



Dipartimento di Strutture per l'Ingegneria e l'Architettura (DiSt)

January 24, 2019, h 15:00

Via Claudio, 21 – edificio 6

Aula «Manfredi Romano»

Prof. Alessandro REALI

**Department of Civil Engineering and Architecture
University of Pavia**

Seminar

Advanced modeling and applications of Isogeometric Analysis with a focus on shells and laminates

Abstract

Isogeometric Analysis (IGA) is a recent simulation framework originally proposed by Hughes and coworkers (2005) with the aim of bridging the Computational Mechanics and Computer Aided Design. Thanks to the high-regularity properties of its basis functions, IGA has shown a better accuracy per-degree-of-freedom and an enhanced robustness with respect to standard finite elements in a number of applications ranging from solids and structures to fluids and fluid-structure interaction. The lecture focuses on some recent advances on modeling and applications of shell structures allowed by the unique IGA features, with special attention to an accurate and inexpensive simulation technique for laminates. An overview of other interesting applications will be presented as well.

Short CV of Alessandro Reali (www.unipv.it/alereali)

Full Professor of Mechanics of Solids and Structures (since 2016) and Dean of the Department of Civil Engineering and Architecture (since 2018) of the University of Pavia

Selected honors/awards:

2014-2018: five times in the list of “Highly Cited Researchers” by ISI

2018: Recipient of the “Bruno Finzi Prize” for Rational Mechanics

2017: Commendatore of the Italian Republic by the President of the Italian Republic

2016: “IACM Fellows Award” (International Association for Computational Mechanics)

2015: “Hans Fischer” Fellowship of the Inst. Adv. Study of the Technische Universität München

2014: “John Argyris” Award for Young Investigators IACM

2013: AIMETA Junior” Prize for Mechanics of Solids and Structures

2012: “O.C. Zienkiewicz” Award ECCOMAS

2010: Ideas” ERC Starting Grant (European Research Council)

Organizzatore

Prof. Elio Sacco

Coord. Dottorato di Ricerca

Prof. Iunio Iervolino

Direttore del Dipartimento

Prof. Andrea Prota