

JOB OFFER

JUNIOR RESEARCHER

Position: Junior researcher in computational fluid dynamics (CFD)
Offer date: DOE publication
Project: CIIAE - Ref^a IJ-CFD (HIDRÓGENO Y POWER-TO-X)
Department: Hydrogen and Power-to-X
Estimated starting date: January 2023

Workplace:	University of Extremadura. Cáceres campus	
Tasks to be developed:	<p>CFD plays an important role for the development of energy storage and hydrogen conversion systems. Numerical modelling is an indispensable tool for understanding and optimization, allowing to determine good design practices that can be applied experimentally.</p> <p>The successful candidate is expected to perform the following tasks:</p> <ul style="list-style-type: none"> – Creating CFD simulations for various types of energy storage and hydrogen technologies – Collaborations with experimental researchers from CIIAE and beyond – Providing recommendations to decision makers based on modelling results – Successful Collaboration with universities, research institutes and companies at national and international level. – Writing publications as first author and co-author (e.g., 1.5 paper p.a. in high-ranked journals) – Writing research proposals and contributing towards acquisition of competitive funding, both private and/or public – Project management and project administration (internal and external), also towards the department and CIIAE – Becoming gradually more independent, in order to conduct, manage and lead an independent project <p>Challenges: Among the main scientific challenges in CFD, it is worth noting the development of transient and multi-scale models that can reliably predict the performance and durability of energy storage and hydrogen conversion systems.</p>	
Duration of the contract and salary:	Temporary Contract Initial duration: November 2024, with the possibility of extension	Gross Salary + S.S. Fees Gross Salary Range: 35 000 € - 38 000 €
Academic background required:	A PhD in engineering (with several possible disciplines, e.g., chemical, energy and industrial), physics, chemistry, mathematics or related discipline	
Other education:		
Professional experience:		

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Job requirements (have to be fulfilled):	Specific techniques (analytical, software, calculations, prototyping, etc.)	<ul style="list-style-type: none"> – Excellent knowledge and deep understanding of physics and chemistry applied to energy storage, e.g., electrochemistry, combustion, heat transfer and fluid dynamics, – Excellent analytical skills and experience in Ansys and/or Comsol – Some programming experience, e.g., Python and Matlab – Statistical skills, for example statistical tests and regression – Excellent analytical skills
	Participation and/or collaboration in R&D&I/business projects	Proven participation on at least 1 R&D projects
	Languages	Excellent oral and written skills in English
	Cross-cutting competences	<ul style="list-style-type: none"> – Commitment to open science in terms of research methods, data and publications – Ability to work in a diverse and flexible academic environment in a team-oriented, but independent way – Experience on collaborating with other colleagues from the same department and beyond
	Willingness to travel and stay abroad	The candidate is expected to travel, both nationally and internationally, in the context of projects and conferences
	Publications: scientific articles (in journals indexed in Web of Science and/or Scopus), theses (PhD and/or Master's), presentations at conferences, reports, technical reports, technical guides, etc.	Strong track-record of publications as first author and co-author as the candidate is expected to publish in top journals in the field. At least 3 publications in Scopus indexed journals. Alternatively, a monograph thesis may also be considered, as well as conference publications
To be evaluated (adds points to the final evaluation):		
<ul style="list-style-type: none"> – Experience with statistical learning models and machine learning – Knowledge of electromagnetism and superconductivity – Programming experience in Fortran, Open Foam and/or FreeFem – Experience with Paraview or similar – Experience with statistical learning models and machine learning – Knowledge of Spanish and/or Portuguese – Experience with industrial collaborations and/or previous experience working on industry – Motivation letter (maximum 2 pages) included in the application. – Evaluation provided by 2 references via telephone conversation. The contact details of the references (e-mail and telephone) are provided by the candidates in their application. 		
Selection process details:		
Technical test: NO		

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Language (English): yes (will be evaluated during the interview)

Job interview: yes

Interested candidates:

Please, send the curriculum vitae, with the deadline being 15 calendar days from the day following the publication in the DOE (Official Journal of Extremadura) indicating the following reference: **Refª IJ-CFD (HIDRÓGENO Y POWER-TO-X)**

FUNDECYT-PCTEX (Edificio Parque Científico Tecnológico), Avda. de la Investigación, s/n, Edificio PCTEX, Campus de la Universidad de Extremadura – 06006 Badajoz (España)

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