

CURRENT TRENDS IN PHASE-FIELD MODELING AND COMPUTATIONS

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MINISYMPOSIUM

The phase-field approach is a very powerful technique to model and simulate complex fracture phenomena under various loading conditions, also in multi field settings and across the scales. Due to its flexibility, this methodology has gained wide interest in the engineering and applied mathematics communities especially in the past decade. Recently, the phase-field approach has been extended to model fatigue failure in the low and high cyclic regime.

This mini-symposium provides a forum for the discussion and exchange of ideas related to new advances and applications of the phase-field approach to fracture and fatigue in engineering. It welcomes contributions on phase-field modeling of fracture including brittle, cohesive and ductile fracture in solid and structural mechanics. Research results on basic aspects of phase-field formulations and of their numerical implementation, experimental validation as well as extensions to novel and/or more complex settings and relevant applications are all welcome.