

# ICSI 2021

## Multiaxial fatigue: experimental, theoretical and numerical approaches

Fatigue is considered one of the main causes for in service failure of mechanical components and structures. The need for the weight reduction of components and a growing need for greater lifespans of equipment, forced the understanding of the fatigue behavior of materials under multiaxial loading cycles and increased number of loading cycles. It is generally recognized that multiaxial stresses occur in many full-scale structures, being rare the occurrence of pure uniaxial stress states.

This symposium is intended to have the present status of the specimens and testing machines where research can be carried out for performing multiaxial fatigue tests under uniaxial, bi-axial or multiaxial loading conditions.

Research on the performance of multiaxial fatigue tests under axial/torsion loading and in plane bi-axial testing using low cost electromagnetic actuators or piezo-electric actuators either in classical cylindrical or in cruciform specimens are welcome.

Further research is needed concerning multiaxial very high cycle fatigue in order to achieve better improvements in testing materials under multiaxial loading conditions.

The main objective of this International Symposium is to bring together researchers, engineers, and students to present and exchange new data and new ideas, allowing an interesting multidisciplinary discussion.

### **Organizing Committee**

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