

## Special Issue

# Application of Finite Element Analysis in Fracture Mechanics

### Message from the Guest Editors

Predicting the catastrophic failure of engineering components due to crack initiation or propagation has long been an active research topic. For real-life components, analytical methods for estimating the conditions for fracture initiation (critical load and crack orientation) are generally insufficient. As a result, numerical methods such as the finite element method are commonly used. This Special Issue is dedicated to studies that utilize the finite element method to study the failure initiation and propagation stages. Manuscripts describing failure modeling due to cracking in all structural materials, including metallic, polymer, composites, ceramics, and glasses, are welcome. Studies focusing on new failure criteria or providing insights on classical failure criteria are especially encouraged. Studies should generally include verification and validation of numerical models. Studies which only report on experimental results will not be considered.

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### Guest Editors

Dr. Elad Priel

Dr. Brigit Mittelman

Dr. Alberto Campagnolo

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### Deadline for manuscript submissions

30 September 2025



## Applied Sciences

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## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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