**The Department of Aerospace Engineering, Universidad Carlos III de Madrid (UC3M)
invites applications to fill PhD positions ROCINANTE-D1 and ROCINANTE-D2**

Position description and objectives:

ROCINANTE is a 5-year ERC-Consolidator Grant aiming to unravel and tame the non-linearly oscillating structures and turbulence present in electrodeless plasma thrusters for in-space propulsion. The success of the project will enable the development of highly efficient devices and open a new research line on active control of space plasma thrusters. At the Plasmas and Space Propulsion Team we seek **excellent and motivated candidates to fill two PhD positions:**

- **ROCINANTE-D1**: Your PhD thesis will consist in *the development and instrumentation of a large plasma source, to characterize and analyze experimentally the fluctuations occurring in the plasma.*
- **ROCINANTE-D2**: Your PhD thesis will consist in *the development of an advanced Particle-In-Cell simulation framework in the Julia programming language, and apply it to characterize and analyze numerically the plasma fluctuations.*

Frequent interaction between the two theses will enable to compare and contrast experimental and numerical results, helping reach the ultimate goals of the project.

What we offer:

- Up to 4-year contracts (renewed yearly), including productivity bonuses.
- Advanced PhD-level education/training and opportunity to carry out a research internship abroad.
- Become part of a young, dynamic, highly qualified, collaborative team.
- Opportunity to travel to international conferences to present research activities.
- Flexible working environment and schedule.

Requirements:

- Young MSc holder (and a total of 300 ECTS completed among BSc + MSc)
- Strong background in: Aerospace Engineering, Plasma Physics (other disciplines are welcome too).
- Previous design/laboratory experience (for D1) or numerical experience (for D2) 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).

How to apply:

Interested candidates must send their applications to odriva@pa.uc3m.es, indicating in the email subject the reference "**ROCINANTE-Dx**" (with x=1,2) 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
- The contact information of up to two references (will be contacted during the hiring process)
- Sample of the best works of the candidate (e.g. MSc thesis).

Application deadline is **May 31, 2026, but the position will be filled as soon as a suitable candidate is found.** Contracts will begin in October 2026, though an earlier/later start date can be arranged. Applications from women and minorities are particularly encouraged.