



## Session description

Chairpersons names: Prof. Antoniomaria Di Ilio - Dr. Antonios Stamopoulos

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Title of the session: Manufacturing of Composite Materials - Process Simulation and Mechanical Characterization

Objectives: The session covers all the aspects of manufacturing of composite materials in terms of fabrication methods and methodologies for creating composite material parts, including the forming ones. Moreover, it concentrates on the assessment of the effects of each manufacturing method applied on composite structures on their shape variation, structural integrity and mechanical performance. Thus the main objective is the relation between manufacturing of composite components and their characteristics as a product as well as their resistance to failure. Considering the fact that the application of these materials covers many industrial sectors from automotive and aeronautics up to civil engineering, contributions (experimental and/or numerical) from all these sectors are welcomed. In particular, the subjects include, but are not limited to, the experimental analysis and/or the simulation of the:

- Fabrication of thermoset composite components.
- Fabrication and forming of thermoplastic composites.
- Manufacturing of components with recycled composite materials.
- Machining and Joining techniques.
- Characterization methods of composites and their constituents for manufacturing simulation purposes.
- Characterization/Simulation of the formability and failure of composite components.