Short Course on X-ray Absorption Fine Structure: Theory, Data Analysis and Modeling
Virtual course.

Draft agenda

Course instructors: N. Marcella (UIUC/BNL), Y. Li (ORNL), A. Frenkel (SBU/BNL), S. Kelly (APS), F. Vila (UW), J. Kas (UW), P. Routh (SBU), H. Wang (SBU), J. Timoshenko (FHI), D. Sprouster (SBU), S. Xiang (SBU), J. Li (SBU), K. Zheng (SBU), L. Ma (NSLS-II)

Wednesday, Nov. 2

9:00   A. Frenkel Welcoming remarks
9:10   A. Frenkel Introduction and overview of XAFS
9:40   N. Marcella EXAFS theory
10:40  Coffee break
11:00  Y. Li EXAFS data processing and analysis methods
12:00pm Lunch
1:10pm F. Vila Theory of XANES
2:10pm J. Kas FEFF9 code for XANES modeling
3:10pm Coffee break
3:40pm N. Marcella XAFS data processing with Athena and Larch (demo)
4:30pm D. Sprouster EXAFS data analysis by FEFF fitting
5:10pm J. Timoshenko Treatment of disorder in EXAFS analysis
6:00pm Adjourn

Thursday, Nov. 3

8:30  Breakfast
9:00  S. Kelly EXAFS data analysis with Artemis and Larch (demo)
10:00 J. Timoshenko Advanced topics: Multiple scattering EXAFS analysis
11:00 Coffee break
11:20 P. Routh XANES data analysis by Principal Component Analysis and MCR-ALS
12:00pm Lunch
1:20pm F. Vila FEFF9 code for XANES modeling (demo)
2:20pm N. Marcella Artificial neural network approach to XANES and EXAFS data analyses
3:20pm Coffee break
3:40pm A. Frenkel *Structural analysis and modeling of mono- and bimetallic nanoparticles using EXAFS*

4:30pm L. Ma *In situ capabilities at the QAS beamline of NSLS-II*

5:00pm Questions and Answers (participants and instructors)

6:00pm Adjourn

Friday, Nov. 4

9:00 Data analysis practicum

12:00pm Lunch

1:00pm Data analysis practicum

5:00pm Adjourn

Accepted participants: limit of 80