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SEVERO OCHOA AND MARÍA DE MAEZTU CENTRES AND UNITS OF EXCELLENCE IN SPAIN

RECRUITMENT OPPORTUNITIES 2016-2017



MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD



FUNDACIÓN ESPAÑOLA
PARA LA CIENCIA
Y LA TECNOLOGÍA

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RECRUITMENT OPPORTUNITIES 2016-2017

This document compiles information relative to Severo Ochoa and María de Maeztu centres and units of excellence with open vacancies for researchers during last quarter of 2016 and 2017.

July 2016

Edited: FECYT
Design and layout: FECYT
Depósito Legal: M-31495-2016
NIPO: 720-16-221-1
e-NIPO: 720-16-222-7

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Severo Ochoa and María de Maeztu Centres and Units of Excellence in Spain

Recruitment Opportunities 2016-2017

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PROLOGUE

THE SEVERO OCHOA CENTRES AND MARÍA DE MAEZTU UNITS OF EXCELLENCE.

Spain offers excellent opportunities for a researcher to develop and enjoy the professional career in Research and Development (R&D).

One of the goals of the Spanish Government is to promote internationally competitive and dynamic research institutions for their high quality of research and attractive work environments.

The Spanish Strategy of Science, Technology and Innovation awards those institutions through the Severo Ochoa Centres of Excellence and María de Maeztu Units of Excellence Programme.

There are a total of 33 entities of which 23 are independent public centres and 10 are units based at universities.

This award given by the Spanish Government recognizes institutions from all areas of knowledge that perform cutting-edge research at global standards. The awarded centres and units show outstanding international scientific leadership and are open to international collaborations.

The evaluation committees involved in the selection process are all foreign highly reputed scientific leaders, including Nobel laureates.

Severo Ochoa Centres of Excellence and Maria de Maeztu Units of Excellence per broad scientific areas:

Life Sciences

- Spanish National Centre for Cardiovascular Research (CNIC), since 2011
- Spanish National Cancer Research Centre (CNIO), since 2011
- Institute for Research in Biomedicine (IRB Barcelona), since 2011
- Centre for Genomic Regulation (CRG), since 2012
- Doñana Biological Station of CSIC (EBD), since 2012
- National Centre for Biotechnology (CNB), since 2013
- Instituto de Neurociencias de Alicante (IN), since 2013
- Department of Experimental and Health Sciences at Universitat Pompeu Fabra (DCEXS-UPF), since 2014
- Institute for Bioengineering of Catalonia (IBEC), since 2014
- Structural Biology Unit at Molecular Biology Institute of Barcelona (SBU-IBMB), since 2014
- Centre for Research in Agricultural Genomics (CRAG), since 2015
- Institute of Environmental Science and Technology at the Universitat Autònoma de Barcelona (ICTA-UAB), since 2015

Maths, Experimental Sciences and Engineering

- Barcelona Supercomputing Centre (BSC), since 2011
- Institute of Mathematical Sciences (ICMAT), since 2011
- Basque Centre for Applied Mathematics (BCAM), since 2013
- Barcelona Graduate School of Mathematics (BGSMath-UAB-UB-UPC-UPF), since 2014
- Instituto de Astrofísica de Canarias (IAC), since 2011
- Institute of Photonic Sciences (ICFO), since 2011
- Institute for Theoretical Physics (IFT), since 2012
- High Energy Physics Institute at the Universitat Autònoma de Barcelona (IFAE), since 2012
- Institute of Cosmos Sciences at the University of Barcelona (ICC-UB), since 2014
- Condensed Matter Physics Centre at the Universidad Autónoma de Madrid (IFIMAC-UAM), since 2014
- Division of Particle Physics at the National Centre for Energy, Technology and Environmental Research (DFP-CIEMAT), since 2015
- Institute of Corpuscular Physics (IFIC), since 2014
- Instituto de Tecnología Química (ITQ), since 2012
- Institute of Chemical Research of Catalonia (ICIQ), since 2013
- Catalan Institute of Nanoscience and Nanotechnology (ICN2), since 2013
- Institute of Materials Science of Barcelona (ICMAB), since 2015
- Institute of Molecular Science at University of Valencia (ICMOL-UV), since 2015
- Information and Communication Technologies Engineering Department at Universitat Pompeu Fabra (DTIC-UPF), since 2015

Social Sciences and Humanities

- Barcelona Graduate School of Economics (BGSE), since 2011
- Department of Economics at the Carlos III University Madrid (DE-UC3M), since 2014
- Basque Centre on Cognition, Brain and Language (BCBL), since 2015

This document gathers the active recruitment opportunities of these centres and units for the last term of 2016 and the year 2017.

More information on the Severo Ochoa Centres of Excellence and Maria de Maeztu Units of Excellence you may find at: www.idi.mineco.gob.es/portal/site/MICINN/excellentinstitutions.

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I. LIFE SCIENCES

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II. MATHS, EXPERIMENTAL SCIENCES AND ENGINEERING

III. SOCIAL SCIENCES AND HUMANITIES

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I. LIFE SCIENCES

1. Spanish National Centre for Cardiovascular Research (CNIC)
2. Spanish National Cancer Research Centre (CNIO)
3. Centre for Genomic Regulation (CRG)
4. National Centre for Biotechnology (CNB)
5. Instituto de Neurociencias de Alicante (IN, CSIC-UMH)
6. Department of Experimental and Health Sciences at Universitat Pompeu Fabra (DCEXS-UPF)
7. Institute for Bioengineering of Catalonia (IBEC)
8. Structural Biology Unit at Molecular Biology Institute of Barcelona (SBU-IBMB)
9. Centre for Research in Agricultural Genomics (CRAG)
10. Institute of Environmental Science and Technology at the Universitat Autònoma de Barcelona (ICTA-UAB)

Spanish National Centre for Cardiovascular Research (CNIC)

Madrid, Spain
www.cnic.es/en

The Centre

The Spanish National Centre for Cardiovascular Research, or Centro Nacional de Investigaciones Cardiovasculares Carlos III, (CNIC), in Madrid, Spain, is a leading international centre for cardiovascular research established through a pioneering leadership and a research strategy that cuts across disciplinary boundaries.

CNIC is a public biomedical research foundation funded through a pioneering public-private partnership between the Spanish Government and the Pro CNIC Foundation.

CNIC is directed by leading cardiologist and internationally renowned scientist Dr Valentín Fuster.

The Pro CNIC Foundation currently includes 14 of the most important private Spanish companies (Acciona, BBVA, Endesa, Prisa, Inditex, La Caixa, Santander, Telefónica) and foundations (Fundación Abertis, Fundación Mapfre, Fundación Mutua Madrileña, Fundación Ramón Areces, Fundación Repsol).

CNIC was created by the Spanish Government as an international reference centre for cardiovascular research, and is distinguished with the Severo Ochoa Centre of Excellence Award. The CNIC's performance is evaluated every year by an independent panel of leading international biomedical scientists (Scientific Advisory Board).

The CNIC's mission is to improve cardiovascular health by advancing scientific knowledge and its effective transfer to clinical applications, and by discovering and providing specialized training to talented researchers.

The Centre has 28,144 m² of floor space dedicated to research, equipped with unrivalled advanced imaging technology. The CNIC is a young centre: more than three-quarters of the researchers have been recruited since 2007. The CNIC currently has a staff of around 450 people.

CNIC is organized to maximize close collaboration between basic and clinical researchers and structured into two interconnected research departments: Basic Research and Clinical Research. These two departments coordinate the activity of 6 interconnected multidisciplinary programs which are grouped into 3 Research Areas:

- Vascular Pathophysiology Area (Programs in Vascular Biology and Signaling & Inflammation)
- Myocardial Pathophysiology Area (Programs in Myocardial Biology and Cardiovascular Metabolism)
- Cellular & Developmental Biology Area (Programs in Genetics & Development and Cell Biology & Physiology)

The 29 CNIC research groups are strategically distributed, with each Area including basic and clinical researchers.

CNIC counts with state-of-the-art Technical Units that ensure top-quality technical support.

The Technical Units comprise Genomics (specialized in second generation sequencing NGS technologies), Cellomics (cytometry, sorting, and high-content screening), Proteomics/Metabolomics (multidimensional liquid chromatography and mass spectrometry), Microscopy (state-of-the-art optical and fluorescence microscopy technologies for live-cell and in-tissue studies), Pluripotent Cells and Transgenesis (CRISPR/Cas9 technology), Viral Vectors, Bioinformatics, and Advanced Imaging (preclinical and clinical studies).

JOB OPPORTUNITIES 2016-2017

CNIC is an international centre currently in expansion, with a solid commitment to excellent research and as such advocates equal employment opportunities for men and women, both from Spain and abroad, as well as the integration of people with disabilities, based on the principles of transparency and merit.

The CNIC HR Strategy is aligned with the principles of the European Charter for Researchers and The Code of Conduct for the Recruitment of Researchers and has been granted by the European Commission the certified Logo of the programme HR Excellence in Research.

With its modern infrastructure and an open-minded philosophy that allows scientists to choose the direction of their research, the CNIC offers unique career building opportunities in the area of cardiovascular research.

All CNIC's employment offers are published in our website. Candidates should present

their interest through an online application corresponding to the specific offer.
Please visit our website for Employment Offers: www.cnlic.es/en/careers

For additional information, also contact rrhh@cnlic.es.

CNIC offers positions in the following research categories until December 2017.

1. SIXTEEN POSTDOCTORAL RESEARCHERS

Requirements:

- PhD in the fields of biology or medicine
- To have at least one year of postdoctoral stay outside Spain in the last two years
- At least one first author paper
- Strong interest in cell biology, cancer or cardiovascular research
- Impact of publications
- Technical expertise: cell biology, molecular biology and animal models

CNIC offers:

- A 3-year contract
- A competitive salary in the range of 27,000 – 37,442 € according to the candidate's expertise and qualification

2. TWENTY FIVE PHD FELLOWSHIPS

Requirements:

- A degree in biomedical sciences within the European Higher Education Area of a minimum of 240 + 60 ECTS
- Non-Spanish university degrees should be equivalent to a European MSc
- Applicants must have an excellent academic record and previous research experience
- Candidates must have a solid working knowledge of English
- Co-authorship of publications in MedLine-listed journals will be positively considered

CNIC offers:

- A 4-year contract
- Remuneration according to the CNIC's salary scales
- An international environment of scientific and technological excellence
- To join the CNIC PhD Programme with additional scientific and financial support

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3. FIFTY TWO LAB TECHNICIANS POSITIONS

Requirements:

- A degree in biomedical sciences
- Good level of English
- Experience in at least one of the following areas: Molecular biology, Cell biology, Omics technology (Proteomics, Genomics, Bioinformatics, Cellomics), or Advanced imaging (PET, MRI, TAC, confocal microscopy, etc.)

CNIC offers:

- Grant-associated temporary contracts
- Competitive salary according to the candidate's expertise and qualification
- An opportunity to be trained in the last biomedical research techniques
- To join an international research centre equipped with unrivalled technology

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Spanish National Cancer Research Centre (CNIO)

Madrid, Spain

www.cnio.es/ing/index.asp

The Centre

The Spanish National Cancer Research Centre, or *Centro Nacional de Investigaciones Oncológicas*, (CNIO) was founded in 1998 within the Institute of Health Carlos III (*Instituto de Salud Carlos III*, ISCIII), with the aim of developing a comprehensive project for excellence in oncology research. Located in state-of-the-art facilities at the Chamartín Campus of the ISCIII, in Madrid, in 2015 the CNIO employed 446 people, of whom 401 were scientific personnel, with an equilibrated structure of senior researchers, trainees and technical support.

The elevated percentage of female staff (65%) facilitates career development of female researchers, which is supported by the WISE (Women in Science) office at the Centre.

CNIO offers an international working environment, as evidenced by the fact that 17% of its staff (and 44% of its postdoctoral fellows) are foreigners. A dynamic working environment for young researchers is favoured considering that 67% of CNIO's staff is below 40 years of age.

Moreover, in 2009 the Centre created a Clinical Research Programme, in collaboration with several hospitals, both public and private, in the area of Madrid to foster translational research and patient-centred investigational studies. To continue nurturing an innovative ecosystem, the CNIO has established a Department of Innovation that helps CNIO staff bring their discoveries to the market by providing training and counselling in technology transfer and intellectual property. Because the CNIO acknowledges the key value of the human capital and its academic role in science, the Centre strives to create a rich and stimulating scientific environment to support excellent research and ethical training, interdisciplinary learning, research mobility, professional growth, and cultural enrichment.

Since its inception and onwards this comprehensive project has created a legacy of research excellence at the Centre, which is recognised today as one of the top leading Cancer Research Institutes in Europe. True to its mission, the CNIO conducts research of excellence in oncology, bringing the very latest scientific discoveries and technologies

in the cancer field to the Spanish National Health System and to the medical community worldwide. Indeed, CNIO received in 2011 the Severo Ochoa Centre of Excellence award by the Ministry of Science and Innovation, and again in 2015 by the Ministry of Economy and Competitiveness (MINECO).

To achieve its goals, CNIO has defined three strategic objectives: to develop research aimed towards the generation of new and more efficacious methods for the diagnosis and treatment of oncological diseases; to translate scientific knowledge into clinical practice to ensure that the scientific discoveries reach patients as quickly as possible and impact national and international healthcare systems; and to transfer the knowledge and technology developed at the CNIO to innovative companies.

CNIO operates as a public foundation, an administrative structure that provides the legal framework for all of its activities, governed by its Board of Trustees. The Centre manages its own budget based on accountability, with autonomy and flexibility regarding collaborations and funding sources. The scientific activity is governed by the Director, supported by the Directors of the Research Programmes and by a Scientific Advisory Board composed of renowned international scientists, issuing recommendations regarding any matters of strategic scientific content.

JOB OPPORTUNITIES 2016-2017

The following positions will be available during the last quarter of 2016 and the year 2017. Some of them will not be advertised right away but they will be open at some point in 2016.

1. PREDOCTORAL TRAINING GRANTS IN CENTRES/UNITS OF EXCELLENCE "SEVERO OCHOA" 2017

There are six predoctoral grants for the CNIO included in the National Programme for the Promotion of Talent and Employability. The call is aimed at promoting predoctoral training in the Spanish research centres accredited as "Centres of Excellence Severo Ochoa". Selected candidates will start their training as predoctoral students and will receive a predoctoral contract of employment for a maximum of 4 years. Successful applicants who finish their PhDs by the end of the third year of contract will obtain a new one-year contract with an increase in salary in preparation for their postdoctoral training and professional future. This is a competitive call offered by the Ministry of Economy and Competitiveness of Spain. The six predoctoral grants will be divided as follows: 2 grants for the Molecular Oncology Programme, 1 for the Structural Biology and Biocomputing Programme, 1 for the Clinical Research Programme, 1 for the Human Cancer Genetics Programme, and 1 for the Cancer Cell Biology Programme.

For more information regarding this call, please go to bit.ly/Predoc-2016 or contact them at severoochoa.predoc@mineco.es.

2. PREDOCTORAL FELLOWSHIP FOR THE HUMAN GENETICS GROUP

This predoctoral position will be offered to the successful candidate to carry out an independent research project on testicular cancer to identify disease genes from families with a history of testicular cancer. The project will entail working and developing expertise in molecular biology techniques and bioinformatics. This is a full time position for a period of four years.

For more information, please visit www.cnio.es/ing/empleo/ayudante-investigacion.asp.

3. POSTDOCTORAL CONTRACTS "CNIO FRIENDS" PROGRAMME 2017

Thanks to the funds obtained through the philanthropic initiative "CNIO FRIENDS", the CNIO will offer a Postdoctoral Contract that is open to doctoral candidates of any nationality to carry out a postdoctoral training at the Centre. There are two Postdoctoral Contracts available with a duration of 2 years each. The call will open around February/March 2017.

Requirements:

- Candidates must hold a doctoral degree or an official specialist title – of medical specialist (MIR), FIR, BIR or QIR – and must have received their degrees no more than 8 years before their start date at the CNIO.
- Candidates must have at least one first-author paper, either published or accepted before the application deadline, in a leading international peer-reviewed journal in the medicine & life sciences field.

The proposals will be evaluated by a Committee composed of CNIO scientists, primarily based on the CV of the applicant and previous research experience.

CNIO offers:

- The possibility to incorporate immediately to a Centre of Excellence.
- Fulltime employment contract for a period of 2 years, according to the provisions of the Spanish Law, with entitlement to all the benefits available to CNIO employees. Remuneration will be commensurate with the salary tables of the CNIO, and will be determined on the basis of the intervening years between the date of completion of the doctorate and the intended start date. The contract does not imply any obligation on the part of the CNIO after the 2-year contract has been terminated.

At the end of the 1st and 2nd years of their contract, the enrolled “CNIO friend” shall submit a report that summarises his/her activities and scientific achievements.

For more information regarding this opening please visit our website www.cnio.es/ing/cursos/convocatoria-postdoctoral-amigos-cnio.asp or contact us at postdoc@cnio.es

4. POSTDOCTORAL CONTRACTS “JUEGATERAPIA-CNIO FRIENDS” PROGRAMME 2016

The “Juegaterapia” Foundation and “CNIO FRIENDS” Fellowship contract is aimed to support one postdoctoral scientist to develop a project focused on childhood cancers. This contract is open to doctoral candidates of any nationality who wish to continue training in paediatric cancer research at a top leading cancer research centre. The call offers a 2-year Postdoctoral Contract and closes on September 30th, 2016.

For more information regarding this opening please visit our website <https://www.cnio.es/ing/cursos/convocatoria-postdoctoral-juegaterapia-amigos-cnio.asp> or contact us at postdoc@cnio.es.

5. BANCO SANTANDER FOUNDATION – CNIO FELLOWSHIP FOR YOUNG RESEARCHERS TRAINED IN THE UK/US PROGRAMME 2016

This programme supports highly talented and motivated young scientists who have been trained in the UK or in the US, and who wish to start or continue their postdoctoral training at one of the world’s leading comprehensive cancer centres. Successful candidates have the opportunity of spending two years at the Centre developing an ambitious research project. The programme is also aimed at fostering collaborations between cancer researchers in UK/US and Spain. The successful applicant must hold a PhD or MD degree and must have one first author publication either published or accepted before the application deadline in a relevant international peer-review journal in the medicine & life sciences field.

For more information regarding this opening please visit our website www.cnio.es/ing/cursos/programapostdoctorado-banco-santander.asp or contact us at bsfpostdoc@cnio.es.

6. POSTDOCTORAL RESEARCH ASSISTANT FOR THE GENES, DEVELOPMENT AND DISEASE GROUP

This opening is a full-time position for a Postdoctoral Assistant. Candidates must hold a PhD in Biomedical Sciences and their application will be selected based on merits. The conditions of the contract will follow the Spanish Employment regulations. An excellent knowledge and understanding of English is required.

The successful candidate will join the Genes, Development and Disease Group, within the Cancer Cell Biology Programme to carry out a project to analyse gene function in healthy and disease conditions, for instance the tumour microenvironment, using mouse models and patient-derived samples. In particular, the project will entail investigating the functions of the AP-1 (Fos/Jun) transcription factor complex that regulates cell proliferation, differentiation, and oncogenesis, and the cross-talk between organs. The ultimate goal of the research project is to define molecular pathways leading to disease/cancer development and to identify novel therapeutic targets.

The position is available immediately and the funding will run until the end of 2017, with a possible 1-year extension.

For more information, please visit www.cnio.es/ing/empleo/ayudante_investigacion.asp or contact Cristina Alvaro (calvaro@srv.cnio.es).

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Centre for Genomic Regulation (CRG)

Barcelona, Spain
www.crg.eu

The Centre

The Centre for Genomic Regulation (CRG) is an international biomedical research institute of excellence, founded in December 2000 and based in Barcelona, Spain. Its mission is to discover and advance knowledge for the benefit of society, public health and economic prosperity.

The breadth of topics, approaches and technologies at the CRG permits a broad range of fundamental issues in life sciences and biomedicine to be addressed. Research at the CRG falls into four main areas: gene regulation, stem cells and cancer; cell and developmental biology; bioinformatics and genomics; and systems biology.

With 400 scientists from 43 countries, the CRG excellence is based on an interdisciplinary, motivated and creative scientific team that is supported by high-end and innovative technologies. Over 200 publications in high quality journals are published every year, and researchers are also active in facilitating the transfer of new basic findings into benefits for health and economic value for society.

Principal investigators (PIs) are recruited internationally and are periodically evaluated. These evaluations determine their future at the CRG, ensuring high standards of excellence in science as well as the mobility and renewal of the workforce.

CRG is devoted to excellent training at all stages of a career in life sciences. The CRG Advanced Training Programme embraces training-through-research, hands-on and theoretical courses, conferences and seminars with leading guest speakers and internal data and journal clubs, to empower researchers with new skills, knowledge and abilities. The institute also runs "Courses@CRG", a series of courses open to the scientific community and focusing on a wide range of topics combining theory and hands-on sessions. Career development and transferable skills are also provided through tailor-made training.

CRG received in 2011 the Severo Ochoa Centre of Excellence award by the Ministry of Science and Innovation, and again in 2015 by the Ministry of Economy and Competitiveness (MINECO).

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CRG runs a successful International PhD and Postdoctoral Programmes (more than two hundred PhD students and postdocs), as well as a Summer Internship Programme, providing undergraduate students with the opportunity to carry out a research project during the summer period.

JOB OPPORTUNITIES 2016-2017

Job opportunities are updated regularly and can be consulted in the following links:

1. CRG PhD PROGRAMME

www.crg.eu/en/content/training-phd-students/crg-international-phd-programme

2. CRG POSTDOCTORAL PROGRAMME

www.crg.eu/en/content/training/postdoctoral-researchers

3. CRG SUMMER INTERNSHIP PROGRAMME

www.crg.eu/en/content/training-undergraduates/crg-summer-internship-programme

4. CRG JOBS

recruitment.crg.eu/content/jobs/open-positions

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National Centre for Biotechnology (CNB)

Madrid, Spain

www.cnb.csic.es/index.php/en/

The Centre

The National Centre for Biotechnology or *Centro Nacional de Biotecnología* (CNB) is one of the largest multidisciplinary life science research centres in Spain, and was recognised as Severo Ochoa Centre of Excellence award by the Ministry of Economy and Competitiveness (MINECO) in 2013. Its 70 research groups and 18 scientific core facilities cover 6 large areas of research:

The **Department of Macromolecular Structures** focuses on the elucidation of the structure of macromolecules, their interactions and the molecular basis of their function. A critical mass of research groups in 3D-electron and X-Ray microscopy, ranging from cryoelectron microscopy to three-dimensional single particle reconstruction, tomography and correlative methods, together with groups in the fields of functional proteomics, biophysics and synthetic molecular biology provide an ample coverage of key areas in structural and functional biology.

The **Department of Cellular and Molecular Biology** focuses, first, on the structural and functional characterisation of virus and cellular elements involved in the progression of infection and, second, on the molecular basis of mammalian gene expression and control of cellular processes in pathological conditions. The first area analyses the role of virus-host interactions that are highly relevant for human and animal health, while the goal of the second area is the identification and exploitation of diagnostic tools and molecular targets relevant to cognitive disorders, neurodegenerative diseases, cardiac development and rare diseases.

The **Department of Microbial Biotechnology** integrates research to gain knowledge on key aspects of microbial biology with environmental, clinical or biotechnological relevance. Its approaches include molecular genetics, genomics, proteomics and metagenomics. The subjects studied include environmental microbiology, microbial responses to hostile environments, microbial pathogens, microbial engineering, microbial resistance to antibiotics and search for new antimicrobials.

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The goal of the **Department of Plant Molecular Genetics** is to elucidate signalling pathways in the main growth and adaptive responses of plants to environmental changes and pathogenic diseases. The ultimate goal is to develop new tools and methods to improve crop production and quality, selection of new varieties that are more resistant to pathogens or reduce fertiliser needs. Biotechnological applications such as the use of plants as biopharmaceutical factories or as tools to fight environmental problems arising from spillages and the accumulation of toxic substances are also being studied.

Research in the **Department of Immunology and Oncology** addresses various key aspects of innate and adaptive immunity, with special emphasis on characterising the molecular mechanisms that underlie inflammation, the processes that drive tissue-specific tumour development, as well as tumour immunology and the relationships among stem cells, inflammation and cancer. The final goal is the development of improved approaches for immune response modulation during infection and inflammatory reactions as well as the identification of novel targets for the prevention, diagnosis and treatment of cancer.

The **Systems Biology Programme** applies emerging concepts and tools in the fields of systems biology, computational biology and synthetic biology to biologically relevant questions. The biotechnological side of this approach includes, among others, novel strategies to program bacteria for deliberate environmental release for the biodegradation of toxic pollutants or as biosensors to monitor the presence of given chemicals.

JOB OPPORTUNITIES 2016-2017

CNB offers each year more than **50 contracts for PhD students and postdoctoral scientists** in the most relevant areas of red and green Biotechnology, with a focus on four major societal challenges, namely infectious diseases, inflammation & cancer, sustainability of food production, and environmental pollution.

Contracts are offered to join one of the 70 research groups in the Departments of macromolecular structures; cellular and molecular biology; microbial biotechnology ;plant molecular genetics; immunology and oncology; and systems biology.

Job offers, application procedures and details of the working contracts are updated on a regular basis on the CNB website: www.cnb.csic.es/index.php/en/jobs-training

Instituto de Neurociencias de Alicante (IN, CSIC-UMH)

Alicante, Spain
in.umh.es

The Institute

The mission of the *Instituto de Neurociencias* (IN) is to investigate the development, structure and function of the nervous system in normal and pathological conditions. Our general objective is to improve our understanding of the brain. In other words, to understand the functioning of the healthy brain, in order to shed light on dysfunctions leading to disease. This goal is recognized as the main challenge faced by modern biology.

The IN received the Severo Ochoa Centre of Excellence award by the Ministry of Economy and Competitiveness in 2013.

The IN is organized into functional research units that serve as a framework that facilitates research activities and stimulates interaction and scientific collaboration among its members. The IN and its members maintain active interchange programs with universities, research centres and neurobiology laboratories around the world.

The research groups of the IN employ a wide variety of techniques that cover the fields of molecular and cellular biology, genetics, physiology, and systems neurobiology. Among the technical facilities at the IN are fully equipped tissue, cell culture and experimental embryology rooms, optical projection tomography (OPT), confocal and two photon microscopy, fMRI and special areas for behavioural experiments.

The IN is focused on the following research fields:

Large-scale organization of functional brain circuits assembled during development.

The old comprehensible ambition of understanding the brain has gained urgency as a consequence of the huge social and economic burden of brain diseases. The general strategy is determining the principles underlying neural connectivity and the pathological consequences of deviation from the normal developmental programs, the properties of synaptic information transfer and its impact on behaviour, the activity-driven gene expression, the epigenetic modifications, and the molecular and cellular mechanisms that influence brain function.

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Mechanisms and factors of tumorigenic processes. The study of cell movements and plasticity, the migratory pathways undergone by neurons, the conversion of epithelial into mesenchymal cells, the circuits and mechanisms that control organ growth, symmetry and body proportion, homeostasis and inter-organ communication in normal development has shown to be crucial to understand the induction of tumorigenic properties, tumour growth and the acquisition of migratory and invasive properties of tumour cells. This knowledge is contributing definitively to the design of novel antitumor and anti-metastatic therapies.

Memory and knowledge: the jump into systems neurobiology. Research in experimental psychology and neuroscience is gradually revealing the underlying psychological processes and the neural mechanisms involved in memory consolidation, the acquisition of knowledge and behaviour in response to experience. These interdisciplinary approaches to classic questions in neurosciences take advantage of the combination of most novel techniques (optogenetics, in-vivo pharmacology, experimental psychology, functional MRI, etc.) and will render added value also to social and educational disciplines.

The IN has an Excellence PhD Training Programme in Neurosciences, providing courses and research training to European graduate students in several areas of basic neurosciences. All courses of the programme are given in English and have assigned an appropriate number of ECTS (European Credit Transfer System) credits to facilitate the recognition of completed courses at other institutions. This includes a weekly seminar programme. In addition, members of the IN organize international courses and workshops open to the European scientific community.

JOB OPPORTUNITIES 2016-2017

1. TWO POSTDOCTORAL POSITIONS AVAILABLE IN PROF M ANGELA NIETO'S LAB, "CELL MOVEMENTS IN DEVELOPMENT AND DISEASE"

We are seeking highly motivated candidates to join us on a wide project within the frame of a European Research Council (ERC) Advanced Grant and an Excellence Programme Grant from the Government.

We aim at characterizing cell movements related to the activation of epithelial to mesenchymal transitions (EMT) in embryos and in adult disease. The EMT is crucial for the formation of multiple tissues and organs during embryonic development and it is reactivated in the adult during wound healing, tumour progression and organ degeneration. In the lab we use zebrafish, mouse and chick embryos as model systems together with a high interest in Cell Biology, Evo-Devo and Biomedical Research. We expect that the results of this work will have a big impact in a variety of human pathologies including congenital malformations, organ degeneration and cancer.

Applicants should hold a PhD degree and a strong background in preferably several of the following disciplines: zebrafish or mouse embryology, cell biology, high throughput approaches.

Selected recent references

- Ocaña et al. (2012). Metastatic colonization requires the repression of the epithelial-mesenchymal transition inducer Prrx1. *Cancer Cell* 22, 709-724
- Grande et al. (2015). Snail1-induced partial epithelial to mesenchymal transition drives renal fibrosis in mice and can be targeted to reverse established disease. *Nat. Med.* 21, 989-997.
- Nieto et al. (2016). EMT: 2016. *Cell* 166, 21-45.

Additional information

Positions are open for 2 years (from December 1st 2016). Starting dates and salaries are negotiable.

Funding: ERC Advanced Grant and an Excellence Programme Grant from the Spanish Government

Interested candidates please send a letter of motivation describing the interest in our project together with your previous research experience, a full CV and two reference letters. Contact by e-mail before October 30th 2016: Prof. M. Angela Nieto, Instituto de Neurociencias CSIC-UMH, e-mail: anieto@umh.es.

2. ONE POSTDOCTORAL POSITION AVAILABLE IN DR GUILLERMINA LÓPEZ-BENDITO'S LAB, "CELLULAR AND MOLECULAR MECHANISMS OF BRAIN WIRING"

Our research team runs several related projects studying the cellular and molecular mechanisms involved in the development of axonal connections in the brain. In particular, our aim is to uncover the principles underlying thalamocortical axonal wiring, maintenance and ultimately the rewiring of connections, through an integrated and innovative experimental programme. These include optical imaging, manipulation of gene expression in vivo, cell and molecular biology, biochemistry, cell culture and electrophysiology.

The candidate should have a PhD, or equivalent, in relevant disciplines (Developmental Neuroscience, Molecular Biology, Genetics) with excellent past-records of achievements. Notions in genome-wide analysis is preferred.

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Additional information

Start date: 01/01/2017 and later

Duration: 3 years

Funding: ERC Consolidator Grant

Applications should include a description of research accomplishments and technical expertise, two letters of recommendation, CV and list of publications.

Contact by e-mail before October 30th 2016: Dr Guillermina López-Bendito, Instituto de Neurociencias CSIC-UMH, e-mail: g.lbendito@umh.es; web: lopezbenditolab.com

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Department of Experimental and Health Sciences at Universitat Pompeu Fabra (DCEXS-UPF)

Barcelona, Spain
www.upf.edu/cexs/

The Department

The Department of Experimental and Health Sciences (DCEXS) was founded in 1998 by the Pompeu Fabra University (UPF), a young, public and modern university born in 1990 and called to become one of the leading European universities. Within this framework, the great challenge of the DCEXS has been to successfully develop a project where research and teaching are firmly integrated.

Together with the UPF's Faculty of Health and Life Sciences, the DCEXS is responsible for undergraduate degrees, Master's degrees, and PhD Programmes in Biomedicine, fully taught in English and recognized by independent agencies. Scientific research is perceived by the students, both undergraduates and postgraduates, as an essential tool in their studies.

The DCEXS is strategically located within the Barcelona's Biomedical Research Park (PRBB), a large scientific infrastructure that gathers together several public research centres and is physically connected to Barcelona's Hospital del Mar, thus being one of the largest hubs of biomedical research in southern Europe. This close contact has allowed DCEXS to establish strategic alliances with surrounding research institutes affiliated to the UPF such as the Centre for Research in Environmental Epidemiology (CREAL), the Centre for Genomic Regulation (CRG) or the Hospital del Mar Medical Research Institute (IMIM).

Over the last few years, the DCEXS has achieved a notable presence in different research fields and a growing research output and impact. Remarkably, DCEXS researchers published 192 papers during 2015, with 161 (84%) falling in the first quartile and 130 (68%) in the first decile. These publications have so far received over 500 citations.

Regarding UPF, its international orientation is one of its distinguishing features. This international projection has been recognised by the Spanish Ministry of Education through the International Campus of Excellence award (2010) and is backed up by the UPF's distinguished position in international rankings as one of the top Spanish universities.

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With the highest percentage of international faculty in Spain and one of the most international in Europe, every year UPF hosts a high number of international students. During 2013-14, international students represented 36% of all Master's students and 52% of all Doctoral students, attracted by the opportunity to study and perform research with internationally renowned faculty and researchers.

It is precisely these international links and projects with the best universities in the world that constitute one of Pompeu Fabra University's most important assets. At present, UPF has collaboration agreements with 40 universities ranked among the world's Top 100 according to the Times Higher Education 2012-13 ranking.

This selection allows us to develop outstanding projects such as the Global Cities programme, an International Summer School run in conjunction with the University of California, Los Angeles, or double and joint degree programmes on the postgraduate level. Through an extensive, select network of exchange agreements with over 250 universities, Pompeu Fabra University's mobility programmes enrich the campus with 1,529 students from 40 different countries (2012-13 Academic Year) and have allowed 30% of UPF graduates to carry out an exchange abroad as a differentiating factor on their résumés.

Lastly, the DCEXS received the "María de Maeztu Unit of Excellence" award by the Ministry of Economy and Competitiveness (MINECO) in 2014.

JOB OPPORTUNITIES 2016-2017

1. DCEXS PhD FELLOWSHIPS

Positions will be available in all lines of research of the Department of Experimental and Health Sciences.

Information will be available at: www.upf.edu/cexs/job_offers/ (the new call will be published in 2017).

We offer a full time 4-year contract expected to start in January 2018 and registration in the Spanish Social Security System, which provides full health and occupational insurance coverage.

Additional information

Academic costs (except tuition fees) are also covered.

Scientists interested in teaching can have the opportunity to teach grad students.

Professionals working in the Barcelona Biomedical Research Park can participate in the PRBB Intervals programme courses. The PRBB Intervals is an interdisciplinary education programme which offers training in science communication, technology transfer, career development and leadership.

Contact person: Regina López Aumatell, PhD; DCEXS Research Manager and María de Maeztu Unit Project Manager; Regina.lopez@upf.edu; (+34) 933160870.

2. POSTDOCTORAL POSITIONS

Positions will be available in all lines of research of the Department of Experimental and Health Sciences.

Information will be available at: www.upf.edu/cexs/job_offers (the new call will be published by October 2016).

We offer a full time 4-year contract expected to start in January 2017 and registration in the Spanish Social Security System, which provides full health and occupational insurance coverage.

Additional information

Scientists interested in teaching can have the opportunity to teach grad, Master's and PhD students.

Professionals working in the Barcelona Biomedical Research Park can participate in the PRBB Intervals programme courses. The PRBB Intervals is an interdisciplinary education programme which offers training in scientific communication, technology transfer, career development and leadership.

Contact person: Regina López Aumatell, PhD; DCEXS Research Manager and María de Maeztu Unit Project Manager; Regina.lopez@upf.edu; (+34) 933160870.

3. EXPRESSIONS OF INTEREST

If you would like to work with us, we also welcome expressions of interest from scientists in all career stages. Students looking for a PhD position are also encouraged to contact us.

For any information and informal inquiry, please contact Dr. Regina López (Regina.lopez@upf.edu).

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Institute for Bioengineering of Catalonia (IBEC)

Barcelona, Spain
www.ibeccatalonia.eu

The Institute

The Institute of Bioengineering of Catalonia (IBEC, www.ibeccatalonia.eu) is a leading-edge multidisciplinary research centre based in Barcelona that conducts excellent interdisciplinary research at the frontiers of engineering and life sciences in order to generate new knowledge by putting together fields like nanomedicine, biophysics, biotechnology, tissue engineering and the applications of health information technology.

The IBEC is a non-profit-making foundation set up in 2005 by the Departments of Innovation, Universities and Enterprise and Health of the Government of Catalonia, the University of Barcelona and the Technical University of Catalonia.

The IBEC conducts interdisciplinary research at the highest international level, creating knowledge that helps to enhance quality of life, improve health and create wealth. IBEC aims to cement a solid international position in the field of nanomedicine and bioengineering.

It is currently located in Barcelona Science Park, has facilities covering 2,500 square metres of floor space, 18 research groups and a team of researchers and support services made up of 250 people from more than 20 different countries. This location in Barcelona Science Park offers a highly stimulating biomedical environment where the institute can work in close cooperation with both public and private sector organisations.

The IBEC is one of the top research institutions named as a Severo Ochoa Centre of Excellence by the Ministry of Economy and Competitiveness (MINECO) in charge of research and innovation policy in Spain, which recognizes excellence at the highest international level in terms of research, training, human resources, outreach and technology transfer. The Severo Ochoa award provides 4M€ over 2015-2019 to implement IBEC's Research and Human Resources Programmes.

At IBEC, frontier research is combined with specific transfer targets to produce new applied technologies to be used in life and health sciences. We have the versatility to generate excellent research and, at the same time, work with industry to develop new diagnostic

or treatment systems. Early diagnosis, new therapies based on regenerative medicine, better quality of life compatible with an ageing population, and technological advances to increase efficiency and make healthcare sustainable: these are some excellent examples of areas where the IBEC can contribute with its cutting-edge research to generate new technological advances of key importance to innovation. They are challenges which concern us because of their social and human repercussions, but also because they have a significant political and economic dimension.

The IBEC has the capacity to write many success stories on healthcare technology, nanomedicine and regenerative medicine, in the spheres of science, technology and innovation, success stories of which we will all be able to feel proud.

JOB OPPORTUNITIES 2016-2017

If you are interested in working at IBEC, there are different ways to apply for any research position:

By applying online to any of the following calls that are launched every year in our website:

- The International PhD Programme: www.ibecbarcelona.eu/phd
- The BEST Postdoc Programme: postdocs.ibecbarcelona.eu/
- Junior Group Leader Positions: www.ibecbarcelona.eu/category/jobs/.

By sending a spontaneous candidacy to jobs@ibecbarcelona.eu.

Or by applying to any of the open positions that are regularly published at our website: www.ibecbarcelona.eu/category/jobs/.

Further information about our 3 main selection processes can be found below.

1. INTERNATIONAL PHD PROGRAMME

The call is aimed at master students (the future PhD student must have obtained a university degree and a master's degree; or must hold an official university qualification from a country of the European Higher Education Area with a minimum of 300 ECTS of official university studies, of which at least 60 are at masters' level).

Doing a PhD at IBEC brings you the opportunity to start your research career in a stimulating, interdisciplinary and high quality international scientific environment. IBEC International PhD Programme aims to train the next generation of researchers in bioengineering for future medicine, active ageing, and regenerative therapies.

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Our regular IBEC Seminars invite top names in bioengineering and nanomedicine from all over the world to help keep us up-to-date on the state-of-the-art of research in the field. IBEC seminars also offer the opportunity to network and discuss recent developments, fostering internal and external interaction and opening doors to future collaborations. IBEC researchers also have the chance to learn from their colleagues at the PhD Discussions series of talks and skills sessions. These provide a forum for students to present the results of their research and discuss them with each other, as well as with more experienced researchers. Outside speakers are also invited to help IBEC's students in their career development by delivering talks on complementary skills such as entrepreneurship and career mobility.

The Institute also holds an annual symposium on bioengineering and nanomedicine, as well as hosting and organizing several project-based or general scientific meetings and workshops throughout the year.

Thanks to IBEC's interdisciplinarity, the most recent technical and technological approaches developed for research in biology and the biomedical sciences are available at the institute. PhD students can acquire experience and practical training in both the classical approaches and new methodologies in imaging techniques, nanomaterials technology, nanofabrication, biosensors, bio signal interpretation, lab-on-a-chip approaches, and many more.

Besides the mandatory doctoral courses offered by the universities, IBEC offers several training courses specifically devoted to PhD students and early postdocs, covering such topics as Scientific writing, Effective communication, leadership, Guidance for women in their research, How to publish in high-ranking journals, Preparing a PhD thesis, Presentation skills in English, Career development, Diversity and Cross-Cultural awareness in research, entrepreneurship or technology transfer.

All these courses on complementary and transferrable skills are designed to enhance future employability and career progress.

As part of their training, young researchers are encouraged to take up research placements in other centres, and there is a special funding programme for this purpose. Thanks to these stays, students benefit from intense transnational and multidisciplinary mobility, as well as the expertise and facilities of the best institutions worldwide. Such mobility provides them with multicultural skills including languages and proves highly beneficial in crossing cultural borders and enhancing their future employability in a globalised job market.

Placements take place in any of the many institutions with which our researchers collaborate, including but not restricted to centres linked to IBEC by strategic research agreements or funded exchange programmes such as Marie Curie or the Networks of

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Excellence. These stays have the added value of enabling PhD students to obtain an international PhD, a recognised distinction which significantly improves their chances of a successful career.

IBEC does not award its own PhD degree. The awarding body of your PhD will be the university at which you enroll as a doctoral student. IBEC is currently recognized as one of these centres by the University of Barcelona (UB) and the Universitat Politècnica de Catalunya. Barcelona Tech (UPC), which are also two of its founding members. The Research part of your doctoral studies will be carried out at IBEC.

Additional information

FOUR TO SIX PREDOCTORAL FELLOWSHIPS will be offered and will be funded by the IBEC and the Ministry of Economy and Competitiveness (MINECO), through the "Ayudas para contratos predoctorales para la formación de doctores" 2017 call.

The fellowships offer a 4 year-contract with a gross salary of 16,422€ per year, plus 6,250€ for mobility and training for the 4-year period.

Call opens: December 2016

Further information available on our webpage: www.ibecbarcelona.eu/phd

Contact the Human resources Unit at phd@ibecbarcelona.eu for further information

2. 'BEST' INTERNATIONAL POSTDOCTORAL PROGRAMME

The Bioengineering Excellence Scientific Training (BEST) Postdoctoral Programme aims to attract international experienced researchers in the areas of Nanomedicine, Cell Engineering and ICT for Health. It will provide exceptional training opportunities for up to 24 high-potential fellows (in 2 calls of 12 positions per call), with a 2-year contract at IBEC and funded interdisciplinary and intersectorial placements at world-class research centres, hospitals and companies within IBEC's global network of collaborating institutions. Fellows will be hosted within an IBEC research group or the group of an IBEC associated researcher, where they will develop their own research project.

Additional information

2-year labour contract for the performance of a research project

32,572€ yearly gross salary with full security coverage, which includes health and accident insurance, pension and unemployment benefits

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Annual Family allowance: 1,817€ for fellow with family obligations.

Yearly 23 working days of paid holidays and 9 leave days for personal matters.

Measures to reconcile work and family life: Maternity and paternity leave (16 weeks), leave for breastfeeding (14 days or 1 hour/day for 9 months), telecommuting, shorter hours for guardianship or leave to care for children and relatives.

A personalized training plan will be defined and implemented yearly according to the different training needs.

9,600€ has been allocated annually for research and training activities, including a complementary training programme to develop non-scientific skills aimed at improving fellows' career development. These funds will be managed by IBEC.

Call opens: End 2017- beginning 2018.

Contact the Human resources Unit at bestprogramme@ibecbarcelona.eu for further information.

Further information available on our webpage: postdocs.ibecbarcelona.eu/

3. JUNIOR GROUP LEADER POSITION

Postdoctoral researchers with an excellent scientific record are expected to develop an ambitious project for their future group and to contribute to one or more of IBEC's core applications areas.

Candidates will be evaluated by the IBEC International Scientific Committee based on their scientific quality, the feasibility of the proposed scientific approach, the potential impact of their research, the added value to the current IBEC research programme and structure, and their ability to carry out efficient leadership and management.

Apart from outstanding scientific output, candidates must prove that they are active in the application of competitive proposals as principal investigators. They must also have begun to establish their own research group by attracting and training new talent. Any mobility experience, e.g. a stay in another country/region, will be considered as a valuable contribution.

Additional information

The successful candidate will be appointed for an initial 4-year period with possibility of renewal. At the end of the fourth year, the Junior Group Leader will be evaluated by

the International Scientific Committee. A positive evaluation will allow the candidate to become a consolidated Group Leader.

Junior Group Leaders at IBEC are offered a start-up package and provided with suitable laboratory space and access to the state-of-the-art core facilities at IBEC. Moreover, they are assigned a research project manager to support them with the management of their projects and interaction with IBEC administrative staff.

Call opens: Yearly, during the 1st Quarter.

Further information available on our webpage: www.ibecbarcelona.eu/category/jobs/
You can also download last year's edition at www.ibecbarcelona.eu/wp-content/uploads/2015/12/tenuretrack2016_long.pdf.

Contact the Human resources Unit at gl.application@ibecbarcelona.eu for further information

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Structural Biology Unit at Molecular Biology Institute of Barcelona (SBU-IBMB)

Barcelona, Spain
www.sbu.csic.es

The Unit

The Structural Biology Unit (SBU) is one of the leading research units of the Spanish Research Council (CSIC). The SBU consists of seven research groups, featuring over 60 researchers, nearly 30% of which are coming from different countries all over the world. The SBU was selected as a María de Maeztu Unit of Excellence in 2015.

The SBU aims to understand the cell machinery from a structural perspective. The study of proteins, nucleic acids and their interactions to elucidate the molecular basis of physiological processes and pathology is the principal interest of our researchers. Research lines are focused in the regulation of nucleic acid replication and transcription, structure-function analysis of proteases and other enzymes related to human diseases, the study of different pathogens, including viruses, and organelles like peroxisomes and mitochondria. A separate line of research is centered on the development of computational methods for X-ray crystallography.

The SBU is part of the Molecular Biology Institute of Barcelona (IBMB) and is located at the Barcelona Science Park (PCB), which provides an excellent scientific and technological framework. The PCB belongs to the Barcelona Knowledge Campus (BKC), a campus of international excellence that includes the University of Barcelona (UB) and the Polytechnic University of Catalonia (UPC), which also keeps our unit and the entire IBMB in close connection with the academic world.

JOB OPPORTUNITIES 2016-2017

1. JUNIOR FACULTY RECRUITMENT – STRUCTURAL BIOLOGIST WITH CRYO-EM EXPERTISE

The SBU is selecting outstanding Junior Group Leaders to postulate for a faculty position at the IBMB-CSIC. We currently have an exciting opportunity for a Structural Biologist with expertise in state-of-the-art electron microscopy techniques for the elucidation of high resolution structures of multi-component complexes relevant to biomedicine.

Outstanding opportunities exist to collaborate with structural, computational, developmental and cell biologists in a highly interactive research environment at the IBMB-CSIC. Attractive start-up packages will be offered.

Additional information

Contract period and status: Permanent position (start end of 2017)

Selection process: Competitive call from CSIC.

Application period: subject to CSIC 2016 calendar

Further information available on our website: www.sbu.csic.es

Contact person: Laia Vives (lvacri@ibmb.csic.es)

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2. SEVEN POSITIONS FOR PRE-DOCTORAL TRAINING

The SEVEN FELLOWSHIPS offered are to join one of the following research projects:

- Structural studies of protein-DNA complexes involved in gene transcription regulation
- Structure of proteins involved on pathological processes
- Structural studies on mitochondrial DNA regulatory proteins
- Structural studies on macromolecular complexes involved in synaptic vesicle fusion
- Biochemistry and molecular biology of proteolytic enzymes and of the host-microbiome interaction
- DNA topology, regulation and functional implications
- Development of computational methods in macromolecular crystallography

Additional information

Contract period and status: 4 years (start around January 2017)

Selection process: Competitive call from Spanish Ministry of Economy and Competitiveness (MINECO)

Application period: subject to MINECO calendar

Further information available on our website: www.sbu.csic.es - www.idi.mineco.gob.es
Contact person: Laia Vives (lvacri@ibmb.csic.es)

3. INPHINIT PREDOCTORAL FELLOWSHIPS

INPhINIT is the new international fellowship program of “la Caixa” Bank Foundation addressed to students to make their PhD in Centres and Units rewarded with the “Severo Ochoa” or “María de Maeztu” excellence distinction. The programme is cofunded by the European Commission through the Horizon 2020-Marie Skłodowska-Curie Actions-COFUND programme.

Students can join the research line of its interest within the multiple projects offered at that moment at the SBU.

Additional information

Contract period and status: 3 years (start around Sep-Oct 2017)

Selection process: Competitive call from “la Caixa” Bank Foundation (Forthcoming by the end of 2016), with selection carried out by the Foundation.

Further information available on the following websites: www.sbu.csic.es – www.inphinitlacaixa.org

Contact person: Laia Vives (lvacri@ibmb.csic.es)

4. ONE POSTDOCTORAL POSITION BY THE BANCO SANTANDER-MARÍA DE MAEZTU POSTDOCTORAL PROGRAMME

There is currently available one open postdoctoral position to join one of our seven research lines. Candidate must have research experience in Structural Biology covering either X-ray crystallography and/or electron microscopy single particle analysis. Knowledge of macromolecular assemblies and experience in reconstituting large multi-protein complexes are desirable.

Additional information

Contract period and status: 3 years (start around first term 2017)

Selection process: Position financed by a competitive call by the Banco de Santander-María de Maeztu Postdoctoral Programme. PhD must be obtained between January 2011 and December 2013.

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Further information available on our website: www.sbu.csic.es

Contact person: Laia Vives (lvacri@ibmb.csic.es)

5. ONE ELECTRON MICROSCOPY TECHNICIAN

The SBU is looking for technical support to the SBU research lines in the 3D structure determination of macromolecular complexes by EM.

Candidate must have experience in negative stain and cryo-EM: sample preparation and optimization, data acquisition using different microscopes and detectors, data processing and analysis.

Additional information

Contract period and status: 3 years (start around first term 2017)

Selection process: Position financed by a competitive call by the Banco de Santander-María de Maeztu Support Technician Programme. Bachelor's degree required.

Further information available on our website: www.sbu.csic.es

Contact person: Laia Vives (lvacri@ibmb.csic.es)

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Centre for Research in Agricultural Genomics (CRAG)

Barcelona, Spain
www.cragenomica.es

The Centre

The Centre for Research in Agricultural Genomics (CRAG) is an independent research institution located in the area of Barcelona (Spain) and devoted to leading-edge research in plant and farm animal biology, genetics and genomics, with an emphasis in the molecular basis of genetic characters of interest in plants and farm animals and in the applications of molecular approaches for breeding of species important for agriculture and food production.

CRAG brings together basic research groups in plant development, physiology, metabolism and genetics; groups in bioinformatics and genomics working on plants and animals; and applied projects developed together with Agbio, Biotech, and Breeding companies.

Currently, CRAG hosts 23 research groups, and approximately 60 PhD candidates and 30 postdocs coming from more than 20 different countries. CRAG research groups are organized into four scientifically-defined research programmes:

- Plant Development and Signal Transduction
- Plant Responses to Stress
- Plant Metabolism and Metabolic Engineering
- Plant and Animal Genomics

CRAG facilities, inaugurated in 2011 at the campus of the Autonomous University of Barcelona (UAB), comprise an ample and well-equipped building designed for modern plant biology and genomics research. CRAG hosts several core units or platforms that are tailored to the needs of its different Research Programs and scientific goals. The facilities include Genomics and NGS, Genotyping, Confocal Microscopy, Metabolomics and Bioinformatics. CRAG is also equipped with greenhouses and controlled environmental chambers for the production and growth of transgenic plants and in vitro plant cell

cultures. Facilities are operated by highly-trained technical staff and are available to all personnel at CRAG as well as to the Industry and other stakeholders.

CRAG develops leading-edge research in its areas of expertise that is regularly published in top research journals. Some of these publications include articles in high-profile general and biology journals (Science, Cell, PNAS, Nature Genetics, Nature Communications, Cell Reports...) and in the best plant-specific journals (Plant Cell, Plant Physiology, Plant Journal...). Patents, collaborations with industry and cooperation with high-profile international researchers and institutions also pervade research at all four programmes and altogether contribute to the Centre international leadership.

General seminars with renowned international speakers are held weekly at the CRAG auditorium and students and postdocs are encouraged to assist. Each CRAG Research Programme holds its own internal seminars fostering collaboration among CRAG scientists. Training and international cooperation is promoted through meetings and workshops organized by CRAG and other collaborating research institutions.

CRAG has been recognized in 2015 with the Severo Ochoa Centre of Excellence award. The "Severo Ochoa" Programme, from the Spanish MINECO, recognizes centres that perform cutting-edge research and are among the world's best in their respective areas. CRAG has also received the "Human Resources Excellence in Research" award from the European Commission. The award reflects CRAG's commitment to conduct transparent and merit-based recruitment and appraisal procedures and to provide attractive working conditions in alignment with the European Charter and Code. CRAG is an equal opportunity / affirmative action employer and encourages women and underrepresented minorities to apply.

JOB OPPORTUNITIES 2016-2017

1. GROUP LEADER IN THE AREAS OF COMPUTATIONAL GENOMIC ANALYSES, BIOINFORMATICS, SYSTEMS BIOLOGY OR MODELING

This position is currently open and will remain open until filled. Applicants at both the Junior and Senior levels will be considered. Appointment level and salary will depend on the profile of the successful candidate.

Areas of particular interest include, but are not limited to: bioinformatics approaches to the study of plant and animal genomes, including crops and livestock, and the development of network analyses and mathematical modelling of biological processes. Examples include computational modelling of regulatory and metabolic networks, large-scale modelling of biological systems, computational studies of the genetics and epigenetics of agricultural traits, or integrative analysis of next-generation sequencing data for understanding the

functional regions of genomes, and the development of software methods and tools for the analyses of high-throughput molecular data.

It is expected that the new research line will create synergies with the Research Programmes at CRAG (www.cragenomica.es/research-programs).

CRAG is committed to provide new group leaders with the best possible support to successfully develop their careers. The successful candidates will receive office space and equipped laboratory space to host her/his research team, personnel support and financial aid.

Additional information

Informal inquiries are welcome and may be addressed to the Director, Prof. José Luis Riechmann (jose Luis.riemann@cragenomica.es).

Applications should include CV, letter of intent, brief research plan (4-pages maximum) and contact details for at least three referees.

Employment is in compliance with Spanish legislation and regulations under a full-time contract. Employees receive the benefits of the Spanish Social Security system covering sickness, maternity/paternity leaves and injuries at work.

Further information can be found on: www.cragenomica.es/events/news/job-opening-group-leader-in-the-areas-of-computational-genomic-analyses-bioinformatics

2. THE INTERNATIONAL CRAG "SEVERO OCHOA" PHD PROGRAMME - 2017 & 2018 CALLS - PHD STUDENTS POSITIONS

This is a four-year PhD programme. Doctoral students enrolled in this program will obtain their PhD Degree from either the Autonomous University of Barcelona (UAB) or the University of Barcelona (UB). In each of the 2017 and 2018 calls, CRAG will offer at least four available scientific projects, led by CRAG researchers.

The programme is aimed at international students who would have completed one of the following options by June 2017 or June 2018:

- Studies that lead to an official Spanish (or from another country of the European Higher Education Area) University Degree in Biology, Biochemistry, Biotechnology, or related areas and that have 300 credits (ECTS), of which at least 60 must correspond to master level.

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- A Degree in a non-Spanish university not adapted to the European Higher Education Area that gives access to doctoral studies in Biology, Biochemistry, Biotechnology or related areas.

Candidates are selected exclusively on merit, on the basis of their curriculum. Academic grades and the curriculum of applicants are evaluated, as well as reference letters and a motivation letter. No selection criteria for positive or negative discrimination are applied.

Additional information

The 2017 PhD Programme Call will open in November-December 2016 and the successful candidates will be expected to join CRAG in December 2017 or January 2018.

The 2018 PhD Programme Call will open in November-December 2017 and the successful candidates will be expected to join CRAG in December 2018 or January 2019.

More information about the doctoral programme at CRAG can be found here: www.cragenomica.es/crag-phd-program.

Inquiries may be addressed to: phdprogram@cragenomica.es.

3. THE INTERNATIONAL CRAG “SEVERO OCHOA” POSTDOCTORAL PROGRAMME - 2017 CALL

This **call will open in early 2017** and candidates will be expected to join CRAG in no later than 1st January 2018.

This is a two-year postdoctoral contract, with the possibility of renewal for a third year being offered. Salary will be approximately 30,000€ gross per year. Contracts include social security coverage. Applications for various CRAG Research Groups will be available.

Additional information

Information about the research groups and CRAG is available at www.cragenomica.es/research-programs.

Applicants must hold a doctorate degree before the start of the postdoctoral contract, but not necessarily when applying. Applicants must possess a high-quality research trajectory and a competitive publication track record.

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Candidate selection will be performed by an independent, external peer review committee. Selection will be based on the candidate's academic qualifications and skills, reference and motivation letters, as well as research potential and future impact of the project. Research trajectory of the receiving group, and match between the candidate's profile and the project will also be part of the criteria. No selection criteria for positive or negative discrimination will be applied.

Inquiries may be addressed to: postdocprogram@cragenomica.es

4. 2017 JUNIOR GROUP LEADER CALL – EXPRESSION OF INTEREST FOR THE RAMÓN Y CAJAL FELLOWSHIP PROGRAMME

This **call will open in the Fall of 2017** and candidates will be expected to join CRAG in late 2018.

CRAG will seek for strong candidates to apply for researcher contracts under the Ramón y Cajal (RyC) programme. This competitive programme, funded by the Spanish Ministry of Economy and Competitiveness (MINECO), offers 5-year contracts to promote the incorporation of national and international researchers with an outstanding track record in research. Successful candidates will develop an independent and internationally recognized research line at CRAG.

Candidates are sought in any of the following scientific profiles:

- Evolutionary Developmental (Evo-Devo) plant biology
- Interdisciplinary approaches for Cell and Developmental Biology in plants
- Plant development and signaling in non-model systems (crops)
- Pathogen/pest fitness in varying host niches
- Integration of plant responses to stress with development and metabolism
- Technology-driven fight against emerging pathogens/pests
- Systems analysis of metabolome-wide responses
- Bioinformatics
- Connecting genotype to phenotype in (plant and animal) breeding
- Population genomics, molecular evolution, modeling

Additional information

International applicants will be specifically encouraged to apply.

CRAG is committed to provide independent young investigators with the best possible support to successfully develop their careers.

Successful candidates will join CRAG as Junior Group Leaders and will receive office space and equipped laboratory space to host her/his research team, personnel support and financial aid.

Inquiries may be addressed to the Director, Prof José Luis Riechmann (joseluis.riemann@cragenomica.es).

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Institute of Environmental Science and Technology at the Universitat Autònoma de Barcelona (ICTA-UAB)

Barcelona, Spain
www.uab.cat/icta

The Institute

The Universitat Autònoma de Barcelona (UAB) established the Institute of Environmental Science and Technology (ICTA) in 2003. It has the status of a UAB Research Institute.

The ICTA-UAB addresses major global environmental and sustainability challenges related to anthropogenic climate and global change. With increased global temperatures, alteration of precipitation patterns, extreme weather events, rapid ocean warming, and rising sea levels, climate change is expected to intensify the challenges of global instability, hunger, poverty and conflicts. There is thus an urgent need to act and stimulate the necessary societal transformations to adapt and protect human populations and natural resources essential for human life. Global change (more broadly than climate change, and sometimes independent of it) is also a main research line of the Institute. For example, fisheries mismanagement –which is perhaps less directly tied to climate- presents a distinct threat to global food supplies, especially in a world increasingly urbanized in coastal settings.

The ICTA-UAB researchers devote much attention to climate and global change studies, following a trans-disciplinary approach that ranges from the Natural Sciences to Engineering and Social Sciences. The ICTA-UAB stands out among the environmental science institutes in Spain and Europe in that it has achieved a rare balance of Natural, Social and Engineering Sciences in studying the various dimensions of climate change, global change and climate policy.

The ICTA-UAB is a trans-disciplinary centre that promotes academic research and postgraduate education in the Environmental Sciences, offering two masters programs (Joint European Master in Environmental Sciences (JEMES) and Master in Interdisciplinary Studies in Environmental, Economic and Social Sustainability), and one doctoral (PhD) programme within the postgraduate education system of the UAB (www.uab.es/postgraduate). These reflect an interdisciplinary and international approach, within which students can choose the learning trajectory that best fits their interests and capabilities. The PhD programme has been awarded the official quality label of the Spanish government.

The ICTA-UAB is a research institute with various categories of employees (see below), including about 60 professors and researchers, approximately 75 PhD students, some 20 research and laboratory assistants and an administrative team of 13 people.

The ICTA-UAB was accredited as María de Maeztu Unit of Excellence in 2015 by the Spanish Ministry of Economy and Competitiveness (MINECO). The award is the highest institutional recognition of scientific research in Spain.

As forementioned, the ICTA-UAB main research areas can be divided in three lines:

- Earth and Life Sciences: Aerobiology, Atmospheric Transport and Health, Climate and Environmental Biogeochemistry, Conservation, Biodiversity and Global Change, Environmental Radioactivity, Integrated Earth System Dynamics, Marine Ecology and Management, Ocean Acidification, Paleo-climate and Ocean Dynamics

- Social Environmental Sciences: Business Environmental Management, Cities and Environmental Justice, Ecological Economics and Political Ecology, Environmental and Climate Economics, Environmental Geography and Water Governance, Analysis of Socio-Ecological Systems in a Global World, Science Communication and Environmental Education, Transport Mobility and the Environment

- Technology, Environment and Society: Agricultural Sustainability and Waste Management, Energy and Integrated Environmental Assessment, Industrial Ecology, Life-cycle Analysis and Eco-innovation, Science and Technology Studies.

JOB OPPORTUNITIES 2016-2017

There are several opportunities to work at ICTA-UAB within our predoctoral and postdoctoral programmes.

PREDOCTORAL FELLOWSHIPS

The PhD programme at the ICTA-UAB offers the opportunity to start an environmental sciences research career in a stimulating dynamic, international, inter-disciplinary and highly qualified working environment.

ICTA-UAB PhD practical training courses are specifically devoted to PhD students and early-career postdoctoral researchers, covering topics such as team building and team collaboration for research, scientific writing and publishing in high-ranking journals, communicating scientific results to stakeholders and policymakers, preparing a strong and visible CV, cross-cultural working: understanding diversity for enhanced performance, effective communication, guidance for women in science and planning your academic and non-academic career.

Additional information

Predocctoral fellowships will be offered in 2016 and 2017 and will be funded by the ICTA-UAB unit of excellence and the Ministry of Economy and Competitiveness (MINECO), through calls.

Information about the calls will be available at the ICTA-UAB webpage (www.uab.cat/icta) and by contacting the ICTA-UAB unit of excellence project manager at pr.mdm.icta@uab.cat.

FIVE POSTDOCTORAL POSITIONS

In 2017, the institute will launch five 2-year duration postdoctoral positions in the following wide topics:

- Translating natural science insights on climate change into models that can be used for systems and synergy analyses
- Integrating socio-economic and policy studies with natural science studies (including modeling simulations and projections) to enhance consilience of climate policy science
- Combining engineering and economic-policy analysis to provide more complete information for policy makers about costs and rebound of technological design for climate solutions
- Tapping into local climate change knowledge to provide more relevant insights into regional and local climate dynamics
- Understanding bottom-up and top-down approaches in fostering a transition to a low-carbon economy

Additional information

Postdoctoral researchers with an excellent scientific record are expected to develop an ambitious project to contribute to the ICTA-UAB unit of excellence core topics. The project should implement ICTA-UAB cross-disciplinary research within the main topics above enhancing the collaboration within different ICTA research groups.

Postdoctoral projects will be developed at the ICTA-UAB between 2017 and 2019. Information will be available by contacting the ICTA-UAB unit of excellence scientific director and the project manager at pr.mdm.icta@uab.cat.

Further information can be found on our website www.uab.cat/icta.

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II. Maths, Experimental Sciences and Engineering

1. Barcelona Supercomputing Centre (BSC)
2. Institute of Mathematical Sciences (ICMAT)
3. Basque Centre for Applied Mathematics (BCAM)
4. Institute of Photonic Sciences (ICFO)
5. Institute for Theoretical Physics (IFT)
6. High Energy Physics Institute at the Universitat Autònoma de Barcelona (IFAE)
7. Institute of Cosmos Sciences at the University of Barcelona (ICC-UB)
8. Institute of Corpuscular Physics (IFIC)
9. Institute of Chemical Research of Catalonia (ICIQ)
10. Catalan Institute of Nanoscience and Nanotechnology (ICN2)
11. Institute of Materials Science of Barcelona (ICMAB)



Barcelona Supercomputing Centre (BSC)

Barcelona, Spain
www.bsc.es

The Centre

The Barcelona Supercomputing Centre - *Centro Nacional de Supercomputación* (BSC-CNS, or BSC) is the leading supercomputing centre in Spain. The mission of BSC is to research, develop and manage information technologies in order to facilitate scientific progress. BSC combines HPC service provision and R&D into both computer and computational science (life, earth and engineering sciences) under one roof, and currently has over 460 staff from 44 countries.

BSC has four departments:

Computer Sciences: This is the Centre's largest department. Its mission is to research and influence the building, programming and use of the computers of the future, in close cooperation with the leading companies in the sector.

The **Computer Applications in Science and Engineering (CASE) Department:** The mission of CASE is to develop new computational strategies to simulate complex problems capable of running efficiently on modern supercomputers.

Earth Sciences: The aim of this department is to carry out research into modelling and understanding the behaviour of the Earth's system, with a particular focus on atmospheric and climatic processes.

Life Sciences: This department uses computational tools to understand life processes. Its research focuses on aspects of computational biology, ranging from bioinformatics for genomics to computational biochemistry.

Most of the BSC's research lines are developed within the framework of European programmes, and the Centre also does basic and applied research in collaboration with leading companies such as IBM, Microsoft, Intel, Nvidia, Repsol and Iberdrola.

The quality of our investigation has been recognized twice by the Spanish Government with the Severo Ochoa Centre of Excellence award for cutting edge Spanish Science, and since April 2015 the Centre has been awarded with the “HR Excellence in Research” logo from the European Commission.

BSC can offer you plenty of opportunities and growth on a professional level. In fact, by joining us you will have the chance of integrate yourself onto a young team with international scientific prestige while enjoying your life in the modern, cosmopolitan and dynamic Barcelona.

JOB OPPORTUNITIES 2016-2017

At the BSC, we would like to increase our community with talented, innovative and dynamic professionals, ready to challenge themselves and kick-off a new project in Barcelona.

The BSC offers:

- A competitive compensation package (salary, perks) matched to the cost of living in Barcelona, depending on the experience of the candidate
- Training plan and professional development, including language classes and personal development courses
- Flexible compensation scheme
- Relocation assistance
- Flexible working hours
- Social activities
- Location close to the Technical University of Catalonia (UPC) with special access to the universities facilities (libraries, sports facilities...)
- Diversity and Equal Opportunity Employment BSC-CNS is an equal opportunity employer committed to diversity and inclusion. We are pleased to consider all qualified applicants for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability or any other basis protected by applicable state or local law.

Due to our number of projects we are opening vacancies regularly, during the last trimester of 2016 and during the whole 2017 all positions will be posted in our website.

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If you are interested in joining us, please check our current vacancies in the career section of the BSC-CNS website (www.bsc.es/vacancies-fellowships).

If you do not find anything that matches your profile, feel free to contact directly the Human Resources Team and we will advise you about our opportunities, and give you further information about us. Contact email: rrhh@bsc.es.

The BSC-CNS is constantly seeking candidates for any of the following researcher profiles:

1. FIRST STAGE RESEARCHERS (PHD STUDENTS)

The main goal of a First Stage Researcher – R1 is to carry out research activities within any of our four scientific departments (Computer Sciences, CASE, Life Sciences, and Earth Sciences) under the supervision of a lead researcher.

The PhD student will develop research activities in the area of her/his studies (thesis), and collaborate with the ongoing research projects of the group/department.

Candidates are required to have either studies that lead to an official Spanish (or from another country of European higher Education Area) university master degree in Computer Sciences, Biology, Chemistry, Physics, Environmental Sciences or related areas and that have 300 credits (ECTS) of an official university degree, of which at least 60 must correspond to master level; or a Degree in a non-Spanish university not adapted to the European Higher Education Area with access to doctoral studies in Computer Sciences, Biology, Biochemistry, Physics, Environmental Sciences or related areas.

2. RESEARCH ENGINEERS

The mission of a Research Engineer is to support the research activities of our scientific departments: Computer Sciences, CASE, Life Sciences and Earth Sciences. The technical contribution is to work within complex scenarios, testing models with experimental and observational data, and translating new science results into model improvements.

The Research Engineer will support researchers in developing, testing new software and/or applications, among other related technical duties.

Candidates are required to have any University degree in Computer Science, Telecommunications, Physics, Mathematics or equivalent, as well as knowledge and professional experience depending on the project and department where she/he will be involved in. Required knowledge or experience may comprise: programming languages (C, C++, Java, Fortran, C/C++, Python, Perl, Bash); MPI and SIMD instructions; computer architecture; global optimization algorithms; runtime systems, GPU programming and FPGAs; parallel programming models (OmpSs, OpenMP, MPI); UNIX/LINUX environments;

Embedded systems programming; Apache Cassandra; Deep learning tool; and/or Fault tolerance middleware development.

3. POSTDOCTORAL RESEARCHERS AND SENIOR POSTDOCTORAL RESEARCHERS IN LIFE SCIENCES

The Life Sciences Department at the BSC is actively seeking for postdoctoral researchers (R2, Recognized Researchers) and senior postdoctoral researchers (R3, Established Researchers).

The aim of the Life Sciences Department is to understand the molecular biology and evolution of living organisms using theoretical models and simulation algorithms. Postdoctoral researchers in the Life Sciences Department will be expected to:

- Develop theoretical studies of biochemical systems, from general methodological development, to the analysis of specific problems of special biological relevance.
- Generate and apply bioinformatics solutions to special requirements emerging from the development and execution of national research projects with a genomic or proteomics focus.
- Research, develop and optimize computational algorithms for characterizing and understanding protein-protein association, which remains one of the most important challenges in Structural Biology.
- Be responsible for research activities on complex biochemical processes both at an electronic, by means of quantum mechanics, and atomic, by means of classical mechanics. Candidates are required to hold a PhD Degree in Computer Science, Chemistry, Physics, Mathematics, Biology, Biotechnology or similar discipline.

4. POSTDOCTORAL RESEARCHERS AND SENIOR POSTDOCTORAL RESEARCHERS IN EARTH SCIENCES

The Earth Sciences Department at the BSC is actively seeking for postdoctoral researchers (R2, Recognized Researchers) and senior postdoctoral researchers (R3, Established Researchers).

The Earth Sciences Department of BSC has the aim of modelling and understanding the behaviour of the Earth System, focusing its research activities on atmospheric processes and climate change modelling.

Postdoctoral researchers in the Earth Sciences Department will be expected to:

- Research and Implement the most efficient climate prediction system to cover time scales ranging from a month to a few decades (sub seasonal-to-decadal climate prediction) at global and regional spatial scales

- Research and Develop a capability to include the modelling of atmospheric processes from urban to global scales to assess their impacts on air quality and its relationship with climate. Contribute to the design and development of operational services, user interfaces and visual prototypes in the field of climate services

- Research the impact of weather, atmospheric chemistry and climate on socio-economic sectors through the development of user-oriented services that ensure the transfer of the developed technology and the adaptation to a rapidly changing environment, especially for those highly vulnerable

- Use cutting-edge HPC and Big Data technologies to increment the efficiency, portability and user-friendliness of the Earth system models developed and used, including the pre-processing and post-processing of weather, atmospheric chemistry and climate data

Candidates are required to have a PhD degree in Computer Sciences, Physics, Atmospheric Sciences, Applied Statistics or any similar discipline related with Earth Sciences.

5. POSTDOCTORAL RESEARCHERS AND SENIOR POSTDOCTORAL RESEARCHERS IN COMPUTER SCIENCES

The Computer Sciences Department at the BSC is actively seeking for postdoctoral researchers (R2, Recognized Researchers) and senior postdoctoral researchers (R3, Established Researchers).

The scientific mission of the Computer Sciences Department is to influence the way computing machines are built, programmed and used. This is done through ideas, cooperation with manufacturers as technology transfer activities and “product-quality” open source developments that are usable by the scientific community.

The Department includes researchers with a holistic and vertical background and vision, and combines both stable and exploratory research paths, always with a co-design approach in mind, which covers from computer architecture, to resource management, performance tools, programming environments and algorithms, targeting not only supercomputer architectures but also BigData, realtime, embedded and mobile platforms. Performance, productivity, power/energy and reliability are the factors that drive our co-design approach.

Postdoctoral researchers in the Computer Sciences Department will be expected to:

- Make advance in the hardware and software technologies available to build and efficiently use supercomputing infrastructures
- Doing research in collaboration with computing system providers
- Research activities on real-time embedded systems and high-performance computing, at both architecture and operating system level, analyzing the interaction between hardware and software
- Doing research on architectural support to novel programming models and execution environments for future multicore architectures
- Design of tools to instrument, analyze and predict the behavior of parallel applications on parallel systems, as well as methodologies and procedures
- Accelerate the processing of data-driven workloads, including large analytics as well as stream processing, in heterogeneous execution frameworks
- Finding appropriate solutions to the scalability of parallel file systems in large installations
- Conducting research on the massive multithreaded architectures focused on network applications
- Research on novel mathematical methods and algorithms for extreme scale computing, especially solving problems with uncertainty on large scale computing systems

Candidates are required to have a PhD degree in Computer Sciences, Telecommunications, Physics, Mathematics or any similar discipline.

6. POSTDOCTORAL RESEARCHERS AND SENIOR POSTDOCTORAL RESEARCHERS IN CASE

The Computer Applications in Science and Engineering (CASE) Department at the BSC is actively seeking for postdoctoral researchers (R2, Recognized Researchers) and senior postdoctoral researchers (R3, Established Researchers).

The CASE Department aims to develop new computational strategies to simulate complex problems specifically adapted to run efficiently on modern supercomputers. Collaborative projects with industry and scientific groups are the main motivation underlying all development carried out in CASE.

Postdoctoral researchers at CASE will be expected to:

- Design Computer Applications in Science and Engineering Development
- Perform Physical modelling of geophysical and environmental flows
- Create high end data visualizations for communication by the scientists to society (dissemination), to their peers (technical reports), and to themselves (visual analysis)
- Interact with backend developers to design the connection (API, wrappers etc.) to the software running in the supercomputer
- Create and maintain different software development frameworks
- Develop computational mechanics simulation tools specifically designed for biomedical research to run on supercomputers

Candidates are required to have a PhD degree in Computer Sciences, Telecommunications, Physics, Mathematics or any similar discipline.

If you are interested in joining us, contact our Human Resources Team (rrhh@bsc.es).

Institute of Mathematical Sciences (ICMAT)

Madrid, Spain
www.icmat.es

The Centre

The Institute of Mathematical Sciences (ICMAT) is a joint research centre constituted by the Spanish National Research Council (CSIC) and three Madrid universities: Universidad Autónoma de Madrid (UAM), Universidad Carlos III de Madrid (UC3M), and Universidad Complutense de Madrid (UCM). The agreement among these four entities creates synergies between the main mathematics departments in Madrid, which allows ICMAT members to benefit from the opportunities that each organisation offers.

The main objective of ICMAT is to become a leading international research centre of excellence offering internationally recognized doctoral and post-doctoral training courses, as well as stimulating high quality mathematical, interdisciplinary research and collaboration. The ICMAT also organises events of international standing and promotes dissemination activities. Since 2010, the ICMAT is located in its own new building on the UAM Cantoblanco campus (Madrid, Spain).

In 2011 and in 2015, ICMAT was awarded with the Severo Ochoa Centre of Excellence label, a Spanish 4-years funding high quality programme. In May 2016, ICMAT became a member of ERCOM (European Research Centres on Mathematics), the EMS (European Mathematical Society) Committee.

The ICMAT conducts research in all branches of mathematics with the support of 62 research staff, 24 postdocs, 52 PhD students and 16 administrative staff. Since its foundation in 2007, ICMAT researchers have been awarded ten ERC grants and 36 PhD theses were defended. Furthermore, the Institute participates in the master and PhD programmes of the three Madrid universities. Since September 2010, the ICMAT has organised 78 conferences and workshops, 20 schools, 12 thematic trimesters, 53 colloquia, 30 advanced courses and 680 seminars. Over 5,000 researchers have visited the ICMAT and around 800 visitors have been welcomed for short, medium and long-term stays, including renowned mathematicians such as S. Donaldson, C. Fefferman and N. Hitchin, who have a long-standing relationship with the Institute.

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Working at the ICMAT guarantees access to an infrastructure of the highest level for the pursuit of research in mathematics: private offices with computer equipment provided with state-of-the-art office and scientific software, multimedia equipment for video conferences and computer support, as well as several fully equipped rooms for seminars, workshops and meetings. In addition, the library "Jorge Juan" provides access to the largest catalogue of publications in mathematics in Spain, including the most relevant electronic subscriptions. Access to several clusters for high-capacity scientific computing is also provided. ICMAT develops a Public Communication and Outreach Programme, which gives researchers the opportunity to reach general audiences, through press releases, media collaborations, outreach activities, etc.

The ICMAT also provides its members with the following services: the ICMAT Transfer and Europe Office, the ICMAT Outreach and Communication Office, the Severo Ochoa Office, the ICMAT Administration Office, and the IT Services.

The ICMAT is currently taking part, among others, in several projects under the EU research funding programmes FP7 and H2020: IRSES network; MC fellowships, MSCA fellowships; ERC Starting Grants and ERC Consolidator Grants.

In conclusion, the variety and quality of the ICMAT scientific activities, together with its wide international network, makes the ICMAT a highly suitable centre for young mathematicians seeking advanced training and developing new collaborations.

JOB OPPORTUNITIES 2016-2017

EXPRESSIONS OF INTEREST FOR POSTDOCTORAL RESEARCHERS

The *Instituto de Ciencias Matemáticas* (ICMAT-Institute of Mathematical Sciences) offers postdoctoral appointments for researchers in Mathematics with an excellent curriculum who wish to pursue their research career at the ICMAT.

The contracts will have competitive financial conditions similar to those in European programmes.

The duration of the contracts will be 2 years. Incorporation from 1st September 2017.

Applications should include a motivation letter, a research statement, a CV, and two letters of recommendation which should be sent directly by the referees

The call will start on the 1st January 2017 and the deadline for submissions will be 1st March 2017.

Each applicant will receive a personal reply and preselected applicants could be interviewed individually in due course.

More information can be found on our website: www.icmat.es

For further information and informal inquiries, please contact us in postdoc-so@icmat.es.

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Basque Centre for Applied Mathematics (BCAM)

Bilbao, Spain

www.bcamath.org/en/

The Centre

The Basque Centre for Applied Mathematics (BCAM) is a world class research centre on Applied Mathematics with a focus on interdisciplinary research in the frontiers of mathematics, attraction and training of talented scientists, development of new numerical and simulation methods, interaction with industry, and promotion of scientific and technological advances worldwide.

Aiming to strengthen the Basque Science and Technology System, BCAM was created in September 2008 by the Basque Government through Ikerbasque, the Basque Foundation for Science. BCAM obtained the Severo Ochoa Centre of Excellence award in 2013, by the Spanish Ministry of Economy and Competitiveness (MINECO).

Located in the Basque Country, it benefits from a long industrial tradition, and it is linked with the French Atlantic corridor, a region of excellence in Applied Mathematics. This context contributes to the task of building an excellence research centre. BCAM counts with around 60 researchers from over 20 different countries with experience in some of the most prestigious research centres on their area, organized in 5 research areas and an administrative support team composed by 7 people.

BCAM is a young research centre that is facing its consolidation phase. In this sense, the scientific strategy of the Centre is based on three Scientific Platforms that have been set up in order to establish an interdisciplinary system capable of facing the challenges of Mathematical Science in a broad manner by bringing together Mathematics, Engineering and Sciences:

- Core in Applied Mathematics: PDE, Numerical Analysis, Fourier Analysis, Algebraic Geometry, Probability and Statistics.
- Computational Mathematics: Modeling and computer simulations using numerical, stochastic and Monte Carlo methods.

- Applications of Mathematics to Industry, Social Sciences and Health Sciences.

Regarding human resources management, BCAM core values rely on people as its main asset, so the continuous evolution of the HR strategy is key for the success of BCAM. In May 2016, BCAM was awarded with the "HR Excellence in Research" certificate in May 2016, implementing the European Charter for Researchers and Code of Conduct for the Recruitment to enhance the efficiency, effectiveness and impact of the actions that BCAM should undertake to provide an attractive and supportive environment to researchers.

Finally, BCAM is part of a network of like-minded organisations from across Europe providing opportunities for the exchange of experiences and the sharing of good practice with other organisations. Nevertheless, BCAM is very active in the exchange of researchers; in fact, the Internship, Visitor and Visiting Fellow programmes are key tools to promote these exchanges.

JOB OPPORTUNITIES 2016-2017

1. PhD FELLOWSHIPS

The Spanish Ministry of Economy and Competitiveness (MINECO) provides 3 PhD grants to students that would like to perform their PhD thesis at BCAM, in the framework of the "Severo Ochoa" Excellence Research Centres programme.

More information can be found at: bit.ly/Predoc-2016

2. FOUR POSTDOCTORAL FELLOWHIPS

BCAM offers four postdoctoral positions in the following research areas:

Modelling and Simulation in Life and Materials Sciences (MSMLS): The goal of this research line is to obtain biological information from the stability boundaries of population dynamical equilibria in a two-parameter space and to enable efficient detailed simulations of extremely large and complex systems which are not possible with conventional simulation methods.

Statistical Physics (SP): The objective of this line is the development of validated models for practical applications with social and environmental interests, such as turbulent premixed combustion, wildland fire propagation and groundwater infiltration.

Machine Learning (ML): The objective in this line is to design new methods for learning probabilistic graphical models in general, and Bayesian networks in particular. These methods will be a hybrid between classical operations research techniques and metaheuristic methods. We will apply the developed techniques in the solution of real data analysis tasks.

Applied Statistics (AS): The goal of this line is to create innovative statistical models, inference methods, computational algorithms and visualization tools for analysis complex data sets from different and diverse sources.

The selected fellows will have a 2-year contract with 100% dedication and a gross annual salary of 28,000-30,000€. Moving allowance for those researchers that come from a research institution outside the Basque Country will be available and range from 1,000 to 2,000€ gross. Free access to the Public Health System in Spain is provided to all employees.

New Postdoctoral Fellows are expected to join BCAM by the end of 2016 or beginning of 2017.

Based on the provided application documents of each candidate, the evaluation committee will evaluate qualitatively: matching the previous training and career with the profile offered, the recommendation letters, the main results achieved (papers, proceedings, etc.), the statement of past and proposed future research and other merits; taking into account the alignment of these items to the topic offered.

More information can be found at: www.bcamath.org/en/research/job

Feel free to contact us: recruitment@bcamath.org

3. VISITING FELLOWSHIPS FOR SENIOR RESEARCHERS

In the framework of the Visiting Fellows Programme, every year BCAM offers research opportunities for outstanding mathematicians from all over the world, for short and long-term visits.

Researchers in any branch of Applied Mathematics are invited to apply if they would like to spend a period of at least 4 weeks, and up to 6 months at BCAM. BCAM provides a stimulating environment to foster research activities in collaboration with BCAM researcher and networking with other researcher centres in the Basque Country.

The Visiting Fellows Programme involves a contract between BCAM and the researcher or an agreement with the researcher's institution. The salary corresponding to this contract is intended to cover the costs of accommodation, local travel, travels, food and honorariums.

Applications will be evaluated twice a year, with the first round being on 15th September, and the second run on 15th March.

More information can be found at: www.bcamath.org/en/research/job

Feel free to contact us: visitingfellow@bcamath.org

4. IKERBASQUE RESEARCH FELLOWS AND PROFESSORS

BCAM is a centre eligible to host Ikerbasque Research Fellows and Professors. Ikerbasque opens these calls once a year with the following conditions:

- Ikerbasque Fellows call offers 5 year contract for young researchers.
- Ikerbasque Professors call offers permanent contract positions for experienced researchers.

Further information can be found on: www.ikerbasque.net/

5. ONE SENIOR RESEARCHER POSITION IN COMPUTATIONAL FLUID DYNAMICS

In 2017, BCAM will open a new position for a Senior Researcher in the Computational Fluid Dynamics research area, in which we aim to develop application-oriented computational fluid dynamics (CFD) methods and simulation software so as to meet important industrial requirements such as accuracy, efficiency, robustness, and geometric flexibility.

This will be an attractive position, offering a competitive salary that shall be negotiated with each candidate, depending on the qualifications and research track.

More information can be found at: www.bcamath.org/en/research/job

Feel free to contact us: recruitment@bcamath.org

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The Institute of Photonic Sciences (ICFO)

Barcelona, Spain
www.icfo.eu

The Institute

ICFO, a member of BIST - The Barcelona Institute of Science and Technology, is a research centre located in a specially designed 14,000 m² building, situated in the Mediterranean Technology Park in the metropolitan area of Barcelona.

ICFO currently hosts 350 people, including research group leaders, post-doctoral researchers, PhD students, research engineers, and staff. "ICFOonians" are organized in 23 research groups working in 60 state-of-the-art research laboratories, equipped with the latest experimental facilities and supported by a range of cutting-edge facilities for nanofabrication, characterization, imaging and engineering.

ICFO has been awarded with the Severo Ochoa Centre of Excellence award by the Ministry of Science and Innovation in 2011, and again by the Ministry of Economy and Competitiveness (MINECO) in 2015. Additionally, it has 13 ICREA Professorships, 18 European Research Council grants and 6 Fundació Cellex Barcelona Nest Fellowships. These grants and awards, altogether, demonstrate the dedication of the Centre to research excellence, as does the consistent appearance of the institute in top worldwide positions in international rankings.

From an industrial standpoint, ICFO participates actively in the European Technological Platform Photonics²¹ and is also very proactive in fostering entrepreneurial activities and spin-off creation. The Centre participates in incubator activities and seeks to attract venture capital investment. ICFO hosts an active Corporate Liaison Programme that aims at creating collaborations and links between industry and ICFO researchers. To date, ICFO has created 5 successful start-up companies.

JOB OPPORTUNITIES 2016-2017

ICFO offers opportunities for personal and professional growth to exceptional students, scientists, technicians and future stakeholders in the academic and industrial worlds.

ICFO strives to be a resource for science, technology and talent. We provide our researchers with unique skills to become successful and independent future leaders.

We host national and international researchers, at different career levels, with backgrounds in scientific disciplines related to Optics and Photonics and their applications, including Physics, Engineering, Mathematics, Chemistry and Biology.

"ICFOonians" have access to cutting edge facilities, a stimulating international and interdisciplinary environment, as well as high-level training and extended administrative and tech support. They also take part in training opportunities aiming at enhancing existing skills and competencies, including scientific lectures, specialized seminars and programs, technical workshops, specific courses and other networking opportunities, as well as dedicated events.

If you are interested in any of the programmes below, visit our Job Openings and Fellowships section on our website (jobs.icfo.eu) or contact the ICFO's Human Resources and Education Unit: jobs@icfo.eu.

1. INTERNSHIPS AND FINAL CAREER PROJECTS

This ICFO Internships Programme offers to outstanding under- and postgraduate students the opportunity to accomplish their Master or final career project, or participating in a research project.

ICFO, in collaboration with the UPC-BarcelonaTech, offer the possibility to do a PhD in the topics pursued by the ICFO Research Group. ICFO PhD students have access to rigorous scientific training, advanced training-through-research, active mentoring and support as well as training in transferable skills.

2. PhD FELLOWSHIP POSITIONS

The ICFO, in collaboration with the Technical University of Catalonia-Barcelona Tech, offers the possibility to do a PhD in the topics pursued by the ICFO Research Groups. ICFO PhD-students are associated to an ICFO group, and conduct their studies under the supervision of the corresponding group leader.

3. POSTDOCTORAL RESEARCH POSITIONS

ICFO postdoctoral researchers conduct their scientific activities under the supervision of the corresponding group leader and have access to opportunities for enhancing existing skills and competencies, including scientific lectures, specialized seminars and programs, technical workshops, courses in transferable skills and other networking opportunities.



Institute for Theoretical Physics (IFT)

Madrid, Spain

www.ift.uam-csic.es

The Institute

The Institute for Theoretical Physics (IFT) UAM-CSIC was officially created in 2003 as a joint research centre belonging to the Spanish National Research Council (CSIC) and the Autonomous University of Madrid (UAM). It is the only Spanish centre dedicated entirely to research in Theoretical Physics. The IFT members develop research in the frontiers of Elementary Particle Physics, Astroparticles and Cosmology, in order to understand the fundamental keys of Nature and the Universe. They are also leading many research projects, both at the national and international level.

The IFT is a genuinely international centre, with around 40% non-Spanish members, collaborations with top research centres worldwide, and participation in international projects and activities. It has a dynamic and stimulating atmosphere, with 20 senior members, 25 postdocs and over 50 PhD students. It organizes over a dozen workshops per year, and hosts several hundred participant and visiting scientists per year.

The IFT is part of the strategic line "Theoretical Physics and Mathematics" of the Campus of International Excellence (CEI) UAM+CSIC established in 2009. Since 2012, it is certified as a Severo Ochoa Centre of Excellence by the Ministry of Economy and Competitiveness (MINECO). Besides purely scientific activity, the IFT also conducts intensive training of young researchers and professionals through the graduate program in Theoretical Physics with mention of excellence from the CEI and the Ministry of Education. Additionally, the Institute carries out the important task of transferring knowledge to society through several outreach programs.

JOB OPPORTUNITIES 2016-2017

The IFT works in the frontier research in Theoretical Particle Physics, Astroparticles and Cosmology. It is an international centre, with 40% non-Spanish members, and participation in EU and other international projects. There are funding opportunities available for scientific travels and organization of activities for our members, such as seminars, workshops and international conferences. The candidate will enjoy a dynamical

environment, with 25 postdocs and over 50 PhD students and a stimulating atmosphere with over a dozen workshops, and hundreds of visiting researchers per year.

1. PREDOCTORAL POSITIONS AT THE IFT

The IFT participates in the Postgraduate Programme on Theoretical Physics at Universidad Autónoma de Madrid, which offers several full tuition plus salary for outstanding master students, especially international ones. In addition, it offers about ten PhD positions through contracts with different public administrations and private foundations. The IFT includes PhD students in grants, and covers expenses to encourage their attendance to schools and workshops worldwide.

Currently we offer FOUR PHD POSITIONS through the doctoral programme from MINECO (www.ift.uam-csic.es/es/jobs/predoctoral), TWO MASTER STUDENT POSITION (full tuition +salary), and FIVE FULL TUITION GRANTS (asabiovera.wix.com/master).

For further information, visit the website: www.ift.uam-csic.es/en/jobs/predoctoral.

For any inquiry, please feel free to contact Agustín Sabio (Agustin.Sabio@uam.es).

2. POSTDOCTORAL POSITIONS AT THE IFT

The IFT offers about Six Postdocs Positions per year, in all fields of research. Postdocs interact and collaborate with other IFT members, through an active program of seminars and informal discussions; yet retain absolute freedom of choice of their research topics. We currently offer THREE TO FOUR POSTDOCTORAL POSITIONS directly funded by the IFT and starting in October 2017 and ending in September 2019. For additional information, visit remo.ift.uam-csic.es/postdoc/

We also welcome postdocs coming to the IFT with their own funding and provide all postdocs with funding for travel and scientific activities. For instance, we welcome expressions of interest for the Programme "Atracción de talento" from the Comunidad de Madrid region: www.ift.uam-csic.es/es/jobs/atracci%C3%B3n-de-talento-comunidad-de-madrid).

For additional information, visit the website: www.ift.uam-csic.es/en/jobs/postdoctoral.

For any inquiry, please feel free to contact Jesús Moreno (jesus.moreno@csic.es).

3. TENURE-TRACK FACULTY POSITIONS AT THE IFT

The IFT is actively seeking for candidates for long term research periods. For instance, the IFT hosts several 5-year tenure track positions, funded by the Spanish Ramón y Cajal programme, both through CSIC and UAM. Other similar fixed-term positions are becoming available through the Talent Attraction program from the Madrid regional Government.

Tenure may be achieved during or after this period, through evaluation by external panels based on scientific excellence.

Further information about fixed-term faculty can be found on: www.ift.uam-csic.es/en/jobs/fixed-term-faculty.

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High Energy Physics Institute (IFAE)

Madrid, Spain
www.ifae.es

The Institute

The High Energy Physics Institute at the Universitat Autònoma de Barcelona (IFAE-UAB, or IFAE) combines basic research in fundamental physics and applied research in instrumentation and medical applications. Therefore, it conducts experimental and theoretical research at the frontiers of fundamental physics, namely in Particle Physics, Astrophysics and Cosmology, Medical Imaging and Physics Instrumentation.

The IFAE focuses on the hottest topics in fundamental physics from particles to the cosmos. The IFAE also work at the cutting edge of detector technology developing pixel detectors for High Energy Physics, telescope cameras and detectors for medical imaging and other scientific and industrial fields.

The IFAE is involved in the ATLAS project at the LHC, the T2K neutrino experiment in Japan, the MAGIC telescopes in La Palma, the Dark Energy Survey project in Chile and the Cherenkov Telescope Array, among others (such as PAU, CTA, DESI, Euclid).

The IFAE facilities include a microelectronics laboratory with state-of-the-art packaging and assembly technologies, a data centre, a mechanical workshop, an electronics lab, an optical room and shielded room.

The IFAE was founded in 1991 and currently has 140 staff members. It is divided in three divisions (theory, experimental, and technical). It also has one spin-off company: X-Ray Imatek.

Due to its outstanding performance, the IFAE has received the Severo Ochoa Centre of Excellence award in 2013 by the Spanish Ministry of Economy and Competitiveness (MINECO).

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JOB OPPORTUNITIES 2016-2017

1. POSTDOCTORAL POSITION AT THE OBSERVATIONAL COSMOLOGY GROUP AT THE IFAE

The successful candidate will join the Observational Cosmology group at the IFAE. The group is involved in the ongoing DES and PAU galaxy surveys, as well as in the upcoming DESI and Euclid projects. Currently, the group is focused on the analysis of the DES data, playing leading roles in weak lensing, large-scale structure, void science and photometric redshift analyses. From late 2016 on, the PAU survey data will become available, providing opportunities for analyses in a variety of topics, including redshift-space distortions and intrinsic galaxy alignments. Opportunities also exist for involvement in the design, production and test of our hardware and software contributions to the DESI and Euclid instruments, as well as for participation in the development of the scientific programs of DESI and Euclid.

The successful candidate will have the opportunity to participate in one or more of the above-mentioned projects, and will be encouraged to pursue her/his own research interests.

Candidates are required to have a PhD in Physics or Astronomy. Previous experience in data analysis in large galaxy surveys is desirable, but not necessary. The ability to think independently while being able to collaborate constructively with the other members of the group and with the members of the international collaborations at large is a must.

Project supervisor and hosting group: Prof Ramon Miquel, Group Leader of the Observational Cosmology Group, IFAE Director

Contact: Joaquim Bosch (qbosch@ifae.es).

2. POSTDOCTORAL POSITION AT THE THEORY GROUP AT THE IFAE

The work of the Theoretical Group at the IFAE involves three broad lines of research: Standard Model physics and QCD, mostly working on aspects of QCD and heavy-flavor physics; Beyond the Standard Model physics, working in close contact with LHC results; and Astro-cosmological implications of particle physics theory.

The fellow is expected to work in one or several of the research lines listed above in strong collaboration with the members of the Theory Group. Applicants working in the first line of research will be given priority.

Candidates are required to have a PhD in Theoretical Physics and a good knowledge of English. The candidate is expected to have a strong profile on any of the research lines of the IFAE Theory Group, especially in Standard Model Physics and QCD.

Project supervisor and hosting group: ICREA Prof Matthias Jamin, Group Leader of the Standard Model research line of the Theory Division.

Contact: Joaquim Bosch (qbosch@ifae.es).

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Institute of Cosmos Sciences of the University of Barcelona (ICCUB)

Barcelona, Spain
icc.ub.edu

The Institute

The Institute of Cosmos Sciences of the University of Barcelona (ICCUB) is an interdisciplinary centre devoted to fundamental research in the field of cosmology, as well as to the technological applications of the sciences of the cosmos in general.

The ICCUB employs almost 200 professionals: 55 Professors (including 10 ICREA positions), 30 Postdocs, 18 Engineers, 40 PhD Students plus support staff, collaborators and visiting scholars. The joint effort of all ICCUB members has enabled the institution to be awarded in 2015 the distinction María de Maeztu Unit of Excellence in the first call organised by the Spanish Ministry of Economy and Competitiveness (MINECO).

Research at the ICCUB, one of the few centres around the world devoted to cosmology from the viewpoint of both Particle Physics and Astrophysics, is largely driven by the following fundamental questions: What are the origin and fate of the Universe? Which are the ultimate constituents of the Universe? And why does the Universe have its present appearance?

These questions reveal the intimate connection between Particle Physics and Astrophysics and so it demands a multidisciplinary approach. Research at the ICCUB aims to tackle them from the theoretical, observational and experimental viewpoints, involving the use of data collected by means of sophisticated instrumentation that cannot be afforded by individual research centres. As an example, ICCUB researchers are currently participating in the following projects: Space Missions (Gaia, Euclid, Solar Orbiter, CORe); Ground-based observatories and telescopes (Sloan Digital Sky Survey, SDSS; Large Synoptic Survey Telescope, LSST; MAGIC Cherenkov Telescopes; Cherenkov Telescope Array, CTA; Dark Energy Spectroscopic Instrument, DESI; CAHA; and ORM); or in Accelerators and particle detectors (LHCb detector, BaBar detector).

The main research lines of ICCUB include: Gravitation and Cosmology, Cosmology and Large Scale Structure, Galaxy Structure and Evolution, Star Formation, High Energy Astrophysics, Experimental Particle Physics, Particle Physics Phenomenology, Theoretical Physics, Hadronic, nuclear and atomic physics.

These research lines are complemented with two transversal technological lines on: Electronic and Instrumentation Development, and Very Large Data Processing and Analysis.

All these activities are supported by an over 4M € yearly research budget from competitive calls and are producing over 500 yearly publications with around 300 being on SCI.

JOB OPPORTUNITIES 2016-2017

The ICCUB devotes a large fraction of the Maria de Maeztu funding to offer PhD Fellowships, Postdoc and Technical Positions for the different research and technological lines described above. These positions are complemented with those offered by several funding bodies mentioned below and in connection with the excellence research unit distinction.

Every year the Spanish Ministry of Economy and Competitiveness (MINECO) and the regional Government both open general calls for different research stage. For instance, the ICCUB welcomes expression of interest for postdoctoral candidates (icc.ub.edu/job/postdoctoral), or for candidates to the Spanish Programme "Ramón y Cajal" (icc.ub.edu/job/ramon_cajal) and/or to the Regional Programme ICREA (icc.ub.edu/job/icrea).

Typical gross salaries range from 16,000€ (PhD) to 25,000€ (Postdoc) per year, depending on the position and the terms of the calls.

Additionally, each group has its own research grants that may also offer additional positions.

For information about hiring opportunities to join the ICCUB, please visit: icc.ub.edu/job/offers.

If you have any question, please visit icc.ub.edu/about/contact.

1. PhD FELLOWSHIPS IN 2016

The ICCUB is searching for PhD candidates in a number of topics described below. Funding is available through the Ministry of Economy predoctoral programme (4 fellowships; bit.ly/Predoc-2016); ICCUB funding (1 fellowship) and a few from the "la Caixa/Severo Ochoa International PhD Programme Fellowships".

If you are interested in any of these positions, visit icc.ub.edu/about/contact for further information.

PhD Position on Precise Determination of the Neutrino Mass from Cosmology

Neutrinos are the only DM component that has been directly detected. They are particularly interesting to study because of the synergy between astrophysical observations and particle physics experiments. Although cosmology can provide the most stringent limits to the mass of relic neutrinos, only accelerator, reactor and underground experiments can eventually provide the full picture regarding mixing angles and other properties of neutrinos. Our group has world experts in neutrino physics who will work to complement the cosmological investigations.

PhD Position on Search of New Physics in Radiative Flavour Decays

In colliders like LHC the search of new physics can be done by looking at the direct production of new particles or by looking at their virtual effects on rare processes. In LHCb this is done looking at effects on rare B meson decays and on its decay Lorentz structure. The EPP group, member of the LHCb collaboration, is involved in multichannel analysis of several radiative decay modes with similar topologies. The group plans to apply its accumulated expertise on radiative decays to measure the photon polarization and CP violation studies in B K pi gamma decays. This is a theoretically clean FCNC process mediated by an amplitude that is highly sensitive to New Physics. The photon helicity could be significantly modified inducing large effects on both the measured Bs decay width difference and the Bs CP violation asymmetry.

PhD Position on Galaxy Formation and Chemo-Dynamical Evolution Unravalled by Gaia

The ICCUB will focus on unravelling the structure and history of the disk through dynamical orbital analysis of the high-accuracy Gaia astrometry supplemented by the upcoming spectroscopic ground surveys (Gaia-ESO, GALAH, WEAVE and 4-MOST, among others). The new Galactic potential and phase space distribution model that will be inferred from this analysis will allow to disclose the mechanisms driving the bar and spiral arms formation and evolution, investigate the radial migration phenomenon and the evolution of moving groups and open clusters, evaluate the possible contribution of DM to the thick disk potential caused by dynamical dragging, and constrain the formation models of the disk.

PhD Position on the Gaia Archive

The Gaia archive (2012-2022) - the paradigm of Big Data in astrophysics is our great upcoming challenge for the next decade. The know-how and skills acquired by leading several Gaia mission critical software packages has placed our team at the forefront of the Spanish contribution in space technology able to manage complex systems dealing with large amounts of data. We plan to provide a comprehensive repository of the rich data products to be generated by Gaia, and a range of access mechanisms and associated

helper applications to maximize the scientific exploitation and public impact of the Gaia data.

2. PhD FELLOWSHIPS IN 2017

The ICCUB will offer a number of PhD fellowships in a number of topics described below. Funding will be available through the Ministry of Economy predoctoral programme (4 fellowships; bit.ly/Predoc-2016); ICCUB funding (1 fellowship) and a few from “la Caixa/ Severo Ochoa International PhD Programme Fellowships”.

If you are interested in any of these positions, visit icc.uab.edu/about/contact for further information.

PhD Position on Determination of the Dark Energy Component of the Universe at the 1% Level

Dark Energy (DE) is probably the biggest conundrum of physics today: its effects are visible only on large cosmological scales mostly via the distance-redshift relation. The well-understood behavior of perturbations in the photon-baryon fluid of the early Universe gives us a standard ruler: the Baryon Acoustic Oscillation (BAO) scale. The BAO scale is imprinted in the matter power spectrum and can then be used to measure the distance-redshift relation and thus DE.

PhD Position on Holography and QCD in Extreme Conditions

The ICCUB is world leader in applications of the gauge/string duality to QCD. Most notably, the ICCUB’s new objectives include the incorporation of confinement into the holographic description of heavy ion collisions, and the systematic search for model-independent observables in strongly coupled gauge theories at finite baryon density. The former may have an impact on our understanding of the far-from equilibrium dynamics of the Quark-Gluon Plasma, and the latter on the possibility that a strongly coupled quark phase is realized at the core of neutron stars.

PhD Position on the Nature of Dark Matter

The nature of the dark matter (DM) can be probed with the Gaia data by modeling the mean, time-independent Galactic potential, and through the effects of DM substructure on tidal streams. The cold DM model predicts that the halo mass distribution should in general be oblate or prolate, and this departure from sphericity will be probed by the Galactic potential model fitted to the Gaia data. Theoretical particle physics has several viable candidates for DM, notably WIMPS and axions, which could be confronted with detailed Gaia observations. Profiles of DM are also necessary to correlate the predictions of WIMP models with observations of photon emission resulting from their annihilation or decay. Theoretical models are also severely constrained by direct detection experiments.

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PhD Position on the LHCb Detector Upgrade

To increase the present data collection rate the LHCb Upgrade plan for 2018 is approved by LHCC. Its R&D is almost completed and budget has been very recently negotiated with funding agencies. ICC has been very strongly involved in the construction of the detector, developing the readout electronics of the SPD detector as part of the calorimeters. At present it is highly involved in the R&D phase, developing the new version of the readout electronics for the calorimeter and the electronics for the new tracking detector. Our plans are to continue doing so during the next phases of production, test, installation and commissioning.

3. TWO POSTDOCTORAL POSITIONS AT THE ICCUB

The ICCUB currently offers two postdoctoral positions.

If you are interested in any of these positions, visit iccub.uab.cat/about/contact for further information.

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Postdoctoral Position on the Determination of the Dark Energy Component of the Universe at the 1% Level

The selected candidate will have a 2-year contract. For additional information about the topic of research, please check previous section.

Postdoctoral position on the Search of new Physics in Radiative Flavour Decays

The selected candidates will have a 4-year contract. For additional information about the topic of research, please check previous section.

4. ONE TECHNICAL POSITION AT THE ICCUB

1. TECHNOLOGY: & ELECTRONICS & Instrumentation (One position, 4 year contract)

The ICCUB currently offers one technical position on technology, electronics and instrumentation.

High-speed online data processing requires specific hardware implementation on FPGAs. This is a common requirement for most scientific projects in which ICC is currently involved. In the context of the service SiUB (siub.uab.cat) as instrumentation service of the Physics Faculty of the University of Barcelona that provides a service on electronics and microelectronics instrumentation design and focused on both the field of research and the transfer of services. We will hire a person knowledgeable in this field to transversally contribute to several leading ICCUB projects in particle physics, astrophysics, space and medical applications.

The selected candidate will have a 4-year contract.

If you are interested, please visit icc.ub.edu/about/contact.

5. TENURE TRACK AND PERMANENT POSITIONS AT THE ICCUB

As mentioned before, the ICCUB relies on different national and regional programmes to attract talent:

“Ramón y Cajal” Programme: 5-year tenure track research positions co-funded by MINECO and the hosting institution. After successful evaluation in the fourth year, Ramón y Cajal fellows are typically offered the opportunity to apply for a permanent position that is open based on his profile.

“Serra Hunter” Programme: permanent tenured teaching positions funded by the regional Government.

ICREA Programme: permanent, tenured positions to researchers from all over the world to come and work in Catalonia. ICREA employs 255 researchers in all fields of knowledge, from philosophers to astrophysicists that perform their research in 50 different host institutions in Catalonia. ICREA offers new research positions every year and continues to promote research in Catalonia.

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Institute of Corpuscular Physics (IFIC, CSIC-UV)

Valencia, Spain
<http://ific.uv.es>

The Institute

The Institute of Corpuscular Physics, or *Instituto de Física Corpuscular*, (IFIC) is a joint centre of the Spanish Research Council (CSIC) and the University of Valencia, devoted to research in Particle, Astroparticle and Nuclear Physics and its applications to other fields of Science and Technology. The IFIC covers both the theoretical and experimental aspects of these fields. Among its goals are the study of the Higgs boson, the top quark, the search for new particles and theoretical models, the study of the neutrino properties and their use as cosmic messengers, the research on nuclear physics and its applications, as well as the development of technology for new particle detectors and accelerators.

Starting back in the 1950s, the IFIC is nowadays a pioneering centre in Spain in research of the constituents of matter. It is in Valencia, one of the main Spanish cities looking the Mediterranean Sea.

In 2015, the IFIC was awarded with the Severo Ochoa Centre of Excellence accreditation in recognition of its outstanding performance and scientific contributions at national and international level, its impact at industrial and social level, and the ability to attract scientific talent.

The IFIC carries out its experimental research associated to large laboratories such as CERN (European Laboratory for Particle Physics) and other international research infrastructures, present or planned, such as KM3NeT or FAIR –both included in the ESFRI Roadmap– and in Spanish scientific infrastructures such as the Canfranc Underground Laboratory (LSC). The IFIC also has a lively programme of activities in knowledge transfer and applications, in particular related to medical and accelerator physics.

Research Lines in Theoretical Physics

The IFIC produces every year a wide variety of theoretical studies, both in the frame of the Standard Model that describes elementary particles and their interactions, as well as in models that explore new physical phenomena. Other theoretical areas cover Nuclear and

Many-Body Physics, Astroparticle Physics and Cosmology. Most research in theoretical physics is focused on present or future experiments.

Research Lines in Experimental Physics

The IFIC studies Physics at colliders. The IFIC has been involved in the design, construction and operation of the ATLAS experiment at the CERN Large Hadron Collider (LHC), where the Higgs boson was discovered. Researchers from the IFIC also lead the study of the heaviest discovered particle, the top quark, searching for new physics phenomena too. The IFIC also participates in the LHCb and MoEDAL experiments at LHC, and contributes to the distributed computing network (GRID) for the LHC and other scientific activities. The IFIC participates in the future International Linear Collider (ILC).

Additionally, the IFIC also is involved in Neutrino Physics, participating in the ANTARES and KM3NeT neutrino telescopes, in the T2K experiment on neutrino oscillations and playing a leading role in the NEXT detector and its search for neutrinoless double beta decay.

Regarding Nuclear Physics, the IFIC contributes to FAIR, the future European facility for nuclear research, by building one of its main detectors, AGATA, as well as participates in the nTOF experiment at CERN.

Lastly, the IFIC research group on Medical Physics carries out activities related to medical imaging.

JOB OPPORTUNITIES 2016-2017

1. PhD POSITIONS AT THE IFIC

The IFIC has the responsibility of the Theoretical Physics and Nuclear and Particle Physics areas in the PhD programme of the Faculty of Physics of the University of Valencia. Around 20 theses are defended every year and more than 80 students are working currently in their PhD at IFIC in fundamental research lines in particle and nuclear physics: LHC physics, flavour physics, future colliders, dark matter searches, neutrino experiments, astroparticle physics, cosmology, nuclear and medical physics. Doctoral courses are programmed every year taught IFIC researchers, visiting professors and international experts. These courses also provide students with the tools and technical abilities required to perform their research at the highest international level.

There are three different contract options for PhD students at the IFIC:

- Contracts funded by the Spanish Government through the **Ministry of Economy pre-doctoral programme**: Every year, the IFIC offers **4 PRE-DOCTORAL CONTRACTS** assigned to different research lines. More information at: bit.ly/Predoc-2016,

- Contracts funded by the Spanish Government through the FPU programme: Information from the 2015 call can be found at: bit.ly/FPU_2015.

- Contracts "**laCaixa**" – **Severo Ochoa International PhD Programme**: "La Caixa" Foundation is a non-profit organization that has established an International PhD Fellowship program aiming to attract young talent worldwide. Under this program, four-year pre-doctoral fellowships are offered to suitable candidates to perform their thesis work in those Spanish research institutes which have been officially accredited as Centres of Excellence Severo Ochoa. "la Caixa" Foundation has selected IFIC to fund doctoral fellowships aimed at highly qualified graduates to undertake their doctoral studies within its research groups both in Experimental and Theoretical Particle Physics. More information can be found at: www.inphinitlacaixa.org or goo.gl/7UjxIM.

Overall information about developing your PhD at the Universitat de València can be found at: goo.gl/NBK5xv.

For informal inquiries, please contact Juan Zuñiga (Juan.Zuñiga@ific.uv.es).

2. POSTDOCTORAL POSITIONS IN THEORETICAL PARTICLE PHYSICS

Funded by the Severo Ochoa Excellence Programme, the IFIC offers annually several two-year postdoctoral positions for junior researchers having a competitive research track record in experimental and theoretical particle physics, and a strong commitment to pursue forefront research lines.

Researchers are expected to work on any of the following research lines: Particle Physics Phenomenology in the Standard Model and beyond (including collider, flavour, Higgs and neutrino physics); QCD and strong interactions; Astroparticle physics; Cosmology; Gravitation and Black Holes; Quantum Information; Nuclear and Many-Body physics.

Additional information is available on the website webific.ific.uv.es/web/.

If you are interested, please contact us via e-mail at s8a.postdoc@ific.uv.es.

3. POSTDOCTORAL POSITIONS IN EXPERIMENTAL PARTICLE PHYSICS

The IFIC has several postdoctoral positions available on experimental particle and medical physics. These positions will be fully funded by the Severo Ochoa Excellence Grant, and in some cases also by the local research groups.

Positions are for two years with starting date in Autumn of 2016 in any of the following subjects: ATLAS upgrade for the High Luminosity Large Hadron Collider; Search for BSM particles in ATLAS and MoEDAL; New Physics search in the Higgs sector with the ATLAS

detector; Flavour physics and detector upgrade at the LHCb experiment; Computing, ATLAS and future colliders; Physics with the neutrino telescopes KM3NeT and ANTARES; Double beta decay search at NEXT; or Medical imaging and particle therapy applications.

Additional information is available at webific.ific.uv.es/web/s8a-postdoc-exp.

If you are interested, please contact us via e-mail at s8a.postdoc.exp@ific.uv.es.

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Institute of Chemical Research of Catalonia (ICIQ)

Tarragona, Spain
www.iciq.eu

The Institute

The Institute of Chemical Research of Catalonia (ICIQ) is one of the world's leading institutions in chemical research. It provides facilities, state-of-the-art equipment and most importantly, excellent scientists and professionals, to assure you a rewarding career. Our undergraduate, doctoral and postdoctoral programmes are thoughtfully designed to prepare a new generation of researchers with the skills and knowledge required to tackle the most important challenges in chemical research.

The ICIQ research groups focus their research on two main areas:

Catalysis: new catalytic processes and products for industrial use that exploit resources more efficiently and minimise waste

Renewable Energies: new technologies for transforming solar energy into electricity and fuels.

At the ICIQ we promote a workplace culture that encourages innovation in a happy and creative atmosphere. Here, you'll find an international and inspiring environment and a robust career development programme tailored to your needs.

The ICIQ was recognised with the Severo Ochoa Centre of Excellence award in 2013 by the Spanish Ministry of Economy and Competitiveness (MINECO).

JOB OPPORTUNITIES 2016-2017

Information for all job opportunities in the ICIQ can be found at www.iciq.org/jobs-grants
For any inquiry, please e-mail the HR Manager Mr Mario Lorenzo (mlorenzo@iciq.es).

1. ICIQ SUMMER FELLOWSHIPS

10 positions are available every March.

Further information at www.iciq.org/education/summer-fellowships/

2. ICIQ MASTER PROJECTS FELLOWSHIPS

Call for Master projects opens in May.

Further information at www.iciq.org/education/master-studies/

3. ICIQ INTERNATIONAL PhD FELLOWSHIP PROGRAMME

The ICIQ opens an annual call (January-February) to fund 25-30 positions to carry out PhD studies at the Centre.

Further information at: www.iciq.org/education/phd-programme/

4. ICIQ POSTDOCTORAL CONTRACTS

We offer around 30-35 positions for postdoctoral researchers throughout the year.

Further information at: www.iciq.org/education/postdoctoral-programmes/postdoctoral-stays/

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Catalan Institute of Nanoscience and Nanotechnology (ICN2)

Barcelona, Spain
www.icn2.cat/en/

The Institute

The Catalan Institute of Nanoscience and Nanotechnology, or *Institut Català de Nanociència i Nanotecnologia*, (ICN2) is a non-profit international research institute located close to Barcelona, Spain. Its research lines focus on the newly discovered physical and chemical properties that arise from the fascinating behaviour of matter at the nanoscale.

The patrons of ICN2 are the Government of Catalonia (Generalitat), the *Consejo Superior de Investigaciones Científicas* (CSIC), and the Autonomous University of Barcelona (UAB).

The ICN2 promotes collaboration among scientists from diverse backgrounds to develop basic and applied research, always seeking interactions with local and global industry. The ICN2 also trains researchers in nanotechnology, develops numerous activities to facilitate the uptake of nanotechnology by industry, and promotes networking among scientists, engineers, technicians, business people, society, and policy makers.

The ICN2 was accredited in 2014 by the Spanish Ministry of Economy and Competitiveness as a Severo Ochoa Centre of Excellence, the highest recognition of centres of excellence in Spain.

The ICN2 is based on four transversal methodological approaches: Growth and synthesis of nanomaterials, Nanofabrication, Characterisation and metrology, and Theory and simulation. Research in these topics will produce specific applications and devices which are able to reach the market, providing new solutions to major social challenges in areas such as Biosystems, Energy, and Information technology and telecommunications.

Additionally, the ICN2 carries out a comprehensive recruiting and training program, a specific Gender action plan and international knowledge dissemination and outreach activities.

The ICN2 is committed to become an international centre of reference in Nanoscience and Nanotechnology, with a clear impact in society: to facilitate the adoption and integration of nanotechnologies in society and industry.

To this end, research at ICN2 encompasses not only basic science, primarily via European and national collaborative projects, but also technological science in areas of in-house expertise and in conjunction with industry. As a result of this approach, the ICN2 interacts closely with universities, research centres, technology centres, private sector R&D, the scientific community and society in general.

Lastly, the ICN2 is one of the six members of the Barcelona Institute of Science and Technology (BIST). This initiative seeks to promote cutting-edge research in science and technology within an environment of multidisciplinary scientific excellence. Its scientific community is made up of members of the participating research centres (CRG, ICFO, ICN2, ICFO, IFAE and IRB Barcelona) with the clear idea of projecting Barcelona to the whole world.

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JOB OPPORTUNITIES 2016-2017

Do you want to change the world? We are looking for people who want to share a common fascination for Science and enjoyment of opportunities to grow and generate new knowledge in a creative and inspiring environment.

The ICN2 offers:

Research excellence: Our scientific excellence is a fact and we are proud of being awarded the Severo Ochoa Excellence since 2014, the highest recognition of centres of excellence in Spain.

Research support infrastructure: We offer, for the research groups within the ICN2 and neighbouring research institutions, a collaborative platform and a repository of expertise and know-how to develop new methods, materials, instruments and techniques.

Know-how in Nanoscience and Nanotechnology: We feel proud of having prestigious senior researchers who dedicate insatiably for the progress of our centre, as well as the career growth of our scientists and others.

Continuous growth: We support growth and career development by giving the opportunity to our employee's continuous learning and evolution.

Cultural diversity: Our teams represent more than 30 nationalities with different research backgrounds and professional careers.

HR Excellence Badge: We are awarded with the HR Excellence in Research Badge that identifies the institutions and organisations as providers and supporters of a stimulating and favourable working environment in research.

Flexible timetable: Our timetable and access is flexible. It means advantages in order to coordinate and organise the personal life with the professional life.

Social life / Campus UAB: Members of the ICN2 have the possibility to have the UAB ESFERA CARD. It allows having discounts in the SAF (gym), UAB Languages, University Village, Hotel Campus... and gaining access in all the Libraries in UAB.

Finally, the ICN2 is an equal opportunity employer and seeks a workforce diverse in age, culture, nationality and gender. The Institute aims to provide an environment of excellence that draws talented scientists, technicians and support personnel from around the world.

If you are interested in joining us, have a look to our Vacancies and Fellowships: jobs.icn2.cat/.

Please, feel free to contact our Human Resources Department at hr@icn2.cat.

1. INTERNATIONAL PhD FELLOWSHIPS PROGRAMME AT THE BARCELONA INSTITUTE OF SCIENCE AND TECHNOLOGY (BIST)

The Barcelona Institute of Science and Technology (BIST) is a multidisciplinary research institute formed by the alliance of six top research centres in Barcelona. The ICN2 is one of them.

BIST offers an exciting international and collaborative scientific environment that includes a broad range of research disciplines and core facilities. In addition, it offers extensive scientific and technical courses, personal skills training opportunities, and career development advice.

Applications for the 2017 BIST International PhD Programme will be opened at the beginning of next year 2017.

Find out more and apply: bist.eu/education/

2. INTERNATIONAL PhD FELLOWSHIPS "laCaixa" FOUNDATION PROGRAMME

The InPhiNIT programme will award, for each call, 57 fellowships for three years and competitive salary conditions. Each fellowship will also has perks as training in soft skills, temporary stages in foreign research centres or companies, networking for each promotion...

The ICN2 is a research centre that will be available to host PhD Students under this programme.

You may find more information and apply at www.inphinitlacaixa.org or obrasociallacaixa.org/en/educacion-becas/becas/en-un-vistazo

3. ONE PhD FELLOWSHIP AT THE ICN2

One PhD Fellowship is available for either the Theory and Simulation Group or the Theoretical and Computational Nanosciences Group. Starting date is expected for the end of 2016.

The ICN2 PhD Fellowship 2016 is possible thanks to the Severo Ochoa Programme by the Spanish Ministry of Economy and Competitiveness to support Research Centres of Excellence.

The ICN2 actively promotes international and interdisciplinary research. Thus, our PhD students are strongly encouraged to undertake mobility actions such as research stays abroad, including companies, collaborations with national and international partners and attendance to conferences and workshops. These actions enable to foster the Fellows' career perspectives after the obtaining of his/her PhD title, and facilitate the PhD student to continue his/her research career in most important institutions worldwide both in academia and industry.

Applications should contain a cover letter, a CV, academic records for Master and Bachelor degrees, and 2 reference letters.

Candidates interested should send an e-mail to hr@icn2.cat with the subject "PhD Fellowship FPI".

4. TWO POSTDOCTORAL FELLOWSHIPS IN THE P-SPHERE PROJECT

The P-SPHERE project is a long-term programme (lasting 5 years) in which two calls will be opened to attract experienced researchers, with same transnational mobility required by the Marie Skłodowska-Curie programme.

It is oriented towards interdisciplinary research related to the strategic challenges of Horizon 2020 and to the intersectoral mobility of researchers, with stays in other institutions, businesses and technological centres.

Two Postdoctoral Fellowships will be opened next September 2016. One for the Physics and Engineering of Nanodevices Group and other for Phononic and Photonic Nanostructures. Find out more and apply at: www.uab.cat/psphere/

5. TWO POSTDOCTORAL FELLOWSHIPS AT THE ICN2

The ICN2 will offer soon two postdoctoral positions in the following research groups:
One Postdoctoral Position in the Oxide Nanoelectronics Group.

Research in the Oxide Nanoelectronics Group led by Dr Gustau Catalan involves studying the electronic (magnetotransport, metal-insulator transitions) and electromechanical properties (piezoelectricity, flexoelectricity) of functional electroceramics at the nanoscale. We have three different projects concerning the development and characterization of bioflexoelectricity, the study of antiferroelectric materials, and the use of a state-of-the-art cryogenic atomic force microscope to characterize the characterization of electronic properties of complex oxides at the nanoscale.

The selected candidate would have to fit into one of these projects. We will value positively experience in the use of scanning probe microscopes and a good knowledge of either flexoelectricity/biomaterials or electronic properties of complex oxides.

Find more information at: jobs.icn2.cat

One Postdoctoral Position in the Phononic and Photonic Nanostructures group

The ICN2 expects to offer some Postdoctoral positions available in September in our website: jobs.icn2.cat

Institute of Materials Science of Barcelona (ICMAB-CSIC)

Barcelona, Spain
www.icmab.es

The Institute

The Institute of Material Science of Barcelona (ICMAB-CSIC) is an internationally renowned public research institute in Advanced Functional Materials integrated in the National Research Council of Spain (CSIC). The mission of the ICMAB is to generate new knowledge in Materials Science through excellent scientific research useful for society and industry.

The ICMAB has 57 permanent and 90 non-permanent scientists and a total of 220 people divided in eight Research Groups. The centre has outstanding international competitiveness, with a large number of high impact articles and citations and European research projects participation (5 ERC grants at present), with the strongest international leadership position in the specific domains of Functional molecular, supramolecular and oxide materials. The centre has been recently recognised with the Severo Ochoa Centre of Excellence award by the Spanish Ministry of Economy and Competitiveness (MINECO).

The Strategic Research Programme includes five mission-oriented Research Lines to face three social grand-challenges: clean and secure energy, smart and sustainable electronics and smart nanomedicine. The strategic Research Lines are: Energy storage and conversion; Superconductors for power applications; Oxide electronics; Molecular electronics; and Multifunctional nanostructured biomaterials.

The ICMAB-CSIC is one of the top research institutions named as a Severo Ochoa Research Centre by MINECO in charge of research and innovation policy in Spain, which recognizes excellence at the highest international level in terms of research, training, human resources, outreach and technology transfer. The Severo Ochoa award provides 4M€ over 2016-2019 to implement ICMAB's Research and Human Resources Programmes.

JOB OPPORTUNITIES 2016-2017

One of the main ICMAB's strategic objectives and missions is to recruit top worldwide class scientists in our fields of research with an outstanding track record that will boost the

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consolidation of the Institute as an international reference Centre in the field of Materials Science. A competitive and multidisciplinary training program will be offered to the new researchers to foster the development of a professional career.

In the period 2016-2020, and within our Severo Ochoa FUNMAT, a number of positions will be available at the Institute for graduate and postdoctoral researchers:

- With the aim of attracting exceptional bachelor and graduate students, a call for master studies and summer fellowships is open until 30th September 2016. Further details: icmab.es/becas-master-icmab.

- Four Severo Ochoa PhD positions will be available in 2017 as part of the "National Programme for the Promotion of Talent and Its Employability" from the Spanish Ministry of Economy and Competitiveness.

- Several PhD and postdoctoral positions will open at the end of 2016 and during 2017 as part of our internal calls of Frontier Interdisciplinary Projects (FIPs).

The Institute is also very proactive in European projects in H2020, participating in different calls within the three pillars (Excellent Science, Industrial Leadership, Societal Challenges).

Opportunities for graduated researchers will be also available in 2017 within the Marie-Curie COFUND project "INPhINIT", an innovative doctoral programme for talented early-stage researchers coordinated by La Caixa Foundation.

Four postdoctoral positions are available at the Institute as part of the Marie-Curie COFUND programme "P-SPHERE" (www.uab.cat/psphere/), coordinated by the Autonomous University of Barcelona (UAB); the applications are open and will close in December 2016.

The ICMAB is looking for excellent experienced researchers to apply for Starting, Consolidator Grants (ERC) and Individual Marie-Sklodowska-Curie Fellowships (IF) during the period 2016-2017.

Additionally, some positions are available at the Institute on a yearly basis related to grants awarded to our researchers for regional, national and international projects.

If you are an enthusiastic researcher with a motivation to work in a multidisciplinary and multicultural environment, please visit www.icmab.es/jobs

Feel free to contact us via e-mail to Dr Jorge Pérez (jperez@icmab.es) or Ms Montse Salas (msalas@icmab.es).



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III. Social Sciences and Humanities

1. Barcelona Graduate School of Economics (BGSE)
2. Basque Centre on Cognition, Brain and Language (BCBL)



Barcelona Graduate School of Economics (BGSE)

Barcelona, Spain
www.barcelonagse.eu

The School

The Barcelona GSE was founded as an institution for scientific cooperation between four existing academic and research units in Economics and Finance with a long tradition of collaboration: the Department of Economics and Business of the *Universitat Pompeu Fabra* (UPF), the Unit of Economic Analysis of the *Universitat Autònoma de Barcelona* (UAB), the Institute for Economic Analysis (IAE-CSIC), and the Research Centre of International Economics (CREI).

Today, with over 150 affiliated professors representing more than 25 nationalities, the Barcelona GSE community constitutes one of the leading clusters of economics research in Europe and worldwide. Research Papers in Economics (RePec) ranks the Barcelona GSE 5th among Economics Department in Europe, and as the 16th Economics Department worldwide. Currently, thirty-five Barcelona GSE faculty have a SCOPUS h-index higher than or equal to 10, and sixty-one of them have a SCOPUS h-index higher than 7. This research productivity has been recognized with a total of 16 European Economic Research Council (ERC) Grants thus far awarded to the Barcelona GSE faculty. In 2011, the Barcelona GSE was distinguished as a Severo Ochoa Centre of Excellence, a programme sponsored by the Spanish Ministry of Economy and Competitiveness (MINECO). This distinction was awarded again to the Barcelona GSE in October 2015.

Research at the Barcelona GSE is organized along three main groups: Applied Economics, Macroeconomics, and Microeconomics. Within each research group, the Barcelona GSE faculty members have developed several key lines/areas of research. There is also a significant degree of synergy amongst the three groups, as different lines of research often bridge multiple sub-fields of economics.

The Barcelona GSE provides an excellent research environment for researchers. New hires by the academic units are integrated into one of the research groups, which offer them many opportunities to present their work, receive feedback and start new projects with other Barcelona GSE faculty. New researchers are also invited to participate in our graduate programs, a key part of training for junior faculty.

During the 2011-2015 period, a total of 37 junior faculty members joined the Barcelona GSE, and 8 more will join in September 2016. The academic units of the Barcelona GSE are very active in the economics junior academic job market, each year interviewing a large number of candidates at the Spanish Economic Association Meetings in December, and the Allied Social Science Associations (ASSA) meeting in January. These interviews are followed up by campus visits ("fly-outs") during the winter term.

JOB OPPORTUNITIES 2016-2017

The Barcelona GSE, through its four academic units, participates in the Junior Economics Job Market. The objective of the Job Market is to provide an organized platform for matching advanced PhD students/post-docs with hiring institutions.

ASSISTANT PROFESSORSHIPS IN ECONOMICS AND FINANCE

During Autumn 2016, the academic units of the Barcelona GSE will announce their open positions for Assistant Professor in Economics and Finance, which have a start date of September 2017, on the following websites:

- Barcelona GSE and Academic Units Job Market Openings at www.barcelonagse.eu/research/job-market-academic-units
- Job Openings for Economists (JOE) at www.aeaweb.org/joe/
- Econ Job Market at www.econjobmarket.org/index.php

The next step in the process is for one or more of the academic units to meet with the candidates who pass the initial vetting stage for a preliminary interview at one of the following meetings:

- the Symposium of the Spanish Economic Association, to be held in Bilbao, Spain, on 15-17 December 2016
- the ASSA Annual Meeting, that will take place in Chicago, on 6-8 January 2017

The preliminary interviews offer candidates the chance to present their research agenda, including their "job market paper".

The selection process will continue with fly-outs for the successful candidates to Barcelona during January and February 2017. Following the fly-outs, the Barcelona GSE academic units make job offers to their selected candidates; and if offers are accepted, the units negotiate the terms of the contract.

The Barcelona GSE offers support to academic units in the new hiring process via the Seeds Grants Programme, which is one of the initiatives of the Severo Ochoa Research Excellence Programme. The main aim of the Seeds Grants is to support specific research activities, such as hiring research assistance, obtaining data or running an experiment that will lead to the initiation (or completion) of a concrete project.

More information and the offers of the four academic units will be published during Autumn at: www.barcelonagse.eu/research/job-market-academic-units.

For any informal inquiries, please feel free to contact the Barcelona GSE Research Office at research@barcelonagse.eu.

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Basque Centre on Cognition, Brain And Language (BCBL)

San Sebastián, Spain
www.bcbl.eu

The Centre

The Basque Centre on Cognition, Brain and Language (BCBL) is a world-class interdisciplinary research centre for the study of cognition, brain and language founded in September 2008. It is one of the centres of the BERC network (Basque Excellent Research Centres). Its mission is to provide a platform for researchers and professionals to carry out frontline research, development, innovation, training and knowledge transfer in the area of language sciences, complemented with science dissemination and outreach.

The main goal of BCBL is the study of language from an experimental point of view. Language and reading are the most unique human abilities and involve complex cognitive processes. However, despite current impressive technological and scientific advances we still do not understand the complexities of the cognitive processes involved, or the causes of language disorders, or reading disabilities, or how to remedy them, or what would be the best way to learn a second language in our multilingual, globalized world. The BCBL carries out research using the most advanced techniques in these fascinating areas.

BCBL main research lines are as follows: Language, reading and developmental disorders; Multilingualism and second language learning; and Neurodegeneration, brain damage and healthy ageing.

BCBL is located in Donostia-San Sebastián, an ideal and unique environment to study language. It offers access to speakers with a wide range of linguistic profiles (monolinguals, early and late bilinguals) with a combination of languages very different from a typological point of view such as Basque, Spanish, French, and English. As an isolated language, Basque has unique characteristics and so provides an unrivalled opportunity to unveil both the specific and the universal characteristics of language.

Importantly, to pursue our aims, we use a variety of methods, including cutting-edge neuroimaging techniques, behavioural methods and computational modelling in four different labs (see description below). In addition, since the moment we started operations we opened calls for recruiting the best scientists from all over the world (staff scientists,

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postdoctoral researchers, etc.) and for hiring highly selective supporting personnel (managers, technical staff, etc).

BCBL has managed to assemble a unique combination of outstanding researchers coming from many different labs, universities, nationalities (more than 15 different) and backgrounds (linguists, engineers, psychologists, medical doctors, etc.), all chosen through a very competitive process, always under the principles of equity, transparency and concurrence. Every recruitment process is open, efficient, transparent, supportive and internationally comparable, as well as tailored to the type of positions advertised. We have been using the best selection practices with selection committees with diverse expertise, competence, adequate gender balance, external expert assessment, and face-to-face interviews.

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JOB OPPORTUNITIES 2016-2017

1. BCBL PREDOCTORAL POSITIONS

BCBL promotes a rich research environment without substantial teaching obligations. It provides access to the most advanced behavioral and neuroimaging techniques, including 3 Tesla MRI, a whole-head MEG system, four ERP labs, a NIRS lab, a baby lab including an eye-tracker, two eye-tracking labs, and several well-equipped behavioral labs. There are excellent technical support staff and research personnel (PhD and postdoctoral students). BCBL offers six PhD positions in different research fields. The positions have a term of appointment of 2 years with a possible renewal.

PhD fellows will be in charge of designing and running experimental series, with direct supervision from a postdoctoral fellow and a staff scientist. We are looking for cognitive neuroscientists or experimental psychologists with an interest/background in psycholinguistics and/or neighboring cognitive neuroscience areas. Knowledge on reading acquisition and bilingualism and expertise in developmental investigation are required. Familiarity with EEG, MEG and/or fMRI will be positively valued.

Deadline: December 15th, 2016

BCBL encourages immediate applications as the selection process will be ongoing and the appointment may be made before the deadline.

To submit your application, please follow this link: www.bcbl.eu/calls

Applications should contain a cover letter/statement describing your research interests (4,000 characters max), your curriculum vitae, and the names of two referees who would be willing to write letters of recommendation.

For further information about these positions, please contact Manuel Carreiras (info@bcbl.eu).

BCBL offers PhD positions in three main broad areas or research:

Two PhD Positions in Language, Reading and Developmental Disorders

How language acquisition, comprehension, production, and reading take place in the human brain. Special attention will be paid to language disorders and the development of computerized tools for their early diagnosis and treatment.

BCBL expects to engage one PhD Student for Neurocognition of Language led by Manuel Carreiras and one PhD student for Developmental Language Disorders led by Marie Lallier.

Two PhD Positions in Multilingualism and Second Language Learning.

Research will be carried out on the cognitive and brain mechanisms of language acquisition and processing in a second language, taking into consideration the age of acquisition, proficiency and usage. Special attention will be paid to multilingualism within the school system and to the development of new educational technologies for second language learning.

BCBL expects to engage one PhD Student for Multilingual Literacy led by Jon Andoni Duñabeitia and one PhD student for Sentence processing in Bilinguals led by Clara Martin.

Two PhD positions in Brain damage and Healthy Ageing

Language and Cognition: Early cognitive and brain markers related to language for neurodegenerative diseases (Alzheimer, Parkinson); neural plasticity and language functions through brain stimulation in the awake patient during surgical brain operations; developing of computerized diagnostic and training tools for aphasic patients and neurodegenerative diseases.

BCBL expects to engage one PhD Student for Parkinson Disease and Neurodegeneration led by Mari Cruz Rodríguez-Oroz and one PhD student for Language and Memory Controlled by Pedro Paz-Alonso.

2. BCBL POSTDOCTORAL POSITIONS

BCBL promotes a rich research environment without substantial teaching obligations. It provides access to the most advanced behavioral and neuroimaging techniques, including 3 Tesla MRI, a whole-head MEG system, four ERP labs, a NIRS lab, a baby lab including an eye-tracker, two eye-tracking labs, and several well-equipped behavioral labs. There are

excellent technical support staff and research personnel (PhD and postdoctoral students). BCBL is looking for cognitive neuroscientists or experimental psychologists with a background in psycholinguistics and/or neighboring cognitive neuroscience areas, computational modelers, and physicists and/or engineers with fMRI/MEG expertise.

Deadline: December 15th, 2016

BCBL encourages immediate applications as the selection process will be ongoing and the appointment may be made before the deadline.

Candidates should have a strong publication track record.

To submit your application, please follow this link: www.bcbi.eu/calls

Applications should contain a cover letter/statement describing your research interests (4,000 characters max), your curriculum vitae, and the names of two referees who would be willing to write letters of recommendation.

For further information about these positions, please contact Manuel Carreiras (info@bcbi.eu).

BCBL offers postdoctoral positions in three main broad areas or research:

- Language, reading and developmental disorders: How language acquisition, comprehension, production, and reading take place in the human brain. Special attention will be paid to language disorders and the development of computerized tools for their early diagnosis and treatment.
- Multilingualism and second language learning: The cognitive and brain mechanisms of language acquisition and processing in a second language, taking into consideration the age of acquisition, proficiency and usage. Special attention will be paid to multilingualism within the school system and to the development of new educational technologies for second language learning.
- Neurodegeneration, brain damage and healthy aging: Language and Cognition: Early cognitive and brain markers related to language for neurodegenerative diseases (Alzheimer, Parkinson); neural plasticity and language functions through brain stimulation in the awake patient during surgical brain operations; developing of computerized diagnostic and training tools for aphasic patients and neurodegenerative diseases.

3. ONE BCBL STAFF SCIENTIST POSITION

BCBL promotes a rich research environment with minimal teaching obligations. It provides access to the most advanced behavioural and neuroimaging techniques, including 3 Tesla MRI, a whole-head MEG system, four ERP labs, a NIRS lab, the baby lab (including an eye-tracker), two eye-tracking labs, and several well-equipped behavioural labs. There are excellent technical support staff and research personnel (PhD and postdoctoral students). BCBL has one open research staff position (Staff Scientist) in the area of language acquisition. The Centre has a state-of-the-art baby lab, and exceptional access to babies.

The bilingual nature of the Basque Country provides an unusual opportunity to study language acquisition.

This position has a term of appointment of 5 years. Candidates should have at least 3-5 years of postdoctoral experience and a very strong publication track record.

Deadline: December 15th, 2016

For further information about the position, please contact the Director of BCBL, Manuel Carreiras (info@bcbl.eu).

To submit your application, please follow this link: www.bcbl.eu/calls

Applications should contain a cover letter/statement describing your research interests (4,000 characters max), your curriculum vitae, and the names of two referees who would be willing to write letters of recommendation.

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