

## CONVOCATÒRIA PER A LA PROVISIÓ DEL LLOC DE TREBALL

### VAC-2017-12 - PhD position in Decision Support System for carbon driven project appraisal at CIMNE (ESR 15)

Number of positions: 1

Professional Category : PhD Student

Place of Work: CIMNE Barcelona and KCC Hamburg

Annual Gross Salary: 32.709,52€, and 2.249,40 of “family allowance” (if applicable)

Working schedule: 40 hours/week

Contract type: Pre-doctoral contract

Expected duration: 14 months in CIMNE, then it will be signed a 6 months new contract in KCC

Scope and functions:

A PhD position is open at the International Center for Numerical Methods in Engineering (CIMNE, Barcelona, Spain) within Horizon 2020 -Marie Skłodowska Curie Actions- European Training Network TERRE ‘Training Engineers and Researchers to Rethink geotechnical Engineering for a low carbon future’ (grant number 675762). The Early-Stage Research (ESR) fellow will be responsible for the development of a new decision support system (DSS) for the risk assessment and management of the reduction of carbon emissions in the construction of geotechnical infrastructures.

The ESR fellow (ESR 15) will develop a new DDS for the risk assessment and management of the reduction of carbon emissions in the construction of geotechnical infrastructures. The research is highly multi-disciplinary and will involve four basic elements of decision-making for managing low-carbon geotechnical infrastructures: (a) scientific geotechnical expertise; (b) web-based information systems; (c) GIS and geo-physical data; and (d) multi-criteria decision-making

TERRE aims at developing novel geo-technologies to address the competitiveness challenge of the European construction industry in a low carbon agenda. TERRE involves 11 academic partners, 3 industrial partners and 7 Partner Organizations from seven different European countries (UK, France, Italy, The Netherlands, Spain, Germany and Switzerland). The project is coordinated by the University of Strathclyde, Glasgow, UK. The Marie Curie ESR fellows will be involved in inter-sectoral and intra-European PhD projects via enrolment in 8 ‘Joint- Awards’ and 7 ‘Industrial’ PhDs focusing on carbon-efficient design of geotechnical infrastructure.

Conditions of PhD completion:

The PhD will be jointly supervised by Angel Priegue (CIMNE) / Enrique Romero (UPC) (primary supervisors) and Patrick Becker (KGG) (secondary supervisor).

The position is offered for 20 months full-time position, starting in February 2018. ESR 15 will be recruited by both their primary host institution (CIMNE for 14 months) and the secondary host institution (KGG for 6 months). ESR 15 will be recruited with an employment contract consisting of a Living Allowance of €3,035.36/month (not included

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Spanish taxes), a Mobility Allowance of €600/month (not included Spanish taxes), and a Family Allowance 250/month (if eligible- not included Spanish taxes). Allowances are subjected to employer and employee's compulsory deductions.

#### Required skills:

-Applicants will be required to meet Marie Curie ESR eligibility criteria. In particular, the ESR fellow must not have resided in Spain for more than 12 months in the last 3 years immediately prior to commencing in the role, and must not have been awarded a Doctoral Degree. Applicants must be in the first four years of their research career. The ESR fellow will be enrolled in the Doctoral Program 'Geotechnical Engineering' of the Department of Civil and Environmental Engineering (UPC).

-In addition to the above, applicants should have a MSc degree in a relevant field such as Geotechnical Engineering, Civil Engineering, Applied Mathematics. Applicants should have ability to undertake research and disseminate results and should be creative, with the ability to apply initiative and problem solve. Candidates should have excellent communication skills with the ability to interact with a range of stakeholders and should have excellent technical presentation skills. Applicants should have excellent organizational skills and be able to work well both independently and as part of a team. Willingness for significant mobility throughout Europe to academic and industrial partners is required.

-English knowledge

#### Merits:

-Spanish Knowledge

#### Evaluation method:

The required skillness and merits will be valued with a maximum score of 100 points. To obtain this note, the values obtained in the following sections will be summed up:

1. Academic qualifications (80 %)
2. Training and improvement (10%)
3. Knowledge of Spanish language ( 5%)
4. Selective tests and interview (5%)

The CVs and presentation letters should be sent by e-mail to the address [fellowships@cimne.upc.edu](mailto:fellowships@cimne.upc.edu), indicating the name of the vacancy in the subject of the post, defined in the call.

The deadline to submit the CVs will be 18th January 2018 at 15h.

The pre-selected candidates will have to send to [fellowships@cimne.upc.edu](mailto:fellowships@cimne.upc.edu) all the documentation required in the "Required skills" and "Merits" section duly scanned and may be called to perform remote or face to face personal interviews.