

COMPUTATIONAL DYNAMICS OF STRUCTURES WITH LARGE DEFORMATIONS

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ABSTRACT

This mini-symposium addresses novel contributions related to theoretical and numerical methods for the computation of the nonlinear dynamics of structures. Special focus lies on the treatment of structures in the regime of large rotations and large deformations, structure preserving integration of the equations of motion, innovative formulations for the treatment of large rotations, analysis and comparison of the accuracy and performance of existing methods.

Sample topics are dynamics and large deformations together with:

- novel beam and shell formulations
- flexible multibody dynamics
- fluid-structure interaction
- contact problems
- bio-mechanical applications
- composite structures
- multi-physics applications
- micro-electro-mechanical or nano-electro-mechanical systems (MEMS/NEMS)
- process simulation (sheet metal production, fiber production, etc.)