Universitat de les Illes Balears
Illes Balears Sostenibles
Impost de turisme sostenible
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Job offer for researchers, research technicians or research support officers under Chapter 6 allocation

Job offer

Title

53/2023 - Scientific software developer in gravitational physics at the University of the Balearic Islands

Main researcher

Name: Alicia Magdalena

Last name 1: Sintes

Last name 2: Olives

Department: Institute for Applied Computing and Community Code (IAC3)

Contract details

Job description

For this call we are seeking a highly motivated, talented scientific software developers/research software engineers who will actively engage in the computational research activities carried out at the Institute of Applied Computing and Community Code (IAC3, http://iac3.uib.es), with the framework of the HiTech-IAC3-BIO Platform. The selected candidates will support our research in gravitational wave data analysis, numerical relativity and, in particular, our involvement in the LIGO Scientific Collaboration, Einstein Telescope and LISA Consortium.
Key tasks/responsibilities:

- Supporting the development and maintenance of software packages used to generate waveform models and forstatistical inference on the properties of observed gravitational-wave sources
- Working to ensure that the computational performance of the software meets the needs of the IAC3's scientists• Ensuring that the software developed is well documented in order to facilitate ease-of-use for the code by new members and external collaborators
- Consulting and training scientists in the use of software, as needed• Supporting research and publications produced by scientists in the group
- Engaging in the visualisation of results.

The Institute of Applied Computing with Community Code (IAC3, http://iac3.uib.es) was created by the University of the Balearic Islands (UIB) in 2008 to foster synergies between different UIB research groups, driven by a quest for excellence and their common focus on computational modelling, as well as a modern approach to code sharing and development. Since its creation, IAC3 has grown to encompass more than 60 full-time staff from seven research groups in the physics and mathematics departments at the UIB. Research within the Gravitational Physics Research Group at the University of the Balearic Islands (UIB) spans a wide range of topics, including gravitational wave data analysis, waveform modelling and numerical relativity. Computing is carried out using an in-house high-performance computer cluster, and external resources such as the Mare Nostrum supercomputer or the LIGO data grid. The group comprises PIs Alicia Sintes and Sascha Husa, faculty members David Keitel and Jaume Carot, and several postdoctoral researchers and PhD students, and it is involved in the

LIGO Scientific collaboration, the LISA Consortium and the Einstein Telescope Project. For further details, please see: http://grg.uib.es.

Category: R1 - Graduate / Engineer / Architect

Qualification: Bachelor's degree or equivalent

Field of research: Computer Science

Subarea of research: Programming

Contract type details

Type of contract: Permanent

Full/Part-time: Full-time

Hours per week: 37,5

Work schedule: Flexible

Application submission deadline

From Friday, March 31, 2023 until Monday, April 24, 2023

Planned start date: Thursday, June 01, 2023

Planned end date of the tasks subject to the contract: Saturday, May 31, 2025

Research project / Agreement

Type of activity: Other research funding

Funding body: Resolució del director general de Política Universitària i Recerca per la qual s'atorga una subvenció directa per part de l'Administració de la Comunitat Autònoma de les Illes Balears a favor de la Universitat de les Illes Balears per a finançar el desenvolupament de la Plataforma HiTech – Institut d'Aplicacions Computacionals i de Codi Comunitari – Biodiversitat (IAC3-BIO) i amb cofinançament de l'Impost de Turisme Sostenible i el Programa Operatiu FEDER 2021-2027.

Call: Subvenció directa

Programme: Programa Operatiu FEDER 2021-2027

Reference number / Official code: SINCO 2022/18146

Number of positions available: 2

Candidate requeriments

Skills/Qualifications

Degree in Computer Science, Astronomy, Physics or related fields.

Specific requeriments

• Some experience with high-performance computing (HPC) or high-throughput computing (HTC) resources

- Expert knowledge in programming languages used in the astrophysics and physics community (e.g. Python, C/C++,Mathematica)
- Experience using multiple computational platforms (e.g. OSX, Unix/Linux)
- Excellent oral and written communication skills.

Language requeriments

Excellent knowledge of oral and written English.

Experience required: 1-4 years

Prior experience

Preference will be given to candidates with the following:

- A background in gravitational-wave physics or astrophysics
- Familiarity with gravitational-wave software
- A PhD in computer science, astronomy, physics or a related field (this is not a requirement)
- Familiarity with modern software development practices, such as version control (Git) and continuous integration

(CI)

- Knowledge of machine-learning methods
- Experience in numerical solutions for ordinary and partial differential equations
- Experience with GPU.

Additional information

Monthly salary and benefits: 2.995,00 €

Selection process

In accordance with article 8 of REGULATORY AGREEMENT 145140 of 15th June 2022 that approves the regulation governing the recruitment of research staff under chapter 6 allocation of the university budget, as well as technical or operational research staff.
Selection criteria:
•Accomplishments in the field (max. 50 points)
•Qualifications in the specialised area (max. 20 points), other (max. 5 points)
•Video CV and, where applicable, a personal interview (max. 10 points)
•Experience in the field (max. 15 points), e.g.: > 2 years (10 points), < 2 years (5 points) •Other merits (max. +5 points) Eligibility threshold: 60 points.

Selection comitee

i. The relevant Pro-Vice-Chancellor for research (or delegated representative) as chair.
ii. The supervisor (or delegated representative).
iii. The members of the Research Area Assessment Committee (CARAI).
iv. One or more expert members in the topic pertaining to the recruitment and chosen by the chair of the committee,where applicable.
v. The head of FORHU (or delegated representative), as secretary, who may speak but not vote.

Additional comments

The contract may be extended until 30.09.2026.