Tuesday June 23 2015

Reconstruction methods
Chair: Michael Menz
9:00 Applying a priori Information to computed laminography
L. Dör
9:20 Reconstruction Methods for Coplanar Translational Laminography Applications
U. Ewert
9:40 CT Reconstruction with Object Specific Non-Standard Trajectories
K. Schörner
10:00 Region-of-interest reconstruction for helical cone-beam CT
H. Banjak
10:20 3D reconstructions from bulky objects using sparse-angle data
J. Hüttemann
10:40-11:10 Coffee break - Kapittelzaal

Phase contrast imaging
Chair: Jürgen Stephan
11:10 X-ray Laue grating interferometer X-ray computed tomography for the characterisation of fibre-reinforced polymers
J. Kastner
11:30 Liquid-metal-jet and ultra-high resolution X-ray tube technology including imaging and diffraction applications
E. Espen
11:50 Multimodal Registration and Fusion of Industrial CT Data
H. Zauner
12:10 Enhancing X-ray imaging of liquids in porous materials
R. Kaufman
12:30 Lunch – Kapittelzaal

Keynote Talk
13:30 Recent Requirements for Digital Radiography Substituting Film in Different Industries and Standard Organizations
U. Zscherpel

Defect Detection I
Chair: Jelle Vlooswijk
14:00 X-ray CT - Comparative Evaluation of Microscopic Computed Tomography for Macroscopic Objects
W. Holub
14:20 Inline 3D X-Ray CT inspection of food on a continuous throughput conveyor belt system: a feasibility study
T. De Schryver
14:40 Inner Defect Detection in Ceramic Matrix Composite Parts using 3D X-ray CT Image Registration
S. Kondo
15:00 Optimisation of the process of X-ray tomography applied to the detection of defects in composites materials C. Ulry
15:20-15:50 Coffee break - Kapittelzaal

Defect Detection II
Chair: Uwe Ewert
15:50 Investigation on the Accuracy of CT Porosity Analysis of Additive Manufactured Metallic Parts
F. Zanin
16:10 Metrological evaluation of tomography methods applied to objects fabricated by additive manufacturing A. Obaton
16:30 Improvement of radiography images contrast and detection of the cracks in welds by dehazing algorithm A. Mofaveghi

Inspirational talk
17:00 Mindfulness of a Top Gun Fighter pilot- How to win today’s globally competitive market
K. Finke-Härkonen
18:00-19:00 Poster presentations with beer reception - Hallway

Wednesday June 24 2015

CT Imaging
Chair: Matthew Boone
9:00 Dynamic in-situ monitoring of pore scale processes using micro-CT imaging
M. Boone
9:20 3D measurements on 2D Xray images
S. Valtius
9:40 Bimodal Imaging Using Neutrons and X-rays
A. Kaestner
10:00-10:30 Coffee break - Kapittelzaal

Quantitative imaging and imaging processing I
Chair: Valérie Kaftadjian
10:50 Compensation of Mechanical Jitter in Industrial Tomography
N. Maass
10:50 Specific technical and physical requirements and constraints for a fast automated or even in-line 3D-CT inspection S. Gendrom-Linke
11:10 Laboratory X-ray tomography for nondestructive testing of specimens and materials at the Nanoscale C. Henz
11:30 Application of Digital Industrial Radiography (DIR) in hydrodynamic study of Trickle Bed Reactors (TBRs)
K. Mohd Salleh
11:50 The quantitative analysis of tungsten ore using X-ray microCT: case study
S. Le Roux
12:10-13:10 Lunch – Kapittelzaal

Keynote Talk
13:10 Advanced X-ray computed tomography methods: High resolution CT, phase contrast CT, quantitative CT and 4DCT
J. Kastner

Quantitative imaging and imaging processing II
Chair: Jan Dowminkle
13:40 New Developments in 3D Grain Mapping Using Diffraction Contrast Tomography (DCT) on a Laboratory X-ray Microscope M. Feser
14:00 Reliability Optimization of Quantitative CFRP Porosity Characterization Using μ-XCT D. Kiefer
14:20 3D Corrosion Detection in Time-dependent CT Images of Concrete O. Paetsch
14:40 Inspecting Cast Materials using High Energy Digital Radiography D. Olivera
15:00 Flat Panel Detectors: a Possibility for Film Replacement in High Energy NDT Applications A. Peterzal-Parmentier
15:20-15:50 Coffee break - Kapittelzaal

Quantitative imaging and imaging processing III
Chair: Valérie Kaftadjian
15:50 High-resolution X-ray Backscatter Technique for Nondestructive Imaging of Aerospace Components S. Kolkkoori
16:10 Dynamic 4D imaging of foamed bitumen by X-ray micro computed tomography I. Jerjen
16:30 Multi-scale characterization of complex geomaterials using multiple imaging techniques W. De Booever
16:50 Refinement of Imaging Processing of Scatter Correction and Beam Hardening Tools for Industrial Radiography and Cone Beam CT D. Shedlock
17:10 A gantry-based X-ray CT system for high-speed 4D scanning D. Van Loo
17:30-18:30 Get Together - Kapittelzaal
19:00-22:00 Conference dinner- MSK

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Thursday June 25 2015

08:30-9:00 Registration - Sacristie

Session on the EC Madame Curie Project INTERAQCT
Chair: Stefan Kasperl

9:00 Assessment of CT simulated data based on POD Numerical Model Approach
E. Dabankah

9:20 Analysis of Combined Probing Measurement Error and Length Measurement Error Test for Acceptance Testing in Dimensional Computed Tomography
F. Borges De Oliveira

9:40 Investigation on Porosity Measurement of Polymeric Parts Produced by Laser Sintering using X-ray Computed Tomography
M. Pavan

10:00 Influence of Electron Beam Alignment on Dimensional Metrology by Computed Tomography
G. Probst

10:00-10:30 Coffee break - Kapittelzaal

Qualification and system reliability
Chair: Clift Bueno and Klaus Bavendiek

10:30 Measurement uncertainty evaluation of an X-ray computed tomography system
C. Affenzeller

11:10 Automatic alignment correction for half-beam CT geometries
N. Maass

11:30 Process Control for Computed Tomography using Digital Detector Arrays
D. Fry

11:50 An efficient procedure for traceable dimensional measurements and the characterization of industrial CT systems
J. Illeman

12:10-12:30 Closing remarks and prospects to DIR 2019 - Refect

12:30-13:00 Lunch - Kapittelzaal

13:30-14:00 Visit to UGCT (Centre for X-ray Tomography) - UGCT

Monday June 22 2015

12:30-13:30 Registration - Sacristie

13:30-14:00 Welcome - Refect

Modelling
Chair: Marius Costin

14:00 Tracking the shape deformation of voids from tensile loading by the use of computed tomography
A. Zekavat

14:20 Multi-Lateral Shearing Interferometry: Principle and Application on X-ray Laboratory Sources
A. Stolidi

14:40 Computed Radiography System Simulation Focusing on the Optical Readout Process
Min Yao

15:00-15:30 Coffee break - Kapittelzaal

Multi-Energy imaging
Chair: Bert Masschaele

15:30 Spectrum Estimation for calibrated Simulation: A Test of Robustness and Accuracy of the Expectation Maximization Method
R. Schleim

15:50 High contrast energy resolving digital radiography and tomography of microstructure of metallic and composite parts using pixel detector Timepix with CdTe sensor
J. Jakupek

16:10 Material Decomposition by means of Photon-Counting Detectors
M. Pichotka

16:30 Properties and Application Areas of Photon Counting and Energy Resolving Digital Detector Arrays
U. Zscherpel

16:50 A Large-Area CdTe Photon-Counting Pixel Detector for High-Energy X-ray Imaging and Diffraction Applications
T. Donath

17:30-19:00 Guided city walk

19:00-21:00 Ice breaker reception - Thagaste

The full conference program can also be viewed online on the DIR 2015 Conference Proceedings & Web App: www.ndt.net/app.DIR2015. Browse or search the proceedings and the authors, exhibitors and sponsors of DIR2015.

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