

**INNOVATIONS IN PHASE-FIELD MODELING, COMPUTATION AND EXPERIMENTAL
VALIDATION**

TRACK NUMBER (1000 COMPUTATIONAL SOLID MECHANICS)

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ABSTRACT

In computational mechanics, recent years have witnessed the emergence of the phase-field method (PFM) as a powerful tool that can be coupled with well-established approaches, such as continuum mechanics, computational fluid dynamics, porous media mechanics, soil mechanics, biomechanics, and the energy sector to solve a wide range of challenging engineering problems. This can be seen, for instance, in the modeling of brittle and ductile fracture, hydraulic fracture modeling in fluid-saturated or unsaturated porous media, phase-change materials as free or pore materials, and recently phase-field fatigue failure and corrosion.

This mini-symposium provides a forum for the discussion and exchange of ideas related to new advances and applications of the phase-field approach in engineering. It welcomes contributions from the theoretical, experimental, and computational point of view, and is intended as a fruitful moment of interdisciplinary exchange of ideas.