

Sunday, June 19

Arrive in Ithaca.

Monday, June 20

8:00	Registration & Coffee	PSB West Pavilion
8:30	Welcome, Description of Upgrade, Workshop Goals: Joel Brock (Director, CHESS) Watch Morning Session Live on YouTube	PSB 120
8:55	Serena DeBeer (Max Planck Institute for Chemical Energy Conversion and Cornell University) <i>"Making and Breaking Bonds: New Insights into Catalytic Processes Using Advanced X-ray Spectroscopic Approaches"</i>	PSB 120
9:40	Stefan Vogt (Argonne National Laboratory) <i>"X-ray Fluorescence Microscopy: Advances and New Opportunities with Upgraded Light Sources"</i>	PSB 120
10:20	BREAK - PSB South Passageway, then split into Parallel Subsessions:	
	Session 1: Watch Live on YouTube HARD X-RAY SPECTROSCOPY PSB 120	Session 2: Watch Live on YouTube IMAGING & MICROSCOPY PSB 401
	Breadth of Scientific Opportunities	Plant Sciences
10:40	John Tse (University of Saskatchewan) <i>"Applications of inelastic scattering"</i>	10:40 Olena Vatamaniuk (Cornell University) <i>"Characterization of Iron and Copper Homeostasis in Plants via the Integration of Molecular</i>

			<i>Physiology, Functional Genomics and Synchrotron X-ray Fluorescence Imaging</i>
11:25	Uwe Bergmann (SLAC National Accelerator Laboratory) <i>"High-resolution photon-in photon-out spectroscopy and imaging with hard X-rays"</i>	11:10	Emil Hallin (University of Saskatchewan) <i>"Minimally invasive characterization of plant phenotypes (above and below ground) using high brightness hard x-rays: supporting rational crop design to help feed a hungry planet with synchrotron science"</i>
		11:40	Arthur Woll (CHESS) <i>"Direct, 3D-resolved x-ray microscopy at the micron-scale"</i>
12:15	LUNCH - Clark Atrium		
	Biological Science and Theoretical Approaches		Instrumentation
1:20	Jan Kern (Lawrence Berkeley National Lab) <i>"Combining X-ray crystallography and spectroscopy to study reaction mechanisms of metallo-enzymes: Studies on Photosystem II at SR and XFEL sources"</i>	1:30	Sarvjit Shastri (Advanced Photon Source) <i>"Direct and Reciprocal Space High-Energy X-Ray Imaging at the APS and APS-U"</i>
2:05	Chris Pollock (Pennsylvania State University) <i>"Interrogating Metallo-enzyme Intermediates using Two-Color K-beta X-ray Emission Spectroscopy"</i>	2:00	Abdul Rumaiz (Brookhaven National Laboratory) <i>"Detector development for NSLS II (and other light source)"</i>

2:50	John J Rehr (University of Washington) <i>"Theory and Calculations of Core-level X-ray Spectra Beyond Quasiparticles"</i>	2:30	Yeukuang Hwu (Institute of Physics, Academia Sinica) <i>"Full-Field X-ray microscopy using Fresnel zone plate"</i>
3:35	BREAK - PSB South Passageway	3:00	BREAK - PSB South Passageway
	Perspectives and Challenges: Viewed from other sources		High Energy Microprobe & Cultural Heritage Applications
3:50	Klaus Attenkofer (BNL/NSLS-II) <i>"Spectromicroscopy and the Real-World Needs"</i>	3:20	Ian Coulthard (Canadian Light Source) <i>"Concept for a High Energy X-ray Fluorescence Microprobe Beamline at CHESS"</i>
4:35	Robert Gordon (Simon Fraser University) <i>"Applied Spectroscopy and Critical Materials: Rare Earths"</i>	3:50	Frederik Vanmeert (University of Antwerp) <i>"X-ray powder diffraction mapping and tomography for the investigation of pigments and their degradation products in oil paintings"</i>
5:15	Close-out and acknowledgements - Ken Finkelstein (CHESS)	4:20	Lisa Van Loon (Canadian Light Source) <i>"Analysis of Electrum Coins by Synchrotron X-ray Techniques"</i>
6:00	DINNER - Wilson Laboratory		
Tuesday, June 21			
9:00	Discussion / Writing Session & Closeout: Break into Subsessions:		
	Session 1: HARD X-RAY SPECTROSCOPY Wilson 301		Session 2: IMAGING & MICROSCOPY Wilson 374