



HFSS 2023

ECCOMAS Thematic Conference on Highly Flexible Slender Structures

Rijeka, Croatia, 25-29 September 2023

Scope

International Conference on Highly Flexible Slender Structures will be held between 25th and 29th of September 2023 at the University of Rijeka, Faculty of Civil Engineering, Rijeka, Croatia. The conference will take place during the closing stage of the MSCA Innovative Training Network [THREAD](#) on highly flexible slender structures for industrial applications. The conference will focus on structural systems and their parts or elements which are both (i) *highly flexible*, i.e. exposed to large overall structural deformation and (ii) *slender*, i.e. characterised by a geometry with one structural dimension considerably larger than the other two.

Objectives

The conference aims to attract wider research community working in the areas of mechanical modelling, mathematical formulations and numerical methods for highly flexible slender structures. Specifically, it is open to both engineers and mathematicians brought together around major challenges in theoretical and numerical analysis as well as industrial applications and open-source simulation software development for such structures. The topics of interest involve advanced concepts in experimental and theoretical structural mechanics, contact problems and non-smooth dynamics, computational geometry, discretisation methods and geometric numerical integration including the newest advances in numerical formulations on non-linear manifolds, which will help usher the next generation of virtual prototyping.



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Scientific / Technical areas covered

Contributions to the conference are invited in the areas including, but not limited to:

- Experimental mechanics for slender flexible structures
- Constitutive modelling of complex composite cross-sections
- Physical and virtual experimentation and mesoscopic simulation
- Advanced geometrical formulations and numerical discretisation of slender structures
- Contact mechanics in systems involving slender structures
- Mathematical modelling and development of novel numerical algorithms for non-linear dynamic analysis on non-linear manifolds
- Geometric integration of equations of motion including fundamental research in the fields of Lie group time integrators
- Adaptive discretisation methods and model-order reduction
- Application of the simulation methods to industrial problems

Special volume of *Multibody System Dynamics* will be issued with papers based on selected conference contributions

Additional Information

Conference web page will be set up in September 2022 with detailed information on abstract submission, important dates, conference fees and accommodation options. Please contact us on hfss-info@uniri.hr for additional information.

Scientific Committee

Martin Arnold (Martin-Luther-Universität Halle-Wittenberg)
Rudolf Beha (Leitner Ropeways)
Oliver Brüls (University of Liège)
Elena Celledoni
(Norwegian University of Science and Technology Trondheim)
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Heike Faßbender (Technische Universität Braunschweig)
Johannes Gerstmayr (University of Innsbruck)
Gordan Jelenić (University of Rijeka)
Sigrid Leyendecker
(Friedrich-Alexander-Universität Erlangen-Nürnberg)
Joachim Linn (Fraunhofer ITWM Kaiserslautern)
Sina Ober-Blöbaum (University of Paderborn)
Edita Papa Dukić (University of Rijeka)

Local Organising Committee

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For any questions, please contact us by e-mail on

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