

# Micro-CT User Meeting 2018: Scientific Program

*"Aula Academica", Ghent*

## Tuesday 17 April 2018

- 08:30-09:00 **Registration and coffee/tea**
- 09:00-09:20 Welcome
- 09:20-09:40 Jasper Nijkamp, Netherlands Cancer Institute, Netherlands  
*"Towards online surgical margin assessment using micro-CT in breast tumours"*
- 9:40-10:00 Ivan Yakimchuk, Schlumberger Moscos Research, Russia  
*"Ceramic Proppant Microstructure Characterization by X-Ray Microtomography"*
- 10:00-10:20 Fabian Westhauser, Heidelberg University Hospital, Germany  
*"A method for direct correlation of 2D-micro-computed tomography datasets onto histomorphometric slides to achieve quantification of 3D osteoid volume in bone substitutes"*
- 10:20-11:00 **COFFEE/TEA break + POSTER VIEWING EVEN NR**
- 11:00-11:20 Frederik Doerr, University of Strathclyde, UK  
*"XRT: Extraction of Quantitative Structural Descriptors from Solid Pharmaceutical Products"*
- 11:20-11:40 María Candás, Universidade de Santiago de Compostela, Spain  
*"Study of the applicability of micro-CT for identification of Mollusca Solenogastres"*
- 11:40-12:00 Pedram Karimipour-Fard, University of Ontario, Canada  
*"The Use of Microcomputed Tomography to Evaluate Integral-Skin Cellular Polyolefin Composites"*
- 12:00-12:20 Thaís Santos, Federal University of Rio de Janeiro, Brasil  
*"Methodology to analyze gap dental copings using tridimensional parameters"*
- 12:20 – 13:40 **LUNCH**
- 13:40-14:00 Nikolaus Nestle, BASF, Germany  
*"Fossilized but functional – Tomographic insights into nature's most resilient actuators"*
- 14:00-14:20 Sergi Llambrich Ferré, KULeuven, Belgium  
*"There is more than bone in your head: How to visualize both skull and brain with a single micro-CT acquisition"*
- 14:20-14:40 Christian Dullin, University Hospital Goettingen, Germany  
*"Free propagation phase contrast in classical microCT improves image quality especially in weakly absorbing specimens"*
- 14:40-15:00 Monika Dabrowska, Wellcome Trust Sanger Institute, UK  
*"Exploring MicroCT and its potential to visualise and score a phenotype in neonatal mouse models"*

- 15:00-15:40      **COFFEE/TEA break + Q&A for Bruker microCT Software team**
- 15:40-16:00      **Bálint Botz, University of Pécs, Hungary**  
*“Investigation of bone microarchitectural changes in mouse models of rheumatoid arthritis”*
- 16:00-16:20      **Gerard van Dalen, Unilever, Netherlands**  
*“Micro-CT imaging and analysis of the fragmentation of Prince Rupert’s glass drops”*
- 16:20-16:40      **Maxime Nachit, KULeuven, Belgium**  
*“Have you been to the gym lately?”*
- 16:40-17:00      **Kaat Dekoster, KULeuven, Belgium**  
*“Using in vivo  $\mu$ CT for longitudinal evaluation of silica-induced pulmonary fibrosis in mouse lungs”*
- 18:00              **Bruker microCT social event**

**Wednesday 18 April 2018**

- 08:30-09:00           **Registration and coffee/tea**  
09:00-09:20           K. Chou, University of Louisville, USA  
*"Porosity Analysis in Metal Additive Manufacturing by Micro-CT"*
- 09:20-09:40           Behzad Javaheri, Royal Veterinary College, UK  
*"4D exploration of the mechanostat: is it time to move on?"*
- 09:40-10:00           Emilie L'Hôpital, IRSN, France  
*"Precipitate characterization and modelling in low permeability porous media"*
- 10:00-10:20           David Shepherd, University of Cambridge, UK  
*"Exploring Exoskeletons of the Cold Using Micro CT"*
- 10:20-11:00           **COFFEE/TEA break + POSTER VIEWING ODD NR**
- 11:00-11:20           Łukasz Skarżyński, Gdansk University of Technology, Poland  
*"Determination of the fracture phenomenon during deformation process using X-ray micro-CT"*
- 11:20-11:40           Mikko A.J. Finnilä, University of Oulu, Finland  
*"Contrast enhanced micro-computed tomography imaging of joint degradation in osteoarthritis rat models"*
- 11:40-12:00           Arnold Wilbers, DSM, Netherlands  
*"Application of iterative reconstruction algorithms in Fiber Reinforced porosity determination"*
- 12:00-12:20           Alisa Zubova, Russian Academy of Sciences, Russia  
*"Some methodological issues of endostructural analysis of the deciduous lower second molars from the upper Paleolithic sites of the East European plain and Siberia"*
- 12:20 – 13:40           **LUNCH**
- 13:40-14:00           Annapaola Parrilli, Rizzoli Orthopaedic Institute, Italy  
*"Structural-mechanical characterization of human ligaments using a custom-made tensile test chamber combined with the Skyscan1176 system"*
- 14:00-14:20           Sylvie Chevallier, ONIRIS, France  
*"Benchtop and synchrotron X-ray micro-tomography to determine the cellular structure of cereal food foams"*
- 14:20-14:40           Sheen Gurrib, University of Cambridge, UK  
*"Investigation of the 3D vascular network in vertebral end-plates of mature sheep using micro-CT"*
- 14:40-15:00           A. Khomyak, Moscow State University, Russia  
*"Studies of the morphology and distribution of sulfide phases by methods of the computer tomography (as applied to the rock from the Yoko-Dovyren layered massife)"*
- 15:00-15:40           **COFFEE/TEA break + Q&A for Bruker microCT Software team**
- 15:40-16:00           Alessandro Felder, Royal Veterinary College, UK  
*"Emerging measures of local geometry in trabecular bone: case studies of intertrabecular angle distributions"*
- 16:00-16:20           A. Pakhnevich, Russian Academy of Science, Russia  
*"Summary of micro-CT studies on Late Cretaceous bryozoans"*

16:20-16:40

Javier Alba-Tercedor, University of Granada, Spain

*"Micro-CT unveils the secret life of the coffee berry borer (Hypothenemus hampei; Coleoptera, Curculionidae: Scolytinae) inside coffee berries"*

18:00

**Social event**

**Thursday 19 April 2018**

- 08:30-09:00      **Registration**
- 09:00-09:20      Anna Jacobsen, California State University, USA  
*"Quantification of ancient and modern wood microstructure using microCT"*
- 09:20-09:40      Louis Rony, GEROM, France  
*"Necrosis of the femoral head, X-ray microtomography aspects (microCT) and histology of retrieved human femoral heads"*
- 09:40-10:00      Jennifer Shepherd, University of Cambridge, UK  
*"Analysis of structurally variable lyophilized collagen scaffolds for cell sieving using micro-CT"*
- 10:00-10:20      Frantisek Spoutil, Institute of Molecular Genetics, Czech Republic  
*"MicroCT for high throughput phenotyping: perspectives and obstacles"*
- 10:20-11:00      **COFFEE/TEA break**
- 11:00-11:20      Andreas Grieser, Math2Market, Germany  
*"Machine Learning-based segmentation of individual Fibers in Micro-CT Scans with GeoDict"*
- 11:20-11:40      Jana Goyens, University of Antwerp, Belgium  
*"MicroCT visualization of the membranous labyrinth"*
- 11:40-12:00      Bartosz Leszczynski, Jagiellonian University, Poland  
*"Cardiac myxoma investigation using micro-CT"*
- 12:00-12:20      Alexander Kulkov, St. Petersburg State University, Russia  
*"Assessment of archaeological ceramics porosity by m-CT analysis"*
- 12:20 – 14:00      **LUNCH**
- 14:00-14:20      **Announcement winner of oral, poster, picture and movie awards**
- 14:20-16:00      Parallel sessions Life Science & Material Science Applications
- The afternoon is reserved for interactive parallel sessions where Bruker microCT application scientists will update you on newest hardware features, novel methods in the SkyScan software, and answer questions sent in by users.*
- 16:00              **Wrap-up and end of User Meeting**