**SAT A: Beyond RG: BioSAXS Short Course**

Time: 4 Full-days
Date: Tuesday, April 21 – Friday, April 24
Course location: Building 401, Room E1100/1200
Organizers: Xiaobing Zuo (APS)

Description: Solution small-angle x-ray scattering has earned great popularity and success in biological studies owing to the advances in brilliant x-ray sources, large area detectors, and, more importantly, data analysis methods in the past two decades. The objective of this course is to raise the awareness and capabilities of the small-angle scattering (SAS) techniques in the structural biology community by providing an intermediate-level course for those in need of a better understanding of bioSAS theory, and techniques and facilities provided at the APS.
This BioSAXS short course will offer an overview of small-angle scattering (SAS, including x-ray and neutron scattering) theory, SAS methods and capabilities for structural biology, and data reduction and analysis tools, to enable the community to submit highly effective beam-time proposals and to facilitate better utilization of the resources at the APS. Although many methods covered in this course were originally developed for biomolecules, which are often mono-dispersed, this course may be also useful for those work with solution samples with high structural homogeneity. However, this course is NOT for soft materials that are polydispersed. Participants are expected to have attained at least a graduate student-level education and are encouraged to have a defined experimental program. Participants are also encouraged to bring their own notebook computers.