

Material failure modeling

Session organizers

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Description

This session aims to bring together contributions related to the numerical modeling from broad phenomena such as material failure or degradation and loss of structural integrity, such as initiation and propagation of fracture in quasi - brittle materials, damage evolution and the transition to damage and fracture in ductile materials, loss of adhesion and delamination of composite materials, etc. In this sense, the work on development, implementation and application of the following problems are welcome:

Fault models based on the analysis of multiple scales.

Models formulated based on classical fracture mechanics , analytical approaches (configurational forces , variational principles , etc. .) And phenomenological .

Numerical methods and algorithms specially adapted for the analysis of failure and fracture problems , such as finite element discontinuities , cohesive interface models , discrete elements , boundary elements , meshless methods , particle methods , etc. .

Contributions with results validated against experimental data, and the experimental works that use computational methods as a tool to support the analysis and interpretation of results will be especially welcome.