

MS 2-3: Cardiovascular Biomechanics

Organizers:

Christian Cyron (Hamburg University of Technology) / Caitriona Lally (Trinity College Dublin) / David Nordsletten (University of Michigan)

Description of the symposium:

Recent advances in biomedical imaging, experimental life sciences as well as computational science and engineering provide a powerful basis for the examination of complex problems in cardiovascular biomechanics and mechanobiology. Beyond the proof of concept, many mathematical and numerical tools are even ready to be used in clinical practice, combining model-driven and data-driven approaches (e.g., Machine Learning). This minisymposium covers the various areas of this field, from fundamental research to applications in the clinic, including theoretical, computational, and experimental work from both solid and fluid mechanics as well as biology. It aims at gathering researchers to discuss and compare the different methods and approaches pursued in the different areas of cardiovascular biomechanics and mechanobiology and identify potential future collaborations to address this global healthcare burden.