

ANNOUNCEMENT FOR PROVISION OF THE WORKPLACE

VAC-2020-13 - PhD Position in the Industrial Manufacturing Processes Group

Number of places: 1

Category: PhD

Workplace: To be defined

Salary (gross): 16.246,05€

Weekly working hours: Full time

Contract type: Predoctoral

Duration: 3 years

Functions to be developed:

The functions assigned to the candidate will be:

- Complete a PhD in the **Civil engineering** program. The candidate is expected to complete the PhD thesis in a maximum of three years.
- Collaborate with various research groups within CIMNE and worldwide.
- To publish a minimum of **two papers** in JCR journals during the PhD period.

The details of the job are as follows:

- Development and validation of the software for the performance analysis of the parts manufactured by Additive manufacturing (AM)/ 3D Printing (3DP) techniques
- Implementation of homogenization technique for infill and lattice structures.
- Implementation of constitutive models
- Implementation of failure criteria
- Optimization of the infill and lattice structures
- Calibration of the software vs experimental results.

Required skills:

1. The position is aimed at students (Spanish nationals, EU and non EU citizens) who have completed one of the following options:

a) The studies that lead to an official Spanish, or European Higher Education Area, 1st cycle university degree (BSc) in **Structural, Civil or Mechanical Engineering** and that have **180** credits (ECTS) of an official university degree.

b) A degree from a non-European Higher Education Area university that gives access to MSc studies in **Structural, Civil or Mechanical Engineering**.

To be eligible for the scholarship grant the applicants have to be formally enrolled to a doctoral program or meet the conditions to be enrolled to a doctoral program at the moment of the recruiting.

2. Excellent academic record.
3. Advanced knowledge of **Continuum** and **Computational Mechanics** (master level).
4. High working knowledge of **English** (Minimum **B2**).
5. Programming skills: **Fortran 2008 Object Oriented**, Python
6. Windows and Linux OS

Other valued skills (not mandatory):

- Previous research or academic experience in the field of the position
- Previous experience in Parallel Computing (HPC).

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:

- **Academic record:** 60%
- **Previous research and academic experience in the field of the position:** 20%
- **Programming skills:** 10%
- **Language 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 **June 30, 2020 at 12 noon**.

The preselected candidates must send seleccio@cimne.upc.edu all the documentation required in the section "Requirements" and "Merits" duly scanned and may be called for the performance of selective tests (which may be of eliminatory nature) and / or personal interviews.