

ANNOUNCEMENT FOR PROVISION OF THE WORKPLACE

VAC-2021-65 – Proper Generalized Decomposition applied to Thermo-Hydro-Mechanical problems, application to radioactive high level waste

Number of vacancies: 1

Category: Research Engineer (RENG 6)

Location: Barcelona Campus Nord UPC

Yearly salary (gross): 14.893,96 €

Working hours: 35 hours/weekly

Contract type: Temporary

Duration: 6 months

Functions to be developed:

Develop numerical methodologies based on model order reduction techniques, namely the proper generalized decomposition (PGD). The problem is based on thermo-hydro-mechanical (THM) coupled equations to model soil and rock behaviour in the context of high-level radioactive waste engineered repositories.

Obligations of candidates

- Be highly committed with quality research, training and management. The successful candidate is expected to become a future leader on the development and application of advanced computational methods for industry
- Participate on the dissemination and outreach activities
- Contribute to the writing of articles in high impact international journals

Required skills:

- To have a strong undergraduate and MSc degree (or equivalent) in Engineering, Mathematics, Physics or a related field and a good level of English
- To have an enthusiastic attitude to conduct research, being hard-worker and critic
- To demonstrate advanced knowledge of programming languages, in particular Matlab.
- To have experience with Finite Element analysis.
- To have previous experience in the use and programming of reduced order models (PGD) for coupled and transient THM problems.

Eligibility: Applicants shall, at the time of recruitment by CIMNE have not been awarded a doctoral degree.

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:** 20%
- **Previous research and academic experience in the field of the position:** 50%
- **Programming skills:** 20%
- **Language skills:** 5%
- **Communication/Teaching skills:** 5%

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 30th September, 2021 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.