

APS WK#7: Wide-angle XPCS and Application of Speckle Spatio-temporal Correlation in Materials

Friday, May 7, Morning

8:30 – 8:45 Alec Sandy (Advanced Photon Source, Argonne National Laboratory)
Opening and Welcome

Session 1: Facilities Update

8:45 – 9:20 Eric M. Dufresne (Advanced Photon Source, Argonne National Laboratory)
Coming soon

9:20 – 9:55 Beatrice Ruta (European Synchrotron Radiation Facility)
Complex Systems and Coherent X-rays: A Perfect Match

9:55 – 10:05 Break

Session 2: Functional Materials - Metallic Glass

10:05 – 10:40 Jian-Zhong Jiang (Zhejiang University)
Atomic Dynamics in Metallic Glasses by X-ray Photo Correlation Spectroscopy

10:40 – 11:15 Robert Maass (Federal Institute of Materials Research and Testing & University of Illinois at Urbana-Champaign)
Structural Dynamics in Bulk Metallic Glasses: Effects of Mechanical and Thermal Stresses

11:15 – 11:25 Break

Session 3: Ferroelectrics and Quantum Materials – 1

11:25 – 12:00 David Le Bolloc'h (Université Paris-Sud)
Sliding Properties of a Charge Density Wave Driven by a Coherent Deformation That Extends to Several Tens of Micrometers

12:00 – 12:35 Roopali Kukreja (University of California, Davis)
Coherent X-ray Scattering Studies of Electronic Materials

12:35 – 1:35 Lunch Break

Friday, May 7, Afternoon

Session 4: Ferroelectrics and Quantum Materials – 2

- 1:35 – 2:10 Dina Sheyfer (Argonne National Laboratory)
Relaxor Ferroelectrics under Applied Field Studied Via Wide-angle X-ray Photon Correlation Spectroscopy
- 2:10 – 2:45 Paul Evans (University of Wisconsin-Madison)
Coherence, Fluctuations, and Dynamics in Ferroelectric Nanodomains
- 2:45 – 2:55 Break
- 2:55 – 3:30 Mark Dean (Brookhaven National Laboratory)
Coherent X-ray Studies of Charge and Spin Density Wave Pinning in Cuprates and Nickelates
- 3:30 – 4:05 Dillon Fong (Argonne National Laboratory)
X-ray Photon Correlation Spectroscopy Studies of Oxygen Vacancy Dynamics in Complex Oxide Heterostructures
- 4:05 – 4:15 Break

Session 5: Emerging Topics

- 4:15 – 4:50 JT Hastings (University of Kentucky)
Studying Artificial Spin Ices with Soft X-ray Photon Correlation Spectroscopy
- 4:50 – 5:25 Yanwen Sun (Linac Coherent Light Source)
Realizing Accurate On-the-fly Contrast Determination for X-ray Speckle Visibility Spectroscopy