



Mathematical Problems in Engineering

Special Issue on
Computational Methods for Fracture 2015

CALL FOR PAPERS

The prediction of fracture and failure of engineering systems and materials is of high practical relevance. An enormous effort was made in the past to develop new numerical methods in order to predict fracture. Among the most popular methods for fracture are the extended finite element method (XFEM) or generalized finite element method (GFEM), embedded finite element method (EFEM), and meshfree methods, to name a few. Besides the enormous progress, computational modeling of fracture remains of high interest in the engineering and materials science community.

The main focus of this special issue is on computational methods for fracture. Articles submitted to this special issue can also be concerned about large-scale engineering applications, implementational aspects, and constitutive modeling. Articles dealing with the transfer of length scales in the context of multiscale methods for fracture are particularly welcome.

Potential topics include, but are not limited to:

- ▶ Advances in partition of unity methods for fracture
- ▶ Meshless methods for fracture
- ▶ Phase-field models for fracture
- ▶ Constitutive modeling
- ▶ Nonlocal models
- ▶ Cohesive zone models
- ▶ Ductile fracture
- ▶ Large-scale engineering applications
- ▶ Parallel-coding and implementational aspects
- ▶ Multiscale modeling of fracture
- ▶ Discrete element methods
- ▶ Peridynamics

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/mpe/cm15/>.

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