

The 7<sup>th</sup>

# International Conference on Multibody System Dynamics

IMSD

Dear colleagues,

The 7th edition of the **International Conference on Multibody System Dynamics (IMSD)** will be organized in the US and hosted by the University of Wisconsin-Madison, between 9-13 June 2024. We cordially invite you to participate in the symposium on

## **Modelling, Formalisms, and Theoretical Methods**

The symposium focuses on recent advances in computational and theoretical aspects of modelling, formulations, and algorithm synthesis in MSD and related fields. Topics addressed include numerical integration schemes, modelling of coupled problems ('multi-physics', electro-mechanical systems, thermodynamics and continua...), geometric methods and structure-preserving algorithms, flexible multibody dynamics, modelling of dissipative systems, advanced computing etc.

Participants are required to submit a two-page abstract online.  
The submission deadline is **1 December 2023**.

Topics include, but are not limited to:

- *Numerical integration algorithms*
- *Formulation methods in MSD: kinematics and dynamics*
- *Modelling of coupled problems (mechanics of different media, 'multi-physics'...)*
- *Geometric methods and structure-preserving schemes*
- *Flexible multibody dynamics: formulations and integration schemes*
- *Variational integrators*
- *Constraint violation stabilisation algorithms*
- *Recursive formulations*
- *Modelling of dissipative systems (variational principles, metriplectic formulations...)*
- *Reduced-order modelling*
- *Advanced computing in MSD*

Submissions can optionally include a full-length paper. The deadline for submitting an optional full paper is 15 April 2024. Note that the submission of a full-length paper still requires the submission of an abstract by 1 December 2023. Selected full-length papers will be considered for publication in a Special Issue of the journal Multibody System Dynamics.

For more information and links to the online submission system, please visit the conference website at [imsd2024.engineering.wisc.edu](https://imsd2024.engineering.wisc.edu).