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Centro Nacional de Supercomputación

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PhD student in Artificial Intelligence for Biomedical Multi-Omic Data Analysis in Precision Medicine (R1)

Job Reference

496_24_LS_ICNB_R1

Position

PhD student in Artificial Intelligence for Biomedical Multi-Omic Data Analysis in Precision Medicine (R1)

Closing Date

Wednesday, 02 October, 2024

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Job title: PhD student in Artificial Intelligence for Biomedical Multi-Omic Data Analysis in Precision Medicine (R1)

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, was a founding and hosting member of the former European HPC infrastructure PRACE (Partnership for Advanced Computing in Europe), and is now hosting entity for EuroHPC JU, the Joint Undertaking that leads large-scale investments and HPC provision in Europe. 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 1000 staff from 60 countries.

Look at the BSC experience:

[BSC-CNS YouTube Channel](#)

Let's stay connected with BSC Folks!

We are particularly interested for this role in the strengths and lived experiences of women and underrepresented groups to help us avoid perpetuating biases and oversights in science and IT research. In instances of equal merit, the incorporation of the under-represented sex will be favoured.

We promote Equity, Diversity and Inclusion, fostering an environment where each and every one of us is appreciated for who we are, regardless of our differences.

If you consider that you do not meet all the requirements, we encourage you to continue applying for the job offer. We value diversity of experiences and skills, and you could bring unique perspectives to our team.

Context And Mission

Professor Nataša Pržulj is looking for several PhD students to work in machine learning and network science. They will be developing new algorithms for computationally hard problems and applying them to analyzing large-scale molecular and patient data to aid drug discovery and personalizing treatment. The successful candidates will work on the prestigious grant Consolidator grant of Prof. Pržulj.

The successful candidates will complete a PhD in Computer Science in about 3.5 years, which will address developing and applying sophisticated machine learning and network science models and algorithms. The algorithms will be carefully tuned to extract relevant biological and medical knowledge from systems-level real-world molecular and medical data. The aim is to utilize them to understand the structure of the data that would enable mining the data for new biological and medical insight that would further lead to improving diagnostics, discovering new biomarkers, improving patient stratification and treatment, personalizing treatment and facilitating rational drug development. The successful candidates will join a dynamic research group of Prof. Pržulj within BSC. 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 Computer Science, Mathematics, Physics, Bioinformatics, or a related field;
 - > Undergraduate degree in a quantitative discipline is required (physics, mathematics, computer science, engineering, or similar)

- Essential Knowledge and Professional Experience
 - › Good technical skills including at least some of the following: algorithms, data analysis, graph, network and complexity theory, scientific computing, statistics, machine learning, programming in C, C++, a scripting language and Matlab, using a parallel computing environment, bioinformatics, network biology, network medicine, network analytics, medical informatics
- Additional Knowledge and Professional Experience
 - › Fluency in spoken and written English
- Competences
 - › Good communication skills
 - › Ability to work in a professional environment within a multidisciplinary and international team

Conditions

- The position will be located at BSC within the Life Sciences Department
- We offer a full-time contract (37.5h/week), a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible working hours, extensive training plan, restaurant tickets, private health insurance, support to the relocation procedures
- Duration: Predoctoral contract - 3.5 years
- Holidays: 23 paid vacation days plus 24th and 31st of December per our collective agreement
- 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 and process

All applications must be made through the BSC website including:

1. A full CV including contact details.
2. Academic transcripts from Undergraduate and MSc.
3. Three letters of recommendation. The references should send their letters to laurentino.quiroya@bsc.es in copy along with the application and before the deadline.
4. A statement of motivation and research interests including the following information:
 - Research background,
 - On explanation of why someone is interested in our group,
 - What research see you doing in our group and how your background is relevant to be successful.
5. It only be consider applicants that submit all the requested documentation (CV, cover letter, transcripts and references)

Deadline

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

OTM-R principles for selection processes

BSC-CNS is committed to the principles of the Code of Conduct for the Recruitment of Researchers of the European Commission and the Open, Transparent and Merit-based Recruitment principles (OTM-R). This is applied for any potential candidate in all our processes, for example by creating gender-balanced recruitment panels and recognizing career breaks etc.

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.

For more information follow this link

This position is reserved for candidates who meet the requirements and have the legal status of disabled persons with a degree of disability equal to or greater than 33%. In case there are no applicants with disabilities that meet the requirements, the rest of the candidates without declared disability will be evaluated.

Application Form

You are applying for the following job offer

496_24_LS_ICNB_R1

Name and Surname *

Gender ** *

Female

Male

Other

Email *

Nationality** *

Where did you first see this job offer (Please indicate the name of the website, social media, referral etc.)? *

please choose one of this and if needed describe the option : - BSC Website - Euraxess - Spotify - HiPeac - LinkedIn - Networking/Referral: include who and how - Events (Forum, career fairs): include who and how - Through University: include the university name - Specialized website (Metjobs, BIB, other): include which one - Other social Networks: (Twitter, Facebook, Instagram, Youtube): include which one - Other (Glassdoor, ResearchGate, job search website and other cases): include which one

Upload CV (select the file, then click the Upload button) *

Examinar... No se ha seleccion...o ningún archivo.

Upload

i Please, upload your CV document using the following name structure: **Name_Surname_CV**

Files must be less than **3 MB**.

Allowed file types: **txt rtf pdf doc docx**.

Cover Letter (optional) (if so, select the file and then click the Upload button)

Examinar... No se ha seleccion...o ningún archivo.

Upload

i Please, upload your CV document using the following name structure: **Name_Surname_CoverLetter**

Files must be less than **3 MB**.

Allowed file types: **txt rtf pdf doc docx zip**.

Other Documents (optional) (if so, select the file and then click the Upload button)

Examinar... No se ha seleccion...o ningún archivo.

Upload

i Please, upload your CV document using the following name structure: **Name_Surname_OtherDocument**

Files must be less than **10 MB**.

Allowed file types: **txt rtf pdf doc docx rar tar zip**.

**** Consider that the information provided in relation to gender and nationality will be used solely for statistical purposes.**

Data policy: *

I accept the [data policy](#) *

Other: *

I confirm that the information given in this form is true, complete and accurate.

Submit

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Barcelona Supercomputing Center, 2024

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