

# 4th Dimensional X-ray Computed Tomography Conference

25<sup>th</sup>-26<sup>th</sup> June 2019  
University of Huddersfield



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## CONFERENCE SCHEDULE

### Day one: Tuesday 25<sup>th</sup> June 2019

- 9.00 Registration and refreshments
- 9.30 Introduction and Welcome talk
- 9.45 **Keynote Presentation**  
Markus Bartscher, PTB: *Path to Traceable Dimensional CT*
- 10.15 Nathanael Turner, MTC: *Study on Methods to Increase Voxel Resolution*
- 10.30 Peter Westenberger, Thermo Fisher Scientific: *Automated Industrial inspection incorporating acquisition errors*
- 10.45 Tristan Lowe, University of Manchester: *Defining spatial resolution in X-ray Computed Tomography for industrial applications*
- 11.00 **Break and refreshments**
- 11.30 **Keynote Presentation**  
Johann Henckel, University College London: *Medical & Micro CT aids the understanding of wear in Orthopaedic Implants*
- 12.00 Patrick Zippert, University Friedrich-Alexander Erlangen-Nurnberg: *An analysis of dimensional accuracy of clinical CT systems*
- 12.15 Matthew Holland, University of Huddersfield: *Use of Micro-CT for the measurement of wear in UHMWPE Total Ankle Replacement components*
- 12.30 **Lunch**
- 13.30 **Keynote Presentation**  
Desi Bacheva, Hieta Technologies: *Challenges in inspecting additive manufactured heat exchangers*
- 14.00 Mason Rowbottom, TWI: *Generation of a calibration artefact for the setting of optimal XCT parameters for measurement of porosity in SLM components*

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- 14.15 Fernando Ferreira, CATIM: *Influence of voxel size on CT measurements of form errors in additive manufactured parts*
- 14.30 Adam Thompson, University of Nottingham: *X-ray computed tomography surface topography measurement: industrial case studies*
- 14.45 Valdis Kruminis, AMRC: *Correcting CAD models for SLM build defects*
- 15.00 Break and refreshments**
- 15.30 David Bate, Nikon Metrology: *3in1 project: Surface roughness on AM parts integrated with other NDT processes*
- 15.45 Alan Wilson, NPL: *Dimensional XCT measurement: the effects of form error and surface roughness on the magnitude of extracted characteristics*
- 16.00 Stephen Cullen, TWI: *Laser Metal Deposition, Laser Power Analysis and Optimisation through the use of XCT*
- 16.15 Tukun Li, University of Huddersfield: *WINGS+ Project Introduction*
- 16.30 Drinks Reception
- 17.30 Carriages for Conference Dinner at Yorkshire Sculpture Park
- 18.00 Tours at Yorkshire Sculpture Park
- 19.00 Conference Dinner

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## Day two: Wednesday 26<sup>th</sup> June 2019

8.45	Coffee
9.15	<b>Keynote Presentation</b> Wenjuan Sun, NPL: <i>Quantitative evaluation using fast XCT for industrial applications</i>
9.45	Rabia Ince, Diamond Light Source: <i>Dynamic Metrology Measurements of XCT Sample Stage</i>
10.00	Miran Park, KAIST: <i>A novel and fast X-ray in-line defect inspection technique for ball grid array structures in 3D packaging</i>
10.15	Osman Ajmal, NPL: <i>Thresholding Determination in multi-material evaluation</i>
10.30	Younes Chahid, University of Huddersfield: <i>Ranking of XCT setting combinations for dimensional metrology using 2D image analysis prior to reconstruction</i>
10.45	Refreshment break and Poster Session
11.30	Ander Biguri, Mu-Vis Southampton: <i>Multi-GPU TIGRE: Very large image reconstruction using iterative algorithms</i>
11.45	Arturo Mendoza, Safran: <i>Beam hardening for composite materials</i>
12.00	Shada Kazemi, NPL: <i>Characterisation of scattering effect in X-Ray computed tomography</i>
12.15	Xuekun Lu, University College London: <i>The correlation of 3D microstructure and performance in Energy Storage Devices using Multi length Scale XCT</i>
12.30	Gerd Schwaderer, Volume Graphics: <i>Foam structure analysis and powder characterisation</i>
12.45	Introduction to DXCT 2020: Martin Turner and Tristan Lowe
13.00	Prize Giving and Lunch
14.00	Discussion session - <b>BSI Standardisation Update</b>
15.00	Conference Close

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Wednesday 26<sup>th</sup> June 2019

Poster Session

Emil Espes, Excillum: *X-ray sources for high throughput and extreme resolutions*

Yushan Gao, University of Southampton: *A parallel stochastic algorithm for large scale CT reconstruction*

Xiuyuan Yang, Cranfield University: *Evaluation of scattering effects in X-ray computed tomography for dimensional metrology*

Christopher Thornton, STFC: *Next generation laser-based X-ray sources for computed tomography*

Jian Qiu, NPL: *A preliminary study on noise reduction methods in industrial XCT*

Nadia Kourra, WMG: *Industrial image processing method for additive manufacturing specimens for removing supporting material for visual and metrological investigations*

Reuben Lindroos, University of Southampton: *The FISTA algorithm for CT reconstruction in dimensional metrology*

Lars Korner, University of Nottingham: *Simulation of continuous high aspect ratio tomography for surface topography measurements*