

ANNOUNCEMENT FOR PROVISION OF THE WORKPLACE

VAC-2022-49 – Research engineer for multiphysics software development for industrial problems involving fluid and bulk solid dynamics

Number of places: 1

Category: Assistant Research Professor

Workplace: UPC Campus Nord - Barcelona

Weekly working hours: 40h per week

Functions to be developed:

- Research on numerical methods as applied to various multiphysics problems from the industry, and other areas relevant for the advance of the team's expertise, making sure that the most salient results are published in relevant indexed research journals.
- Development of numerical methods for multicomponent flows and other tools necessary to solve the problems proposed by our industrial problems.
- Direction of consultancy work most related to the candidate's expertise adapting his/her research path to suit the various challenges proposed by our industrial partners.
- Mentorship of young researchers and design of suitable research plans for the further development of the team.
- Reporting based on objectives.

Required skills:

- Experience in the numerical modelling of multicomponent flows.
- Ability in physical modelling of a variety of physical systems relevant to the multiphysics problems most often encountered by our industrial partners: fluid mechanics, granular matter, partial differential equations and continuum mechanics.

- Creative researcher able to come up with innovative research directions and new solutions to old problems.
- Able programmer. The preferred languages being Python and C++
- Adaptable personality, able to combine theoretical work with consultancy for industry and commercial activities to promote the technology and create alliances.
- Experience in managing small research teams.
- Proficient in written and spoken English.
- Good written and oral communicator, including the ability to answer a variety of (unexpected) technical questions coming from the industry.

Other valued skills (not mandatory):

- Experience in the Oil & Gas
- Experience in the agricultural machinery industry.
- Competence in statistical methods
- Proficient in written and spoken Spanish/Catalan

Qualification system:

The requisites and merits will be evaluated with a maximum note of 100 points. Such maximal note will be obtained summing up the following points:

- **Publication and career track:** 30%
- **Previous research and academic experience in the field of the position:** 40%
- **Programming skills:** 10%
- **Language skills:** 10%
- **Communication/Teaching skills:** 10%

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

The deadline for registration to the offer ends on 1 July, 2022 at 12 noon.

The preselected candidates may be requested to send the documentation required in the "Requirements" and "Merits" sections, duly scanned, and may be called to go through selection tests (which might be of eliminatory nature) and / or personal interviews.