THE UNIVERSITY of EDINBURGH
School of Engineering

PhD opportunity – Marie Curie Early Stage Researcher

Behaviour of dense granular systems: predicting flow regimes for bulk material handling

PhD Research Project

We are seeking a full time PhD researcher with research interests in mechanics of soils and granular media, particle technology and computational mechanics to join the University of Edinburgh (UK) and the Technical University of Braunschweig (Germany).

You will work on DEM and FEM modelling and experimental testing of dense granular systems, investigating the underlying particle-scale mechanisms in dense granular flows to characterise bulk mechanical responses under compression and shearing regimes. The aim of the project is to develop micromechanically-based continuum descriptions that can be implemented in numerical codes to allow for efficient numerical modelling involving dense granular materials.

This project forms part of the EU funded Marie Curie Initial Training Network **T-MAPPP** – Training in Multiscale Analysis of multi-Phase Particulate Processes (http://www.t-mappp.eu). T-MAPPP is a multidisciplinary and inter-sectoral consortium aiming to develop multi-scale analysis of dry, wet and multiphase particulates and to provide structured training for 15 researchers within a collaborative research network involving 10 full partners and 6 associate partners across Europe.

Requirements

The candidate must have an MSc degree or a first or upper second class honours degree (or international equivalent) in a relevant field such as civil engineering, mechanical engineering, chemical engineering, physics, or applied mechanics. Knowledge of Finite Element or Discrete Element modelling, or numerical methods in general, and a good understanding of soil mechanics, particle technology or granular physics would be advantageous.

Candidates must meet the general requirements for undertaking a Ph.D. at the University of Edinburgh. Additionally, they must meet the Marie Curie mobility requirements (in the general case, they must not have resided or carried out their main activity in the UK and Germany for more than 12 months in the 3 years immediately prior to the date of selection).

Further information

For further information on this position and to apply online see:
http://www.t-mappp.eu/esr-11.html

Initial enquiries may be made to Dr Stefanos Papanicolopulos (S.Papanicolopulos@ed.ac.uk) or Prof. Jin Ooi (J.Ooi@ed.ac.uk)

Although the position will remain open until filled, applicants are encouraged to submit their applications before 15 March 2014.