**Beca postdoctoral | Búsqueda de candidatos a Beca Post-Doctoral (UNLP)**

Búsqueda de candidatos para Beca Post-Doctoral, en el marco de un proyecto de investigación en micromecánica de sólidos.

**Tema:***El rol de las interfaces imperfectas en la respuesta termomecánica hereditaria de sólidos microestructurados.*

**Director:**Dr. Ing. Martín I. Idiart.

**Lugar de trabajo:** Departamento de Aeronáutica, Facultad de Ingeniería, Universidad Nacional de La Plata.

Many energetic solids of technological interest are aggregates of micrometric particles or grains cemented together by a compliant binding phase. Prominent examples include polymer-bonded triaminotrinitrobenzene and cyclotetramethylene-tetranitramine. Despite occupying a low fraction of the total volume, the binding phase can play a central role on the overall thermomechanical behavior and sensitivity of the solid. This is because irreversible phenomena such as viscous deformations and damage evolution occur mostly within that phase as a result of the granular morphology and local thermomechanical contrast. In high-energy systems the intergrain spacing is much smaller than the grain size, the binding phase can be regarded as an interphase of vanishing thickness, and the aggregate can be conceived as a microstructured solid with imperfect interfaces exhibiting hereditary behavior. Their engineering simulation thus calls for a multiscale constitutive framework that incorporates the role of imperfect interfaces on the hereditary thermomechanics of microstructured solids and that, at the same time, generates constitutive descriptions suitable for implementation into numerical codes for structural analysis. The proposed research aims at developing such a framework.

**Requisitos:** Poseer título de Doctor o estar próximo a doctorarse en alguna especialidad de las Ingenierías o las Ciencias Físicas con conocimientos en micromecánica teórica y/o computacional de sólidos. Buen dominio del idioma inglés.

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