Universidad Carlos III de Madrid (UC3M, www.uc3m.es)
invites applications to fill PhD positions ALBATOR-D1, ALBATOR-D2

Position description and objectives:

- **ALBATOR-D1: Numerical simulation of ECR plasma thruster discharges, focusing on the understanding of the driving physics and the optimization of their design and operation.**
- **ALBATOR-D2: Numerical simulation of plasma thruster plumes and their interaction with immersed bodies, applied to space debris removal with the 'ion beam shepherd' concept**.

Both positions will involve the development of top-class Particle-in-Cell kinetic simulation codes, the usage of high-performance computing (HPC) hardware, and the analysis, publication, and presentation of results. The contract will be funded under the **EIC ALBATOR project**. Selected candidates will join the Plasma and Space Propulsion Team (EP2, ep2.uc3m.es) at Universidad Carlos III de Madrid under the supervision of professors E. Ahedo and M. Merino, and collaborate closely with other researchers.

Requirements:

- Young MSc holder (and a total of 300 ECTS completed among BSc + MSc)
- Strong background in the following disciplines: Aerospace Engineering, Applied Mathematics, Scientific computing, Plasma Physics, Fluid Dynamics, Electromagnetism. Excellent candidates from other disciplines are also invited to apply.
- Previous design/laboratory experience is highly desirable.
- Outstanding academic record; critical & creative thinking.
- Team-working and communications skills; Previous international experience desirable
- Ability to deal independently and proactively with scientific and engineering challenges.
- Good proficiency in English (oral & written).

What we offer:

- Up to 4-year contract; starting annual gross salary 25 k€ plus productivity bonuses.
- Become part of a young, dynamic, highly qualified, collaborative team.
- Opportunity to travel to international conferences to present research activities.
- Opportunity to carry out a research internship abroad.
- Flexible working environment and schedule.

How to apply:

Interested candidates must send their applications to odriva@pa.uc3m.es indicating in the email subject the reference "**ALBATOR-D1-D2**," and attaching the following documents in pdf format:

- A motivation letter highlighting candidate's skills, experience and research goals (max. 1 page).
- CV, including relevant education and work experience. Academic grade reports and % position in your class are valuable information for the evaluation.
- The contact information of up to two references (will be contacted during the hiring process)
- Sample of best works of the candidate (e.g. MSc thesis).

Application deadline is **June 30, 2025, but the position <u>will be filled as soon as a suitable candidate is found</u>.** Contracts will begin in September 2025, though an earlier/later start date can be arranged. Applications from women and minorities are particularly encouraged.

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