October 13th 2019 – CBMXIV

MICCAI 2019 workshop on Computational Biomechanics for Medicine XIV

http://school.mech.uwa.edu.au/CBM2019/

09.00-09.10   Opening remarks (*Karol Miller*)

09:10-11:40   Session 1: Computational Solid Mechanics

- 09.10-09.40: Lung Tumour Tracking Based on Patient-Specific Biomechanical Model of the Respiratory System.
  Hamid Ladjal, Lyon, France
- 09.40-10.10: Simulation of soft tissue deformation in real-time using domain decomposition.
  Ryadh Hafessas, Strasbourg, France
- 10:10-10:40: Design of Auxetic Coronary Stents by Topology Optimization.
  Zhen Luo, Sydney, Australia

10.40-11.10   Coffee Break

- 11.10-11.40: Physics-based Deep Neural Network for Real-Time Lesion Tracking in Ultrasound-guided Breast Biopsy.
  Andrea Mendizabal, Strasbourg, France

11.40-12.30: Keynote Lecture: What has image-based modelling of cerebrospinal fluid flow in chiari malformation taught us about syringomyelia mechanisms?

   Lynne Bilston, Sydney, Australia

12.30 – 14.00   Lunch

14.00-15:30   Session 2: Topics in patient-specific computations

- 14.00-14.30: Towards Visualising and Understanding Patient-Specific Biomechanics of Abdominal Aortic Aneurysms.
  Kiara Beinart, Perth, Australia
- 14.30-15.00: Pipeline for 3D reconstruction of lung surfaces using intrinsic features under pressure-controlled ventilation.
  Samuel Richardson, Auckland, New Zealand
- 15.00-15.30: A Flux-Conservative Finite Difference Scheme for Anisotropic Bioelectric Problems. *George Bourantas, Perth, Australia*

15.30-16.00   Coffee Break

16.00-17.00: Panel discussion on challenges for computational biomechanics for medicine and closure (led by *Adam Wittek*)