

Job: Research Grant for Master

Job/Fellowship Reference: PTDC/EAM-GTC/29923/2017-UM.1.18

Main research field: Engineering

Sub research field: Civil Engineering

Stating date: 01.10.2018

Salary: €980/month (tax-free)

Job summary:

A call is open to award one research grant to develop research activities within the I&D Project CEN-DynaGEO – Coupled Experimental and Numerical Approaches Toward Reliable Dynamic Characterization of Geomaterials, PTDC/EAM-GTC/29923/2017, funded by the Portuguese Science and Technology Foundation (FCT). The recipient is expected to conduct research in the field of Geomechanics at the University of Minho, University of Lisbon and BarcelonaTech.

Research Field: Civil Engineering/ Geomechanics

Requirements for admission: Master (MSc) in Civil Engineering (Structures or Geotechnics). Fluent in written and spoken English. The classifications of the candidates at the Undergraduate (U) level and at the Master (M) level should preferably be such that $0.6*U + 0.4*M \geq 14$, on a 0 to 20 scale. Evidence of prior scientific experience in Geomechanics of the Finite Element Method is an advantage.

Work plan: 1) Handle the experimental work involving the bender element testing of geomaterials; 2) Experimental characterization of soil-apparatus interfaces; 3) Development and testing of bender elements with optimized shapes; 4) Optimization of the testing setup in bender element experiments; 5) Finite element model-updating for the automatic dynamic characterization of geomaterials. For further details, please check the Project CEN-DynaGEO page, at <https://sites.google.com/view/cen-dynageo>.

Applicable legislation and regulations: Law N.º. 40/2004, of 18 August (regulation of the scientific research activity); Regulation of the research grants of the FCT (<http://www.fct.pt/apoios/bolsas/regulamento.phtml.en>)

Work place: The main research work will be developed at the School of Engineering of University of Minho (ISISE – Institute for Sustainability and Innovation in Structural Engineering), under the scientific supervision of Professor António Gomes Correia, Doctor Dragos Ionut Moldovan (University of Lisbon) and Professor Marcos Arroyo (BarcelonaTech). Some periods are planned to be also at University of Lisbon and BarcelonaTech.

Duration of the Grant: The grant will have the duration of 12 months, beginning in October 1st, 2018, with yearly extensions up to a maximum of 36 months.

Monthly salary: The monthly net salary is €980, in accordance with the FCT grant regulations (<http://alfa.fct.mctes.pt/apoios/bolsas/valores>). Additionally, Social Security contributions and Accident Insurance are covered.

Selection criteria: The selection methods will be the following:

50% for the final grade of the course, calculated according to the formula $0.6*U + 0.4*M$, where U and M represent the classifications of the candidates at the Undergraduate and Master levels, respectively (for Master integrated (MI) the formula is $1*MI$);

20% for publications (5 points for ISI journals, 2 points for non ISI journals, 1 point for international conferences, 0.5 points for national conferences);

30% for the interview. Preference factors: interest in following up with a PhD program, experience in experimental work in the field of activity of the project and basic knowledge of the finite element method.

In the event that the candidates do not have the appropriate profile for the proposed functions, the jury reserves the right to close the competition without any recruitment.

Jury: António Gomes Correia (University of Minho), Dragos Ionut Moldovan (University of Lisbon) and Marcos Arroyo (BarcelonaTech).

Application period: The call is open from de 30-08-2018 to 12-09-2018.

Applications must be made through an application letter together with the following documents: *Curriculum Vitae*, *certificates of graduation degrees and other documents considered relevant*.

Applications should be delivered by email to agc@civil.uminho.pt or by regular mail to:

Prof. António Gomes Correia

Departamento de Engenharia Civil da Escola de Engenharia da Universidade do Minho

4800-058 Guimarães, Portugal.

Notification of results: the final results will be sent by email to the candidates.