

Computational modeling in bioengineering applications

Session organizers

1. Pablo Blanco, LNCC - INCT MACC, Petrópolis, Río de Janeiro, Brasil.
2. Gustavo Buscaglia, Instituto de Ciências Matemáticas e de Computação ,Universidade de São Paulo, São Paulo, Brasil.
3. Santiago Urquiza, Departamento de Ingeniería Mecánica, Facultad de Ingeniería, Universidad Nacional de Mar del Plata, Mar del Plata, Argentina.

Description

The aim of this session is to bring together the latest scientific works about computational modeling and simulation in bioengineering and biomedical problems. The contributions should be seeking into computational aspects of subjects involving multiphysics, multiscale models of biological systems and processes, development of new numerical methods and data-driven computational modeling. Therefore, contributions in the following areas and topics are welcome:

- Anatomical models,
- Image-based computational modeling,
- Inverse problems for material characterization,
- Fluid-structure interaction,
- Biomechanical modeling of soft and hard tissues,
- Multi-scale modeling of living tissues,
- Physiological modeling of organs and systems,
- Biochemical transport,
- Validation of biomedical models,
- Application of models in medical practice.