

SSRL Summer School on Synchrotron X-Ray Absorption Spectroscopy

Tuesday, September 8 – Thursday, September 10, 2020

The 2020 school will be hosted remotely between September 8-10th 2020 via online zoom sessions. The lecture material will be posted on the SSRL website ahead of time to give participants ample time to review and practice the course material. Unlike in previous years, there will be no lectures on the general theory and on science examples of XAS. Participants will be directed to comprehensive lectures already available online that teach these aspects of XAS.

Tuesday, 8 September 2020 (ZOOM webinar)	
8:55 – 9:00 AM	Introductory Remarks - Riti Sarangi
9:00 – 10:00 AM	Introduction to Experimental Aspects of XAS/EXAFS – John Bargar
10:05 AM – 11:05 PM	Experimental Design and Sample Preparation – Ryan Davis
11:10 – 12:00 PM	Considerations for Complex Catalysis Samples- Adam Hoffman
12:00 – 1:00 PM	Lunch Break
1:00 – 2:00 PM	Introduction to XRF Imaging at SSRL – Sam Webb
(PARALLEL ZOOM webinar)	
2:05 – 3:00 PM	Introduction to the Imaging Beamline Facilities– Sam Webb
2:05 – 3:00 PM	Demonstration of Web-XAS data collector on BL 7-3 - Riti Sarangi

Wednesday, 9 September 2020 (PARALLEL ZOOM webinar: EXAFS)	
9:00 – 10:00 AM	Hands-on data analysis session using Athena: Data Reduction Shelly Kelly
10:00 – 11:00 AM	Principles of FEFF based data analysis: Riti Sarangi
11:00 AM – 5:00 PM	Hands-on data analysis session using Athena: EXAFS Data Fitting Shelly Kelly
12:00 – 1:00 PM	Lunch Break
(PARALLEL ZOOM webinar: Imaging)	
9:00 AM – 5:00 PM	XRF Hands-on data analysis session : Sam Webb
12:00 – 1:00 PM	Lunch Break
XRF Hands on session includes: New Imaging Beamline Controls, SSRL Data files and their formats, Introduction to SMAK SMAK at the Beamline, Things you can do in SMAK - workflows and what you need to collect! PCA analysis & Friends, MCA data analysis, XRF Quantification, XANES fitting and interaction with SIXPACK, Particle and Masked areas Statistics, Cluster Analysis, SiVM XANES speciation Ocean optics Visible data analysis, Advanced file features (crop/resolution changes), alignments, data file fixing.	

Thursday, 10 September 2020 Zoom with an Expert
(ZOOM webinar)

9:00 AM – 10:00 AM

Combining Advanced Spectroscopy with XAS: **Thomas Kroll**

10:00 AM – 11:00 AM

Electronic Structure Interpretation from XANES: **Riti Sarangi**

(PARALLEL ZOOM webinar)

11:00 AM – 2:00 PM

Heterogeneous Catalysis

Adam Hoffman

XRF Imaging

Sam Webb

Biological Systems

Riti Sarangi

Environmental Systems

John Bargar

12:00 – 1:00 PM

Lunch Break