24th IACM Computational Fluids Conference (CFC 2027)
March 12-15, 2027, Yokohama, Japan

FLUID-STRUCTURE INTERACTION: METHODS AND APPLICATIONS

LAURA BATTAGLIA*, JORGE D'ELÍA*, LUCIANO GARELLI*, GUSTAVO RÍOS RODRÍGUEZ*, MARIO STORTI*

MARCELA CRUCHAGA**

* CIMEC-UNL-CONICET, Colect. Ruta Nac. 168, Km 0, Paraje El Pozo, Santa Fe, SF, Argentina.
http://www.cimec.org.ar/, lbattaglia@santafe-conicet.gov.ar, jdelia@santafe-conicet.gov.ar, lucianogarelli@gmail.com, gusadrr@santafe-conicet.gov.ar, mario.storti@gmail.com

**Departamento de Ingeniería Mecánica, Universidad de Santiago de Chile (USACH), Av. Bernardo O'Higgins 3363, Santiago de Chile, Chile. marcela.cruchaga@usach.cl

Key words: Fluid-structure interaction, Numerical methods, Applications, Multiphysics, High Performance Computing

ABSTRACT

The mini-symposium focuses on advances in computational fluid-structure interaction (FSI) problems. The presentations will cover a wide range of applications, including aerodynamics, renewable energy (e.g. wind turbines, land and airborne, wave energy converters, hydropower), biomedicine, aerospace and aerodynamics, civil engineering (bridges and buildings).

The topics to be discussed include:

- Partitioned and staggered methodologies
- Embedded and Arbitrary Lagrangian-Eulerian methods
- Multiphysics coupling methods
- High Performance Computing in FSI
- Theoretical developments in FSI and moving boundaries
- Industrial applications