

Agenda

eBERlight 101 Workshop November 19-21, 2024

November 18		
7 pm	Speaker Dinner	TBD
November 19 (446 auditorium)		
Time	Topic	Speakers
8:30 am	Welcome and Introductions	Jonathan Lang (<i>APS-XSD</i>) Karolina Michalska (<i>APS-XSD</i>)
8:45 am	eBERlight/APS Overview	Karolina Michalska (<i>APS-XSD</i>)
9:00 am	Introduction to X-Ray Fluorescence Microscopy	Gosia Korbas (<i>APS-XSD</i>)
10:00 am	Break	
10:30 am	Sample Preparation	Qiaoling Jin (<i>APS-XSD/Northwestern University</i>)
11:00 am	Group A: 8-BM (or 2-ID-D) Beamline Tour with Evan Maxey (<i>APS-XSD</i>) and Mike Endres (<i>APS-XSD</i>) Group B: Discussion	Gosia Korbas (<i>APS-XSD</i>) Gyorgy Babnigg (<i>ANL-BIO</i>) Xiaoyang Liu (<i>APS-XSD</i>) James O'Sullivan (<i>APS-XSD</i>) Darren Sherrell (<i>APS-XSD</i>) Kenneth Kemner (<i>ANL-BIO</i>) Qiaoling Jin (<i>APS-XSD/Northwestern University</i>)
12:00 pm	Lunch Discussions	
1:00 pm	Group A: Discussion Group B: 8-BM (or 2-ID-D) Beamline Tour with Evan Maxey (<i>APS-XSD</i>) and Mike Endres (<i>APS-XSD</i>)	Gosia Korbas (<i>APS-XSD</i>) Gyorgy Babnigg (<i>ANL-BIO</i>) Xiaoyang Liu (<i>APS-XSD</i>) James O'Sullivan (<i>APS-XSD</i>) Darren Sherrell (<i>APS-XSD</i>) Kenneth Kemner (<i>ANL-BIO</i>) Qiaoling Jin (<i>APS-XSD/Northwestern University</i>)
2:00 pm	Introduction to X-Ray Fluorescence Microscopy Data Analysis	Si Chen (<i>APS-XSD</i>)
2:30 pm	Break	
2:45 pm	Hands-On Tutorial on X-Ray Fluorescence Microscopy Data Analysis	Gosia Korbas (<i>APS-XSD</i>) Xiaoyang Liu (<i>APS-XSD</i>)
3:45 pm	Break	
4:00 pm	Hands-On Tutorial On X-Ray Fluorescence Microscopy Data Analysis	Gosia Korbas (<i>APS-XSD</i>) Xiaoyang Liu (<i>APS-XSD</i>)
5:00 pm	End of Day	

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November 20 (446 auditorium)		
Time	Topic	Speakers
8:30 am	X-ray Computed Tomography Introduction	Viktor Nikitin (<i>APS-XSD</i>)
9:30 am	Science Talk: “Integrating Structural And Chemical Imaging To Address Bio/Environmental Questions”	Tamas Varga (<i>EMSL/PNNL</i>)
10:00 am	Break	
10:15 am	Group A: 7-BM Beamline Tour With Alan Kastengren (<i>APS-XSD</i>) and Alex Lavens (<i>APS-XSD</i>) Group B: Discussion	Gosia Korbas (<i>APS-XSD</i>) Gyorgy Babnigg (<i>ANL-BIO</i>) Xiaoyang Liu (<i>APS-XSD</i>) James O’Sullivan (<i>APS-XSD</i>) Darren Sherrell (<i>APS-XSD</i>) Kenneth Kemner (<i>ANL-BIO</i>) Qiaoling Jin (<i>APS-XSD/Northwestern University</i>)
11:15 am	Break	
11:30 am	Group A: Discussion Group B: 7-BM Beamline Tour With Alan Kastengren (<i>APS-XSD</i>) and Alex Lavens (<i>APS-XSD</i>)	Gosia Korbas (<i>APS-XSD</i>) Gyorgy Babnigg (<i>ANL-BIO</i>) Xiaoyang Liu (<i>APS-XSD</i>) James O’Sullivan (<i>APS-XSD</i>) Darren Sherrell (<i>APS-XSD</i>) Kenneth Kemner (<i>ANL-BIO</i>) Qiaoling Jin (<i>APS-XSD/Northwestern University</i>)
12:30 pm	Lunch Discussions	
1:30 pm	Software introduction	Viktor Nikitin (<i>APS-XSD</i>)
2:00 pm	Data Analysis Demonstration	Xiaoyang Liu (<i>APS-XSD</i>) Darren Sherrell (<i>APS-XSD</i>)
3:00 pm	Break	
3:15 pm	Data Analysis Demonstration	Xiaoyang Liu (<i>APS-XSD</i>) Darren Sherrell (<i>APS-XSD</i>)
4.15 pm	Break	
4:30 pm	Science Talk: “Applications of XFM and XCT in Wood Science Research”	Joseph Jakes (<i>USDA</i>)
5:00 pm	End of Day	

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November 21 (446 auditorium)		
Time	Topic	Speakers
8:30 am	APS Tour (Meet in 401 Lobby)	Kenneth Kemner (<i>ANL-BIO</i>) Darren Sherrell (<i>APS-XSD</i>)
9:45 am	Break	
10:00 am	Science Talk: "Synchrotron X-ray Fluorescence Microscopy reveals the Relationship Between Mineral Nutrient Homeostasis, Fertility and Crop Yield"	Ju-Chen Chia (<i>Cornell University</i>)
10:30 am	Science Talk: "Soil micro-environment modulated by vegetation history drives differential assimilation of NO ₃ to produce N ₂ /N ₂ O"	Poulamee Chakraborty (<i>Michigan State University</i>)
11:00 am	Break	
11:10 am	Science Talk: "Using lab-based X-ray imaging in plant and soil biology"	Keith Duncan (<i>Donald Danforth Plant Science Center</i>)
11:40 am	How To Become A User	Michelle Radford (<i>APS-XSD</i>)
12:00 pm	Closing Remarks/Survey	Karolina Michalska (<i>APS-XSD</i>)