

Advanced numerical strategies and inverse methodologies for material characterization

Scientific area: Computational Solids And Structural Mechanics

Contributions on the following subjects are welcomed:

- Optimization techniques and inverse analysis: identification of constitutive or damage parameters, identification of boundary conditions, numerical methods, algorithms for inverse analysis and optimisation of manufacturing processes.
- Material behaviour modelling at the macroscopic level: generic or dedicated models covering complex loading paths, high strain rates, cyclic loading, high temperatures, hardening, anisotropic behaviour, fracture criteria, and strategies for model selection.
- Experiments, models and test design: numerical methodology for the identification of model parameters, experimental method applied for model validation, shape and topological optimization.
- Non-conventional modelling: data-driven and hybrid/implicit models using machine learning/AI techniques.

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