

ANNOUNCEMENT FOR THE PROVISION OF A WORKPLACE

VAC-2019-52 – Severo Ochoa PostDoc Researcher Position in Aeronautics Group

The International Centre for Numerical Methods in Engineering (CIMNE, www.cimne.com) is a research centre, created in 1987 by consortium between the Catalan Government and the Technical University of Catalunya, devoted to the development and application of numerical methods to a wide range of areas in engineering. CIMNE has been selected as a Severo Ochoa Centre of Excellence for the period 2019-2023. This is the highest level of recognition of excellence and leadership awarded to a research centre in Spain. CIMNE is offering a research position that will be funded by the Severo Ochoa Programme.

Position details

Number of vacancies: 1

Category: Post Doc Researcher (PDOC1)

Workplace: Barcelona

Salary (gross): 36.504,81 EUR

Weekly working hours: Full time

Duration: 3 years

Functions to be developed

CIMNE is looking for a Postdoc Researcher to be part of the Research and Technical Development (RTD) Group on "Aeronautics". As a multi-disciplinary group, the Aerospace Engineering Group at CIMNE is focusing on CFD for membrane structures, like parachutes, and Optimization methods, like Genetic Algorithms. In collaboration with other groups in CIMNE, it is also dealing with research in structural mechanics and materials. Applications range from flight performance of parachutes, inflatable structures, meshless methods, composite materials optimization, Game theory, hybrid genetic algorithms for aeronautical shape optimization, and transport system optimization. The group is developing a simulation tool to design parachutes, as well as inflatable and thin-membrane structures. The Post-doc research is planned to focus on FSI of thin membranes structures. The functions assigned to the candidate will be:

- Plan and conduct high quality research in collaboration with Severo Ochoa IPs
- Foster cooperation with European and International research groups and institutions
- Help supervise MSc and PhD students
- Document and disseminate the research results, both within CIMNE and externally
- Publish in high impact journals (a minimum of 2 papers/year is expected)

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- Participate in research projects and contracts of interest for the RTD Group
- Submit competitive RTD research proposals
- Collaborate in the active search of funding resources for the research group
- Collaborate in training activities

Requirements

- Having obtained a PhD degree in “Aeronautical or Mechanical Engineering” at least 2 years before the application deadline
- Good publication record (a minimum of 10 papers published in indexed journals)
- High working knowledge of English, both written and spoken.
- Good programming skills; good knowledge of Fortran
- Good knowledge of FSI techniques and state-of-the-art research
- Good knowledge of LINUX environment
- Good knowledge of MATLAB, OCTAVE or similar

Other valued skills

- Previous research or academic experience in the field of the position
- Previous experience panel and vortex methods for in potential flow (at user and code developing level)
- Previous experience in meshless methods for fluid flow applications
- Previous post doc stages at an entity, different to the one where the PhD was awarded
- Good programming skills; other programming languages like TCL-TK, QT, C++ ,
- Extra language skills: other EU languages (French, German, Spanish or Catalan will be a plus)
- Knowledge of HPC and HTC environments
- Knowledge of LaTeX and Office packages
- Good communication/Teaching skills

Evaluation procedure

The requirements and merits will be evaluated in a scale from 0 to 100 points. The overall grade will be the sum of the marks obtained in the following items:

- Publication and career track (30%)
- Previous research and academic experience in the field of the position (20%)
- Post doc stages (15%)
- Programming skills (15%)
- Language skills (10%)
- Communication/Teaching skills (10%)

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How to apply

Candidates must complete the "[Application Form](#)" on our website, indicating the reference code of the vacancy and attaching the following documents:

- Curriculum vitae, including Researcher's ID or ORCID No.
- A motivation letter, including a brief summary of work experience and a statement of research interests and career goals.
- Academic transcripts from all Undergraduate, MSc and PhD degrees.
- At least three reference letters.

The deadline for registration is **January 31, 2020 at 12:00 noon**.

CIMNE's Severo Ochoa selection committee will review the applications. Shortlisted candidates may be called for an interview. They shall also be required submit certifications demonstrating all merits and compliance with the requirements of the position to seleccio@cimne.upc.edu (unless the certificates were provided along with the initial application).

CIMNE is an equal opportunity employer committed to diversity and inclusion. We are pleased to consider all qualified applicants for employment without regard to race, colour, religion, sex, sexual orientation, gender identity, national origin, age, disability or any other basis protected by applicable state or local law.

CIMNE has been awarded the HRS4R label.