

Special Session (SS02)

Advanced modelling, design and testing of smart composite structures

Organizers:

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Description:

The new generation of smart multifunctional composite structures has triggered the need for better understanding of material characterization, high frequency vibration, wave propagation, fracture and damage progression and, ultimately, optimization of these smart composite devices and micro-structures. The aim of this special session is to bring together researchers working on simulation, optimization and testing of composite structures with integrated active elements (piezoelectric, magnetostrictive, electroactive, etc), acting as sensors and actuators, or also functionally graded structures. Applications to modern devices and structures are sought in energy harvesting, micro-electro-mechanical systems, structural health monitoring, and vibration control, among others.