



OPEN POSITION

IMDEA Materials Institute is a non-profit research organization, promoted by the Regional Government of Madrid, Spain, to carry out research activities in Materials Science and Engineering. More information can be found at <http://www.materials.imdea.org>

The research groups of Computational Solid Mechanics and Multiscale Materials Modeling and at IMDEA Materials is seeking for a

PhD candidates – Modeling the evolution of material interphases

(Ref: INTERPH)

to carry out a PhD in Computational Mechanics and Materials Science. The candidate will work on mathematical models to represent interfaces between two different phases in a material (e.g. liquid/solid) and its evolution as well as its robust and efficient numerical implementation. The PhD will be covered by an FPI grant from the Ministry of Science within the program for Centres of Excellence *María de Maeztu*. The PhDs will be focused on (1) Mathematical representation of interfaces, diffuse approaches (e.g. phase field model) and sharp interface approaches, (2) Thermodynamics and physics for modeling the equilibrium and evolution of those surfaces and (3) Numerical implementation using finite elements or alternative techniques.

The candidate will learn advanced concepts in materials modeling, applied mathematics, nonlinear computational mechanics and thermodynamics, finite elements, optimization, etc., and gain hands-on experience in scientific programming. The student will get experience in a technological field with high employability

Requirements: The optimum candidate should hold (or finish during 2021) a Master of Science in Mechanical Engineering, Applied Mathematics, Materials Science, Physics or similar. **High level of English is mandatory.**

In addition, knowledge of some of the following fields will be positive

- Continuum Mechanics, finite elements
- Programming skills (Python, C++, Fortran)
- Materials Science

Conditions:

- Starting date: Opening of FPI grant call September 2020. Incorporation, to be determined.
- Full time contract including social security coverage.
- Enrolment in an academic PhD program.

Contact: Interested candidates should send their CV **indicating the job reference number, reference letters, and academic records** to:

<http://jobs.materials.imdea.org>