



**POLITECNICO
MILANO 1863**



MOX Seminar Series

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Combining in vitro and in silico approaches towards patient-specific cardiovascular investigations

18 January 2018, 2:00 pm

Aula Consiglio VII Piano - Edificio 14, Dipartimento di Matematica POLITECNICO DI MILANO.

Abstract:

This seminar will outline the workflow developed at the Laboratory of Biological Structure Mechanics – LaBS, Politecnico di Milano. (www.labsmech.polimi.it) for the investigation of cardiovascular devices. The combined in vitro and in silico approach will be applied to the study of stenting procedures of peripheral arteries in idealized and patient-specific models as well as to the study of percutaneous aortic valves, where fluid-structure interaction simulations are required. Such examples will demonstrate the extent to which performances of minimally-invasive devices are related to their design, the materials and the applied loads.

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Gabriele Dubini:

G. Dubini is Full Professor at the Department of Chemistry, Materials and Chemical Engineering G. Natta, Politecnico di Milano. He was the Director of the Laboratory of Biological Structure Mechanics (LaBS) at Politecnico di Milano in 2003-2007. From 2008 to 2012 he was member of the Council of the European Society of Biomechanics (ESB), and the Secretary General from 2010 to 2012. His main research interests are the virtual planning of paediatric cardiac surgery procedures and minimally invasive vascular procedures, the design and characterisation of endovascular and microfluidic devices for biomedical applications