



June 20-24, 2016 Catania, ITALY

Mini-symposium

## **Functional Fatigue, Fracture and Failure Analysis of Shape Memory Alloys and Devices**

Shape Memory Alloys (SMAs) have seen growing interest in the last years in engineering and biomedical fields. Superelastic and shape memory based devices are subjected to cycling conditions and the fatigue life represents a fundamental issue for developing industrial applications.

This minisymposium is aimed to share research achievements and industrial results on functional and structural damage mechanisms occurring during static or fatigue loading of SMAs and devices.

Minisymposium topics:

- Functional fatigue of pseudoelastic SMAs and biomedical devices.
- Functional fatigue of martensitic SMAs and actuators.
- Life time prediction of SMAs within low and high cycle fatigue regime.
- Crack formation and stable/unstable propagation under static or fatigue loads.
- Local crack tip microstructural damage and phase transition mechanisms.
- Toughening effects and temperature dependent fracture properties.
- Effects of material processing and device manufacturing on fatigue and fracture.
- NiTi alloying and inclusions.
- Experimental fatigue tests.
- Rotating bending tests.

Abstract submission deadline: **15 Jan 2016**

Organizers:

**Ausonio Tuissi**, *National Research Council, CNR IENI, Lecco, Italy* ([tuissi@ieni.cnr.it](mailto:tuissi@ieni.cnr.it))  
**Carmine Maletta**, *University of Calabria, Rende, Italy* ([carmine.maletta@unical.it](mailto:carmine.maletta@unical.it))