

SoftMechMP is a new International Centre to Centre Collaboration between the SoftMech Centre for Multiscale Soft Tissue Mechanics (www.softmech.org) and two world-leading research centres, Massachusetts Institute of Technology (MIT) in the USA and Politecnico di Milano (POLIMI) in Italy, funded by the EPSRC. Its exciting programme of research addresses important new mathematical challenges driven by clinical needs, such as tissue damage and healing, by developing multiscale soft tissue models that are reproducible and testable against experiments.

Heart disease has a strong negative impact on society. In the United Kingdom alone, there are about 1.5 million people living with the burden of a heart attack. In developing countries, too, heart disease is becoming an increasing problem. Unfortunately, the exact mechanisms by which heart failure occurs are poorly understood. On a more optimistic note, a revolution is underway in healthcare and medicine - numerical simulations are increasingly being used to help diagnose and treat heart disease and devise patient-specific therapies.

The Centre started on 1st January 2020 and has an impressive range of project partners that it engages with to advance research and ultimately deliver real-world impact. These include Biomer Technology Ltd; Boston Scientific; Dassault Systemes; GlaxoSmithKline plc (GSK); Humanitas University; InSilicoTrials Technologies; Kirkstall Ltd; Massachusetts Institute of Technology; NHS; Polytechnic University of Milan; Scottish Health Innovations Ltd; Siemens; Terumo Aortic; Translumina GmbH; Vascular Flow Technologies.