



Job Offer for

Two Post-doc positions in CFD Development Engineer

The Universidad Politécnica de Madrid (UPM) is the oldest and largest Spanish technical University, with more than 4.000 faculty members, around 48.000 undergraduate students and 6.000 postgraduates in 21 Schools of study. UPM Schools cover most of engineering disciplines, including Aeronautics. **The School of Aeronautics ETSIAE-UPM** is one the best schools of engineering in Spain and the oldest providing an aeronautical degree. ETSIAE-UPM was ranked 41st of the world in Shanghai's ranking for aeronautical engineering in 2017. Two different departments are involved in this project:

The Dept. of Applied Mathematics at ETSIAE-UPM (<http://numath.dmae.upm.es>) offers a young dynamic environment, where currently 10 PhD students and 20 academics perform research in fluids and numerical methods aerospace technology.

Short description

In the framework of the European Project NextSim (CODA: Next generation of industrial aerodynamic simulation code) UPM requires:

We are looking for two hardworking and skilled post-doctoral researchers to work on an exciting project in the field of Numerical simulation. You will join an established group (UPM, BSC, CIMNE, ONERA, DLR, CERFACS and AIRBUS) working at the forefront of numerical simulations for Computational Fluid Dynamics problems.

The project requires a deep knowledge of numerical simulation and software development for the solution of the Navier-Stokes equations. Key objectives are the development of algorithms for numerical efficiency, algorithms for data management and the efficiency implementation of those algorithms in the most advanced HPC platforms (MareNostrum).

The final objective of NextSim is the development of a new simulation tool that will be the new reference for aeronautical design. Additionally, the results will be presented at the most meaningful international conferences and workshops and will be disseminated in the most relevant archival journals in the field of fluid mechanics and scientific computing.

Who and what are we looking for from you?

Mandatory technical skills and experience:

- PhD in engineering, aeronautics, applied mathematics or physics, or equivalent expertise.
- Excellent computational skills and interest in CFD programming (e.g. C++, Fortran) and fluid modelling are expected
- Deep knowledge of High-order methods, spectral element and discontinuous Galerkin solvers is also necessary.

Language skills:

- Fluent English language is a prerequisite for the role.

You should be highly motivated and dynamic, have good communication and analytical skills, be a stress-resistant problem solver, and be a team player able to meet the highest quality standards.

What do we offer?

All positions include a very competitive 3 year contract. We also offer to work in a stimulating, young and multicultural environment, and to be part of a dynamic and growing research team at ETSIAE.

How to apply?

Please send cover letter and resume plus relevant technical papers, reports, references, etc. to **eusebio.valero@upm.es** quoting the reference **PostDoc_numerical_UPM**
