

FRACTURE AND CONTACT MECHANICS FOR INTERFACE PROBLEMS

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ABSTRACT

This Mini-Symposium aims at providing a forum for specialists in fracture mechanics and contact mechanics to discuss advances in mathematical formulations and computational models for interface mechanical problems. Perspective Authors are invited to present innovative analytical and numerical methods based on fracture mechanics and contact mechanics for the characterization of the mechanical behaviour of interfaces in engineering applications. This is a follow-up event of two MS on the same topic organized in the IV European Conference on Computational Mechanics (France, 2010, 44 speakers) [1,2] and in the 10th World Congress on Computational Mechanics (Brasil, 2012, 16 speakers), demonstrating a high interest of the scientific Community.

Topics of the MS include, but are not limited to:

- Multiscale characterization of roughness of contact and fracture surfaces;
- Mathematical formulations for structural analysis of multi-material systems;
- Cohesive zone models for decohesion and contact at interfaces under monotonic or cyclic loading;
- Interface problems in multi-physics;
- Interface problems in composites and in polycrystalline materials;
- Interface problems in biomechanics;
- Interfaces in materials for renewable energy applications (photovoltaics and fuel cells).

REFERENCES

- [1] M. Paggi, A. Carpinteri, P. Wriggers, "Special issue on fracture and contact mechanics for interface problems", *Engineering Fracture Mechanics*, Vol. 80, 1-2, 2012.
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