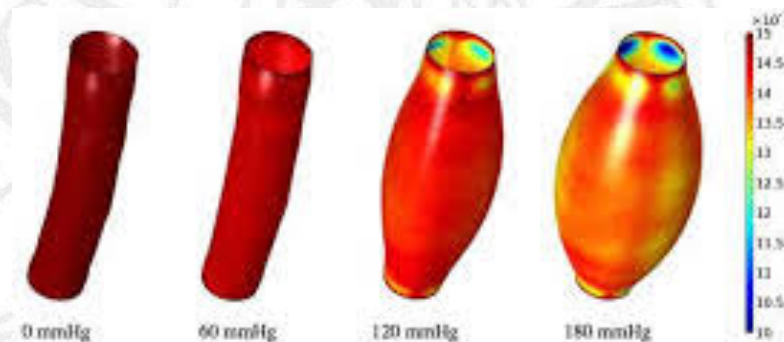


MULTISCALE APPROACHES FOR MULTIPHYSICS MODELLING OF THE MECHANICAL RESPONSE OF ARTERIAL TISSUES

To date the research activity in the biomechanical field has recently focused also on the development of engineering tools and computational methods useful for providing support towards highly-personalized diagnostic and clinical treatments. Since biomechanical problems generally span over a large range of spatial and temporal scales, considering multiple space-time continua for describing the mechanical response of biological tissues is surely an indispensable task. In this framework, modelling approaches based on multiscale strategies are able to describe complex processes across multiple and very different scales.

In this talk, different multiscale and multiphysics modelling strategies to analyse the mechanical response of arterial tissues will be presented. In particular, analytical formulations and numerical treatments for incorporate the influence of main biophysical processes occurring at different scales will be discussed in a computational framework.



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January 29th, 10:00 (sharp)

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