerator technology.

As the forefront facility in the United States for rare isotope science, NSCL and FRIB have over 400 employees, including 35 faculty members in nuclear and accelerator science. Approximately 150 graduate and undergraduate MSU students are involved in research projects. Learn more about NSCL and FRIB at www.nscl.msu.edu and www.frib.msu.edu; information about NSCL faculty appointments can be found at www.hr.msu.edu/documents/facacadhandbooks/NSCLFacPos.htm

Applicants should send a letter of application, a résumé, including a list of publications, and the names and addresses of at least three references to **Prof. Michael Syphers, NSCL, Michigan State University, East Lansing, MI 48824-1321 or jobs@nscl.msu.edu**.

MSU is committed to achieving excellence through cultural diversity. The university actively encourages applications and/or nominations of women, persons of color, veterans and persons with disabilities. MSU is an affirmative action/equal opportunity employer.



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ASSISTANT PHYSICIST - NEUTRINO PHYSICS - UPTON, NEW YORK

Requires a Ph.D. in physics with emphasis on experimental particle or nuclear physics. The successful candidate will participate in the activities of the group including the Long Baseline Neutrino Experiment at DUSEL in South Dakota and the Daya Bay reactor neutrino experiment in China. Travel to DUSEL, Fermilab, and/or China should be expected.

The candidate will work within the Electronic Detector Group and will have broad associations with other groups in the Laboratory and throughout the world to carry out his/her work. The Electronic Detector Group in the Physics Department currently has twelve physicists at various career levels with major current responsibilities in neutrino physics and a long history of research in fundamental particle physics.

The appointment is expected to start on or about March 1, 2011 under the direction of S. Kettell in the Physics Department.

To apply, please visit
www.bnl.gov/HR/Careers
and submit your CV to Job ID #15570.

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Who Do We Want?

Although most of us have advanced degrees in mathematics, computer science, physics or econometrics from the world's leading universities and departments, we are just as interested in raw talent and will consider all outstanding graduate applicants. We expect all prospective candidates to work efficiently both in a team environment and individually. We value mental flexibility, innovative thinking and the ability to work in a collaborative atmosphere. No prior experience in the financial industry is necessary. We want to hear from you if you are ambitious and would relish the challenge, opportunity and excellent compensation offered.

Software Engineers

We are seeking outstanding software engineers to develop and maintain system critical software running in a 24-hour production environment. You will be responsible for all aspects of software development on a diverse range of projects, such as automating trading strategies, integrating third party data into our system and the development of data analysis tools. You will have the following:

- A high quality degree in computer science or related discipline
- C++ experience that demonstrates your ability to work efficiently in a fast paced environment
- Extensive knowledge of the development life cycle, from prototyping and coding through to testing, documentation, live deployment and maintenance

Desirable experience includes Linux, scripting, working with large numerical data sets, and large scale systems.

Quantitative Analyst

We are seeking outstanding researchers to build quantitative models of financial markets within our research and development team. You will be responsible for projects from the initial idea-generation stage through to implementation and execution. You will undertake research using large and often complex data sets, employing different computer programming languages (mostly C++) and our in-house development library infrastructure. You will have experience in some of the following areas: numerical analysis, optimisation, signal processing, statistics (including robust techniques), stochastic processes, time series analysis, volatility / GARCH modelling, machine learning.

System Administrator

We are seeking an experienced administrator to develop many new systems and services while having significant responsibility for our IT systems and computing infrastructure. You will be responsible for the provision and management of business-critical systems, in-house infrastructure development and supporting live operations, HPC research and internal development environments.

You will have at least 3 years professional system experience in a Linux/Unix environment, a scientific / technical degree and significant Linux expertise.

How to apply

Email or post CV and covering letter stating which role you are applying for to:

Dr Steven Kurlander
Oxford Asset Management
13-14 Broad Street
Oxford OX1 3BP
United Kingdom

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Radboud University Nijmegen



Radboud University Nijmegen is strategically located in Europe and is one of the leading academic communities in the Netherlands. Situated in the oldest city of the Netherlands, it has nine faculties and enrolls over 19,000 students. Radboud University Nijmegen is a founding partner of Nikhef, the Dutch national institute for subatomic physics.

1. Chair in theoretical particle physics

(vacancy nr 62.01.11)

As professor in the theory of fundamental interactions beyond the Standard Model you will initiate and conduct research, with emphasis on the links between particle physics, mathematical physics, and astro-particle physics and cosmology. This research will strengthen the existing links between the various departments in the Institute for Mathematics, Astrophysics and Particle Physics (IMAPP).

2. Tenure track assistant professor in experimental particle physics

(vacancy nr 62.02.11)

You will participate in the operation and data analysis of the ATLAS experiment at the LHC. Our group has a strong involvement in muon identification and an interest in searches for the Higgs boson and supersymmetry.

For both positions the duties include teaching at bachelor and master level as well as the supervision of PhD students.

Details of the vacancies, application process and employment conditions can be found at: www.ru.nl/english/ under **job_opportunities**

Closing date: March 1st 2011

Radboud University Nijmegen is an equal opportunity employer.



Sigmaphi, a **world specialist** in magnetic systems for particle accelerators is looking for 4 engineers to assist with development and research.

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Assistant Engineer to the Production Manager

Prepare the product launches, develop methods. Trained in mechanical engineering, 5 years experience in manufacturing.

Design Engineer

Create drawings for our products. Bachelor degree. A few years knowledge and experience of Solidworks is necessary.

A good level of English is required for all these positions.

Based in Vannes, France.

For further information and to apply, please contact Mr Lancelot, contact@sigmaphi.fr

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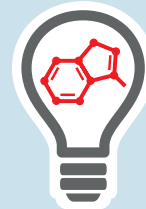
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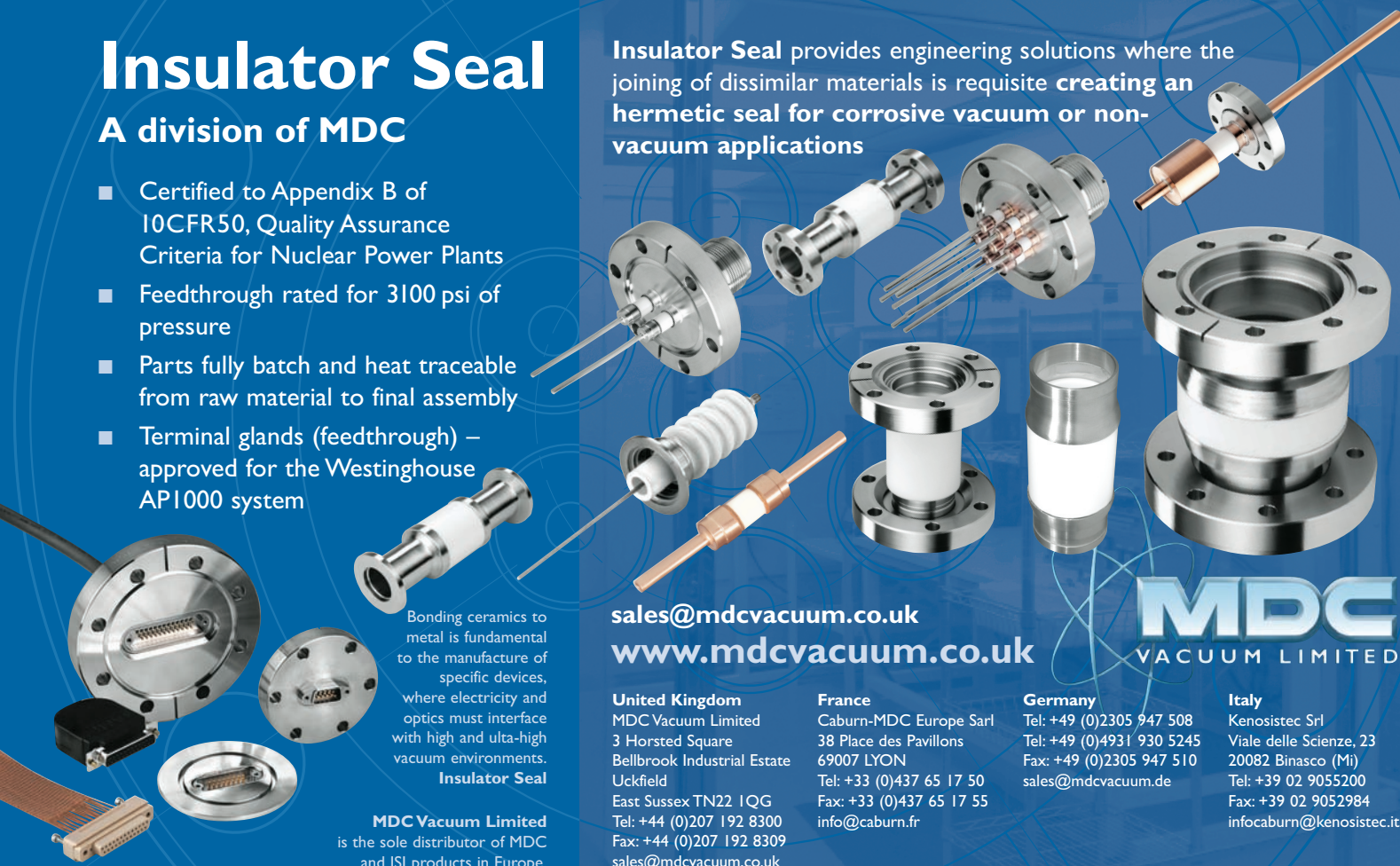
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