14th World Congress on Computational Mechanics (WCCM XIV)
8th European Congress on Computational Methods in Applied Science and Engineering (ECCOMAS 2020)
July 19–24, 2019, Paris, France

ANALYTICAL AND NUMERICAL MULTI-SCALE AND MULTI-FIELD INTERFACE MODELS
1500

M. SERPILLI[‡], R. RIZZONI[†], F. LEBON [*] AND S. DUMONT[**]

[‡] Department of Civil and Building Engineering, and Architecture, Università Politecnica delle Marche
Via Brecce Bianche, 60131, Ancona, Italy, E-mail: m.serpilli@univpm.it

[†] Department of Engineering, University of Ferrara
Via Saragat 1, 44122, Ferrara, Italy, E-mail: raffaella.rizzoni@unife.it

[*] Laboratoire de Mécanique et d'Acoustique, CNRS
Aix-Marseille University, Impasse Nikola Tesla, Marseille, France, E-mail: lebon@lma.cnrs-mrs.fr

[**] IMAG, University of Montpellier, CNRS
UMR 5149 Pl. E. Bataillon, 34095 Montpellier cedex 5, France, E-mail: serge.dumont@unimes.fr

Key words: Interfaces, Composite materials, Thin films, Multi-scale models, Numerical modeling

ABSTRACT

The presence of interfacial layers has a significant effect on the mechanical properties and the durability of materials used in different field of engineering. The development of reliable models for materials whose properties are interface controlled plays a crucial role in the optimization of currently used and advanced materials. The present mini-symposium aims at providing a forum for an in-depth discussion of new and recent analytical and computational models of imperfect interfaces in structures and in composite materials. Contributions concerning theoretical, numerical and experimental aspects are welcome from scientists (including mathematicians, physicists, engineers) working in different fields of material science and mechanics of materials. Topics to be covered include, but are not limited to, the following:

- multi-scale modeling of interphases, thin films and surfaces, contact laws;
- models of imperfect, sliding, debonding or cohesive interfaces in composite materials;
- deformation, damage, fracture and other dissipative processes at interfaces;
- advanced finite element methods for the computational modeling of interfaces and surfaces.

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