



Universidad de Oviedo

Imperial College
London

2 Research Assistant/Associate positions in CFD modelling of dust explosions (2 years)

General Description: Applications are invited for two Research Assistant (PhD candidates) or Research Associates (post-docs) positions at the University of Oviedo, in close collaboration with Imperial College London. Research Assistants will be appointed for 2 years while Research Associates will be appointed initially for one year, with the possibility of extending one more year. Conditional upon satisfactory progress, the researchers will have the opportunity to divide their time between the University of Oviedo and Imperial College upon their convenience. At the University of Oviedo, they will be working under the supervision of Prof. Covadonga Betegón while at Imperial College, the supervisors will be Profs. Emilio Martínez-Pañeda and Vito Tagarielli.

Project: Dust explosions compromise the design of large silos for the biomass industry. Very large biomass silos are being designed to store wood pellets that can act as combustible dust and lead to explosions that compromise the structural integrity of the silo. There is a need to develop Computational Fluid Dynamics tools and understanding to model this multiphase flow problem. The researchers will be using the open source toolbox OpenFOAM to develop a framework that captures dust explosions, involving multi-phase flow and turbulence.

Requirements:

- A degree in engineering, mathematics, physics, or another closely-related discipline.
- Solid and verifiable background in CFD and programming
- Good writing and communication skills

In addition, a competitive candidate for this role should demonstrate the following desirable (non-essential) qualifications:

- A high average grade in the undergraduate degree, 7/10 or higher.
- A relevant Masters level degree qualification
- A research or educational background in Computational Fluid Dynamics
- Familiarity with OpenFOAM
- Experience in coding with C++ or other programming languages.

A lack of experience in the above non-essential skills could be compensated by evidence of research potential. Appropriate training will be provided.

Funding: The position is open for both Home (Spain) and International candidates. A competitive salary is offered: 20600€/year for Research Assistants and 25000€/year for Research Associates (the minimum wage is 9000€/year).

How to apply: Applicants wishing to be considered for this opportunity should send the following application documents to Prof. Covadonga Betegón (cova@uniovi.es) and/or Dr. Emilio Martínez-Pañeda (e.martinez-paneda@imperial.ac.uk). Feel free to contact for informal discussions.

- CV, including average grades and research experience (if any)
- Cover letter, explaining their motivation and suitability
- Contact details of two academic referees

The closing date for applications is **February 15, 2020**. Interviews will be held shortly afterwards, and the PhD student is expected to start in the spring of 2020: April 1st or a later date of mutual agreement.