Università degli Studi di Pavia

Dipartimento di Meccanica Strutturale

in collaboration with
Centro di Simulazione Numerica Avanzata – CeSNA
Istituto Universitario di Studi Superiori

SEMINAR

Fluid-Structure Interaction and Isogeometric Analysis: From Wind Turbines to Biomechanics

The equations governing the motion of fluids and structures on moving domains, including the isogeometric formulation of the Kirchhoff—Love shell and the bending strips technique, are presented and the fluid—structure interaction (FSI) coupled problem is formulated. At the discrete level, the coupling assumes non-matching discretizations for the fluid and structure at their interface, which enables the use of different discretization techniques in the fluid and structural domains, and greatly simplifies the design-to-analysis process for FSI simulations. Applications to FSI of wind turbines as well as FSI of patient-specific cardiovascular blood flow will be presented.

Prof. Yuri Bazilevs
Department of Structural Engineering
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Thursday 22 September, 15.00
MS1 Conference Room,
Department of Structural Mechanics,
Via Ferrata,1 – Pavia

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