

[271_LS_ICB_R1](#)

Job Reference

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Position

PhD student in Integrative Computational Network Biology (R1)

Closing Date

Thursday, 31 January, 2019

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About BSC

The Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC-CNS) is the leading supercomputing center in Spain. It houses MareNostrum, one of the most powerful supercomputers in Europe, and is a hosting member of the PRACE European distributed supercomputing infrastructure. 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 500 staff from 44 countries.

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Context And Mission

The Integrative Computational Network Biology group, led by ICREA Research Professor Nataša Pržulj, is looking for three PhD students to work in analyzing large-scale molecular and patient data to aid personalizing treatment. The project will be in the context of the recent prestigious ERC Consolidator grant of Prof Pržulj titled “Integrated Connectedness for a New Representation of Biology”. The successful candidates will complete a PhD in bioinformatics, addressing multiple topics: developing and applying sophisticated models and algorithms carefully tuned to extract relevant biological and medical knowledge from systems-level real-world molecular and medical data, including whole genome sequences, epigenetic data, protein-protein interaction networks, signaling networks, metabolic networks, transcriptional regulation networks, gene and disease ontologies, drug similarity networks, drug-target interactions, drug-drug interactions, patient records, lifestyle data, electronic health records etc. The aim is to mine these inter-linked

heterogeneous networked data for new biological and medical insight that would lead to improving diagnostics, discovering new biomarkers, improving patient stratification and treatment, personalizing treatment and facilitate rational drug development. The successful candidates will join the new Integrative Computational Network Biology (ICONBI) research group within the Life Sciences department at the Barcelona Supercomputing Center, which integrates independent senior scientists that work on various aspects of computational biology. The students will work in a highly sophisticated HPC environment, will have access to systems and computational infrastructures, and will establish collaborations with experts in different areas.

Key Duties

- Complete a PhD in computational biology
- Collaborate with various research groups across Europe and elsewhere

Requirements

- Education
 - MSc in Bioinformatics, Computer Science, or a related field
- Essential Knowledge and Professional Experience
 - Fluency in spoken and written English
- Competences
 - Good technical skills including at least some of the following: bioinformatics, network biology, network medicine, network analytics, medical informatics, algorithms, statistics, machine learning, programming in C, C++, a scripting language and Matlab, using a parallel computing environment, scientific computing, data analysis, graph, network and complexity theory
 - Good written and verbal communication skills in English
 - Ability to work in a professional environment within a multidisciplinary and international team
 - Critical and creative thinking skills
 - Ability capacity to interact and build strong relations with a diverse members/stakeholder/staff base
 - Ability to work independently and in a team
 - Ability to take initiative, prioritize and work under set deadlines and pressure

Conditions

- The position will be located at BSC within the Life Sciences Department
- We offer a full-time contract, a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible hours, extensive training plan, tickets restaurant, private health insurance, fully support to the relocation procedures
- Duration: Temporary
- Salary: we offer a competitive salary commensurate with the qualifications and experience of the candidate and according to the cost of living in Barcelona
- Starting date: asap

Applications Procedure

All applications must include:

- A motivation letter with a statement of interest, including two contacts for further references - **COMPULSORY** - Applications without this document will not be considered
- A full CV including contact details

Deadline

The vacancy will remain open until suitable candidate has been hired. Applications will be regularly reviewed and potential candidates will be contacted.

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.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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