

## **Minisymposium proposal**

# **Advances in Numerical Methods for Flexible Multibody Mechanics**

### **Organizers:**

Olivier A. Bauchau  
University of Michigan-Shanghai Jiao Tong University Joint Institute  
800 Dong Chuan Road, Shanghai, 200240, China  
E-mail: olivier.bauchau@sjtu.edu.cn

Olivier Brüs  
Department of Aerospace and Mechanical Engineering (LTAS), University of Liège  
Chemin des Chevreuils, 1 (B52), 4000 Liège, Belgium  
E-mail: o.bruls@ulg.ac.be

Alberto Cardona  
Centro Int.de Mét.Comput.en Ingeniería (CIMEC – INTEC), Univ. Nacional del Litoral – CONICET  
Güemes 3450, 3000 Santa Fe, Argentina  
E-mail : acardona@intec.unl.edu.ar

### **Short title:** Flexible Multibody Mechanics

This mini-symposium deals with new advances in numerical methods for flexible multibody mechanics. The objective is to present emerging fundamental approaches used in computer-aided kinematic and dynamic analysis of flexible multibody systems, and to identify future directions of research in the area.

Topics of interest include, but are not limited to:

- New formulations and models in flexible multibody mechanics
- Lie-group based formulations for multibody mechanics
- Time-integration methods for constrained multibody dynamics
- Contact and impact mechanics in the context of multibody dynamics
- Reduced order methods in multibody dynamics

Papers describing advanced applications in areas as wind-turbines, vehicles, robotics, biomechanics, aerospace engineering, engines, and microelectromechanics, within many others, are also welcome.