



ICOM-25

25th International Congress on X-ray Optics and Microanalysis

5 - 9 August 2019, The Westin Lombard Yorktown Center, Lombard, IL, USA

Web: www.icom25.com E-Mail: info@icom25.com Registration: www.dxcicdd.com

Join us to exchange latest research on novel groundbreaking synchrotron and laboratory X-ray spectrometry developments! The ICOM-25, dedicated to developments in Synchrotron instrumentation and micro- and nano-analysis will be held together with the DXC specialized on newest developments and innovation in laboratory XRD and XRF in Lombard, Illinois.

Organizers

U. Fittschen, Clausthal University of Technology

S. Vogt, Argonne National Laboratory

K. Janssens, University of Antwerp

G. Falkenberg, DESY

C. Stoltenberg, Clausthal University of Technology

D. Zulli, ICDD (Administrator)

Preliminary Program

Joint DXC-ICOM edition. The 25th edition of ICOM is being organized together and in the same venue as the 68th Edition of the Denver X-ray Conference (DXC), i.e. the Westin Hotel in Lombard, Chicago, IL. A salient feature of DXC is that it includes the largest and most diverse exhibition of X-ray instrumentation, not only of standalone systems but also of components such as X-ray detectors, optics and sources for performing X-ray fluorescence, X-ray diffraction and other forms of X-ray analysis and X-ray imaging.

Throughout the week, ICOM delegates will be able to attend all ICOM and DXC sessions and activities, including the DXC tutorial and scientific sessions, the DXC vendor exhibition and the joint DXC-ICOM poster sessions.

Together and apart. DXC is a 5-day (Mon-Fri) conference, but its scientific sessions only start on Wednesday, while Monday and Tuesday are traditionally devoted to tutorial lectures on various X-ray related topics. Parallel to the DXC activities, and equally traditional, the ICOM scientific sessions will start on Monday morning with an opening session on X-ray optics and a session on Detector developments in the afternoon.

APS Visit. Since the conference venue in Lombard, IL is in the immediate vicinity of the Advanced Photon Source (APS) at Argonne National Laboratory (ANL), ICOM-25 comprises a full-day visit of the APS/ANL on Tuesday 6 August, including a scientific session on new developments of X-ray nanoprobe (morning), lunch (APS canteen) and a visit to selected APS beamlines (after lunch). Bus transfer is foreseen between the Westin Lombard and APS.

Joint plenary session. On Wednesday 7 August, ICOM and DXC will have a joint session focused on New Approaches in Imaging, which will also serve as the plenary opening session of DXC. The more specialized ICOM sessions on Wednesday afternoon and Thursday will blend in seamlessly with other specialized DXC sessions.

Conference dinner. The ICOM Conference will conclude on Thursday evening with the ICOM conference dinner.

ICOM-25	Monday 5 August	Tuesday 6 August	Wednesday 7 August	Thursday 8 August
Morning	X-ray Optics	Advanced XRF and SR Nanoprobes	New Approaches in Imaging	Data Analysis
Afternoon	New Detectors and Instrumentation	Visit of APS Beamlines	Biological Applications/ Cultural Heritage	Functional Materials/ Earth & Environmental
Evening	Poster Session	Poster Session	Social Event TBA	Conference Dinner

Plenary Session: New Approaches in Imaging

Chair: U. Fittschen, Clausthal University of Technology

Florian Meirer, University of Utrecht, *Spatial and Temporal Exploration of Heterogeneous Catalysts with Synchrotron Radiation*

Benjamin Hornberger, Lyncean technologies, *Multimodal Imaging Using Lyncean's Compact Synchrotron Source*

Gayle Woloschack, Northwestern University, Feinberg School of Medicine, *X-ray Imaging from Tissues to Cells to Subcellular Structures*

X-ray Optics

Chairs: U. Fittschen, Clausthal University of Technology; S. Vogt, APS-Argonne National Laboratory

Frank Seiboth, DESY, *Aberration-Corrected Optics for Diffraction-Limited Nanofocusing*

Arthur Woll, Cornell, *Quantitative, Total Metal Imaging Using 3D Confocal X-ray Fluorescence Microscopy at the Micron Scale*

Adam Kubec, PSI, *Multilayer Laue Lenses for High Resolution X-ray Applications*

New Detectors and Instrumentation

Chairs: P. Siddons, J. Thieme, Brookhaven National Laboratory

Gemma Tinti, Paul Scherrer Institute, *Title to be announced*

Wah-Keat Lee, Brookhaven National Laboratory, *Hard X-ray Full-field Transmission X-ray Microscopy at NSLS-II*

David Shapiro, Lawrence Berkeley National Laboratory, *Title to be announced*

Advanced XRF and SR Nanoprobes

Chairs: A. Lanzirotti, The University of Chicago – CARS; C. Sun, X-ray Science Division, Argonne National Laboratory

Yong Chu, Brookhaven National Laboratory, *Title to be announced*

Biological Applications

Chairs: G. Falkenberg, K. Spiers, DESY

Björn de Samber, University Ghent, *Imaging Metals in Single Cells at the Nanoscale and the Accompanying Quest for Quantification*

Hendrik Küpper, Czech Academy of Sciences, *Investigation of Metal Distribution and Speciation in Plants by Cryogenic μ XRF and μ XANES Tomography*

Simon James, The Florey Institute of Neuroscience and Mental Health, *Title to be announced*

Data Analysis

Chairs: F. De Carlo, W. Di, Argonne National Laboratory

Daniel Pelt, Centrum Wiskunde & Informatica, *Improving X-ray Tomography Reconstruction and Analysis using Deep Learning*

Stefano Marchesini, Lawrence Berkeley National Laboratory, *Advanced Ptychography Data Analysis*

Doga Gursoy, Argonne National Laboratory, *Computed Tomography at High-Speeds*

Earth and Environmental Sciences

Chairs: D. Eichert, Elettra-Sincrotrone Trieste; U. Fittschen, Clausthal University of Technology

Jürgen Thieme, Brookhaven National Laboratory, *Samples from Mars and How to Study Them*

Ken Kemner, Argonne National Laboratory, *X-ray Tomographic Investigations of the Distribution of Bacteria within Soil Aggregates*

Maria Elana Montero-Cabrera, Centro de Investigación en Materiales Avanzados, S. C., *Do the Naica Giant Crystals Deteriorate due to Human Activities?*

Cultural Heritage

Chair: K. Janssens, University of Antwerp, M. Schmeling, Loyola University Chicago

Emeline S. Pouyet, NU-ACCESS and Northwestern University, *Lab X-ray and SR studies of Cultural Artifacts*

Matthias Alfeld, Delft University of Technology, *Combining X-ray and Visual Hyperspectral Imaging for the Investigation of Painted Cultural Heritage Objects*

Functional Materials

Chairs: F. Meirer, Utrecht University; G. Pepponi, Fondazione Bruno Kessler

Simon R. Bare, Stanford SSRL, *SR Based Studies of Catalysts*

Christina Strelt, TU Vienna, *Trace Element Imaging of Bone using micro- and nano-XRF*

Michael Stuckelberger, DESY, *Multimodal Imaging of Solar Cells during In-Situ and Operando Experiments*

The Call for Papers will open in mid-January, and the deadline for abstract submissions will be 15 March 2019. Submit your abstract on-line: www.dxcicdd.com