14th International Conference on Fracture
Rhodes, Greece, June 18-23 2017

Invitation to Mini-Symposium on:

Multiscale Modelling of Damage and Fracture in Composites

Organised Jointly
by:

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Composite materials are nowadays widely used in many high-end engineering applications due to their many advantages. Failure of composite structures presents a significant concern relating to integrity and safety of structures. Fracture can reduce the durability and life of a structure, and may lead to catastrophic failures Therefore, structural application of composites requires more accurate failure prediction than what is currently available, and such predictions can be achieved through computational multiscale modelling.

Fracture is inherently a multi-scale process in that engineering scale (mm-m) macro cracks and defects are generated from the cumulative effect of multiple hierarchical processes. In composite materials, processes at several length scales contribute to the various modes of damage and ultimately failures. To develop accurate predictive modeling and analysis tools, it is essential to understand how different physical processes that could occur over nano to macro scales interact to generate the macro cracks and defects that cause failure of composite materials. This will encompass different types engineering composites, ranging from conventional polymer composites to natural fibre composites. This primary aim of this Mini-Symposium is to promote and disseminate latest research on analytical and computational modeling techniques to quantify and predict defects and damage in composites at various scales and integrate them in a hierarchical multiscale framework.

Please send an expression of interests by submitting a provisional title to one of the organisers by the 31 August 2016 for planning purposes.

Full abstracts will be due by the 31 October 2016 to be submitted via the conference webpage http://www.icf14.org.