

ANNOUNCEMENT FOR PROVISION OF THE WORKPLACE

VAC-2023-57 – Grant for the hiring of predoctoral research personnel (FPI) in the framework of the project POTENTIAL project - Data-driven computational engineering for flexible performance

Number of places: 1

Category: PhD Student

Workplace: Barcelona, Campus Nord UPC

Salary (gross): 17.651,68€¹

Weekly working hours: 40h/week

Contract type: PhD

Duration: 4 years

Expected start date: January 1st 2024 as maximum

Functions to be developed:

The thesis will be carried out within the framework of a research project entitled POTENTIAL - Data-driven Computational Engineering for Flexible Performance, Ref. PID2022-141957OB-C21, whose principal investigators are Prof. Javier Bonet and Prof. Alberto García-González, co-leading the Structural Mechanics Research group.

The thesis will be developed in the mark of electro-active and magneto-active based materials and constitutive models. The candidate is expected to carry out high-quality research focusing on dimensionality reduction, material modelling and under the framework of soft composites design and topology optimization. The candidate will attend advanced training courses and join a strongly multidisciplinary team collaborators at

¹ The salary will be adapted in accordance with the stipulated in Real Decreto 103/2019 (current salary revised annually: 17.651,68€ for the 1st and 2nd year, 18.912,52€ for the 3rd year and 23.640,65€ for the 4th year) and next actualizations.

Additional grant of 6.860€ to cover the expenses derived from stays in R&D centers.

CIMNE, University of Cartagena and Swansea University, among others. the candidate is expected to present research highlights in international conferences and to contribute with the development of scientific articles for high-impact journals in the corresponding fields of application.

More information about the Project available at: [CIMNE RTD Project: POTENTIAL](#)

The candidate will join the Structural Mechanics Research group: [Structural Mechanics](#)

This contract is funded by the announcement of Proyectos de Generación de Conocimiento 2022 del Ministerio de Ciencia e Innovación: [Proyectos de Generación de Conocimiento 2022 | Agencia Estatal de Investigación \(aei.gob.es\)](#)

Required skills:

- The candidate must have a Master's degree (or equivalent) in Engineering, Mathematics or related disciplines; and to be in disposition to be enrolled in a PhD programme in the moment of the contract's formalitation.
- Knowledge of numerical methods, computational mechanics and simulation.

Other valued skills (not mandatory):

- Flexibility and ability to work in an interdisciplinary team with frequent mobility to different institutions in Barcelona, Cartagena, Swansea and others.
- Knowledge of programming languages.
- Notable oral and written communication skills in English, demonstrated by an academic certificate.

It is expected that the selected person is curious and committed to develop high-quality research, and also has hard-working and enthusiastic attitude towards research and innovation.

Qualification system:

The requirements and merits will be valued with a maximum grade of 100 points. This maximum score will be obtained by adding the following points:

1. Academic and/or scientific/technical career (up to 50 points).
 - Scientific/technical contributions (up to 45 points). The academic record and other curricular merits will be valued, as well as the level of suitability that these will have with respect to the tasks to be managed, based on previous academic and professional experience.
 - Mobility and internationalization (up to 5 points). The relevance and impact of their research path and/or in the industry will be valued, considering the prestige of the entity and the activities that are developed in it.
2. Candidate's willingness to develop the research activities of the job offer (up to 50 points). The suitability of the candidate to the program, project or research activities to be developed will be a plus in terms of his/her previous academic and professional experience. Therefore, the extra value that the

realization of the project will represent in his/her professional career, and the extra value that it will be for the center and the team, will be considered as a plus.

Candidates must complete the "Application Form" on our website, indicating the reference of the vacancy and attaching the required documents.

The deadline for applying for the vacancy is November 2nd, 2023 at 12 noon.

The pre-selected candidates may be asked to send the documentation required in the "Requirements" and "Merits" sections, duly scanned, and may be called to go through selection tests (which may be of an eliminatory nature) and / or personal interviews. At the time of formalization of the contract, the candidate must be admitted in a PhD Program.

***It is mandatory to provide the CV in the official form of the Spanish Ministry, which can be downloaded from the following link: <https://www.cimne.com/cvdata/cntr2/spc2/dtos/mdia/People/CV-abreujat.pdf>**

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