MS09: Damage & fracture of fiber reinforced composites & multi-materials structures: characterization & modeling (*Prof. Xiaojing GONG, Université de Toulouse, Institut Clément Ader, France*)

Fiber reinforced composites and multi-materials are increasingly being used in the construction of structural components of various sizes in many industrial sectors such as transportation, nuclear power, biomedical engineering and civil engineering. This is mainly motivated by the lightening of structures with same or better mechanical properties. However, the durability of these materials highly heterogeneous and anisotropic is not yet mastered, even though it is at the heart of the security of large technological structures, especially in aeronautics, space and nuclear. It is therefore essential to have the best knowledge about the mechanisms of damage and fracture including their initiation and their development.

The objective of this mini symposium is to exchange state-of-the-art research results in the field of characterization and modeling of damage and fracture of multifunctional composite structures. The proposed topics of discussion are as following:

- Experimental investigation of damage and failure mechanisms
- Testing methods
- Damage and failure criteria
- Modeling and prediction of the durability
- Simulation of damage and failure evolution

