



NXCT & Alan Turing Institute Workshop

Advanced acquisition and analysis of image-based data

Tuesday 22 June 10:00 – 16:00 (BST)

Hosted via Zoom

10:00 – 10:15	Welcome, Introductions and Format of the Day
10:15 – 11:00	Overview of NXCT facility and The Alan Turing Institute Tim Burnett (NXCT), Adam Sobey (The Alan Turing Institute) <ul style="list-style-type: none">- Overview of mission and available resources at NXCT and The Alan Turing Institute- Introduction to X-ray Computed Tomography (CT) – all sectors- Use of machine learning for CT data- Reconstruction / advanced methods- Post-acquisition
11:00 – 12:30	Image-based data and modelling interplay 11:00 – 11:30 Will Parnell – The University of Manchester <i>Combining imaging and the mathematics of materials for the design of novel composites</i> 11:30 – 12:00 Tiina Roose – The University of Southampton <i>Image-based modelling in biology</i> 12:00 – 12:30 Martin Jones – The Francis Crick Institute <i>Extracting meaning from big data: image segmentation for volume electron microscopy with crowdsourced training data</i>
12:30 – 13:15	Roundtable discussions What are the major challenges in utilising very large multidimensional imaging data to support modelling?
13:15 – 14:00	LUNCH
14:00 – 15:00	Novel applications of image-based data to accelerate understanding 14:00 – 14:30 Fabrice Pierron – The University of Southampton <i>X-ray CT for deformation measurements and material identification</i> 14:30 – 15:00 Thomas Blumensath – The University of Southampton <i>Exploiting low dimensional data structures in volumetric imaging</i>
15:00 – 15:45	Roundtable discussions Discuss possible solutions to the challenges defined earlier
15:45 – 16:00	Close and Next Steps