11th. World Congress on Computational Mechanics (WCCM2014) 5th. European Conference on Computational Mechanics (ECCM V) 6th. European Conference on Computational Fluid Dynamics (ECFD VI) July 20 - 25, 2014, Barcelona, Spain

ANALYTICAL AND COMPUTATIONAL MODELS FOR IMPERFECT INTERFACES

R. RIZZONI^{*}, F. LEBON[†] E. BENVENUTI^{*} AND S. DUMONT[‡]

*Department of Engineering, University of Ferrara Via Saragat 1, 44122 Ferrara, Italy <u>raffaella.rizzoni@unife.it</u> elena.benvenuti@unife.it

[†] CNRS, Laboratoire de Mécanique et d'Acoustique, Université Aix-Marseille 4 31 Chemin Joseph-Aiguier, 13402 Marseille Cedex 20, France 5 <u>lebon@lma.cnrs-mrs.fr</u>

> ‡LAMFA, Université de Picardie Jules Verne 33, rue Saint-Leu, 80039 Amiens, France serge.dumont@u-picardie.fr

Key words: imperfect interfaces, composite materials, multi-scale modeling, embedded cohesive interfaces, finite element method.

ABSTRACT

The goal of the mini-symposium is to give the state of the art and to present some advances and applications in analytical and computational modeling of imperfect interfaces in structures and in composite materials.

The mini-symposium is intended to bring together diverse interdisciplinary groups of researchers and to promote a fruitful exchange of ideas and information among scientists, engineers and mathematicians.

Potential topics of the mini-symposium may include, but are not limited to, the following issues:

- multi-scale modeling of interphases;

- computational strategies for imperfect and cohesive interfaces;

- computational analysis of coated inclusions by means of the generalized finite element method, the extended finite element model, and embedded spring like models or other advanced techniques.