-------------------------------------------------------------------------------

SCHEDULE FOR SATURDAY, July 21, 2018

3:00 - 6:00 PM – School participants arrive at Argonne and register at the Argonne Guest House, Building 460.

6:00 - 8:00 PM – Informal get-together at Argonne Guest House. Pizza buffet and beverages for all School participants.

-------------------------------------------------------------------------------

ARGONNE SCHOOL OPENING - SUNDAY, July 22, 2018

APS Building 401, Room A1100

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Time/Date | Sunday, July 22 | Time/Date | Sunday, July 22 | Time/Date | Sunday, July 22 (cont.) |
| 8:30 AM | Breakfast Buffet  Argonne Guest House  Restaurant | 9:45 - 10:45 | Lecture  X-ray Generation & Instrumentation  Dennis M. Mills  Argonne National Laboratory | 3:45 - 4:45 | APS Tour |
| 9:30 AM | Welcome  Dr. Dennis Mills  Deputy Director Advanced Photon Source  Argonne National Laboratory  Opening Remarks  Dr. Stephan Rosenkranz  Senior Physicist  Materials Science Division  Argonne National Laboratory  Dr. Brian Toby  Senior Physicist  X-ray Science Division Advanced Photon Source Argonne National Laboratory |
| 10:45 - 11:00 | Break | 4:30 - 4:45 | Break |
| 11:00 - 12:00 | Lecture Continued  X-ray Generation & Instrumentation  Dennis M. Mills  Argonne National Laboratory | 4:45 - 5:45 | Lecture  Inelastic X-ray Scattering (I)  RIXS, etc.  Jason Hancock  University of Connecticut |
| 12:00 - 1:15 | Lunch (Guest house) | 6:00 - 7:00 | Dinner (Guest house) |
| 1:15 - 2:15 | Lecture  Interaction of X-rays and  Neutrons with Matter  Roger Pynn  University of Indiana |
| 2:15 - 2:30 | Break |
| 2:30 - 3:30 | Lecture Continued  Interaction of X-rays and  Neutrons with Matter  Roger Pynn  University of Indiana |  | |
| 3:30- 3:45 | Break |

Program Week 1: July 23-26, 2018

Locations: ESB Building 241 Room D172 (Monday & Tuesday)

APS Building 401 Room A1100 (Wednesday-Friday)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time/Date | Monday  July 23  241/D172 | Tuesday  July 24  241/D172 | Wednesday  July 25  401/A1100 | Thursday  July 26  401/A1100 | Friday  July 27  401/A1100 | Saturday  July 28 |
| 8:30 - 9:30 | Lecture Continued  Interaction of X-rays and  Neutrons with Matter  Roger Pynn  University of Indiana | Lecture  X-ray Abs. Spectroscopy I  Grant Bunker  Illinois Institute of Technology | Lecture  SAXS/SANS II  Dale Schaefer  University of Cincinnati | Inelastic X-ray  Scattering (II)  Ercan Alp  Argonne National Laboratory | Lecture  Single Crystal Diffraction  Christine Beavers  Advanced Light Source  Laurence Berkeley National Lab | Bus Travel to  Oak Ridge  Bus departs Argonne Guest House - 8:00 AM  Dinner at  Oak Ridge |
| 9:30 - 9:45 | Break | Break | Break | Break | Break |
| 9:45 - 10:45 | Lecture Continued  Interaction of X-rays and  Neutrons with Matter  Roger Pynn  University of Indiana | Lecture Continued  X-ray Abs. Spectroscopy II  Grant Bunker  Illinois Institute of Technology | Lecture  XPCS  Andrei Fluerasu  NSLS-II/Brookhaven | Lecture  (TBD)  Aymeric Robert  LCLC/Stanford Linear Accelerator | Lecture  Powder Diffraction  Brian Toby  Argonne National Lab |
| 10:45 - 11:00 | Break | Break | Break | Break | Break |
| 11:00 - 12:00 | Lecture  X-ray Imaging  Chris Jacobsen  Argonne/Northwestern | Lecture  SAXS/SANS I  Dale Schaefer  University of Cincinnati | Lecture  X-ray Magnetic Dichroism  Elke Arenholz  ALS/Lawrence Berkeley National Laboratory | Lecture  (TBD: Pulse-probe x-ray measurements)  Linda Young  Argonne/UChicago | Lecture  Polycrystalline Diffraction  Matt Miller  Cornell/CHESS |
| 12:00 - 1:15 | Lunch (cafeteria) | | | | |
| 1:30 - 2:30 | Lecture  Coherence Based Imaging  Ross Harder  Argonne National Lab | X-ray Experiment 1  See Experiments  Schedule | X-ray Experiment 2  See Experiments  Schedule | X-ray Experiment 3  See Experiments  Schedule | X-ray Experiment 4  See Experiments  Schedule |
| 2:30 - 3:30 | Group Photo & Break |
| 3:30 - 4:30 | Lecture  Surf./Interface Scattering  Paul Zshack  NSLS-II, Brookhaven National Laboratory |
| 4:45 - 6:00 | Break |
| 6:00 - 7:00 | Dinner (Guest house) | | | | ANL Wrap-up Dinner  (Guest house) |

-------------------------------------------------------------------------------

SCHEDULE FOR SATURDAY, July 28, 2018

School participants arrive in Oak Ridge, TN and check in at the Comfort Inn. Transportation provided from airport and dinner hosted by Oak Ridge National Laboratory.

-------------------------------------------------------------------------------

OAK RIDGE SCHOOL OPENING - SUNDAY, July 29, 2018

Spallation Neutron Source (SNS) Building 8600, Iran Thomas Auditorium, Room A103

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Time/Date | Sunday, July 29 | Time/Date | Sunday, July 29 | Bus Schedule |
| 10:00 11:30 | -Badging  -Safety Training (PFE) | 1:00 - 1:45 | Lecture  Neutron Generation and Detection/Neutron Optics and Instrumentation  Lee Robertson  Oak Ridge National Laboratory | 9:30am Buses depart Comfort Inn for ORNL |
| 11:30 - 12:15 | Lunch | 1:45 - 2:00 | Break |  |
| 12:15 - 1:00 | Welcomes  Opening Remarks  Dr. Hans M. Christen  Director, Neutron Scattering Division, Oak Ridge National Laboratory  Welcoming Address  Dr. Jack Carpenter  Retired, Argonne National Laboratory  Dr. Bryan C. Chakoumakos, Dr. Katharine Page, Dr. Bianca Haberl  Neutron Scattering Division  Oak Ridge National Laboratory  Dr. Adam Aczel, Representative to the Spallation Neutron Source / High Flux Isotope Reactor User Group (SHUG) | 2:00 - 2:45 | Lecture  Quasi-elastic Neutron Scattering  Ken W. Herwig  Oak Ridge National  Laboratory |  |
| 2:45 - 3:00 | Break |  |
| 3:00 - 6:30 | Tours  SNS, HFIR, and Graphite Reactor |  |
| 6:30 - 8:00 | Dinner and Discussion | 7:15pm-7:30pm Buses depart ORNL for Comfort Inn |

Program Week 2 – July 29 – August 3 2018

Spallation Neutron Source (SNS) Building 8600, Iran Thomas Auditorium, Room A103

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time/Date | Monday  July 30 | Tuesday  July 31 | Wednesday  August 1 | Thursday  August 2 | Friday  August 3 | Saturday  August 4 |
| 7:30 – 8:15 | Bus departs Comfort Inn | Bus departs  Comfort Inn | Bus departs  Comfort Inn | Bus departs  Comfort Inn | Bus departs  Comfort Inn |  |
| 8:30 - 9:30 | Lecture  Inelastic Neutron  Scattering  Bruce Gaulin  McMaster University | Lecture  Reflectivity  Chuck F. Majkrzak  National Institute of Standards and Technology | Lecture  Neutron Spin Echo Spectroscopy  Piotr A. Zolnierczuk,  Julich Centre for Neutron Science | Lecture  Diffraction Applications  Ashfia Huq  Oak Ridge National  Laboratory | HFIR/SNS Experiment 4  (20 Instruments)  See Experiments  Schedule  Experiments Will Run Until 12:30 | School participants depart for home |
| 9:30 - 9:45 | Break / Group Photo | Break | Break | Break |
| 9:45 - 10:45 | Lecture  Inelastic Neutron  Scattering  Bruce Gaulin  McMaster University | Lecture  Neutron Polarization  Chuck F. Majkrzak  National Institute of Standards and Technology | Lecture  Imaging with Neutrons  Hassina Bilheux  Oak Ridge National  Laboratory | Lecture  Extreme Conditions Environments  Bianca Haberl  Oak Ridge National Lab |
| 10:45 - 11:00 | Break | Break | Break | Break |
| 11:00 - 12:00 | Lecture Continued  Magnetic Scattering  Bruce Gaulin  McMaster University | Lecture  PDF Analysis  Katharine Page  Oak Ridge National Laboratory | Lecture  Timmy Ramirez-Cuesta  Neutron Vibrational Spectroscopy  Oak Ridge National  Laboratory | Lecture  Flora Meilleur/Josh Pierce  Neutrons and Structural Biology / Dynamic Nuclear Polarization  Oak Ridge National Lab |
| 12:00 – 1:00 | Lunch | Lunch | Lunch | Lunch | Lunch (12:30-1:15) |
| 1:00 - 6:30 | HFIR/SNS Experiment 1  (20 Instruments)  See Experiments  Schedule | HFIR/SNS Experiment 2  (20 Instruments)  See Experiments Schedule | |  | | --- | | WiNS (Women in Neutron Sciences) Career  Development Seminar  (1:00 – 2:00)  Fulvia Pilat  Oak Ridge National  Laboratory |   Tour of Manufacturing Demonstration Facility (limit 60 students)  Buses departure: 2:20 PM  returns to Comfort Inn after tour | HFIR/SNS Experiment 3  (20 Instruments)  See Experiments  Schedule | |  | | --- | | Lecture (1:15-2:15)  Diffuse Scattering  Raymond Osborn  Argonne National  Laboratory | | Break (2:15 – 2:30) | | Lecture (2:30 – 3:30)  Simulation of Inelastic Neutron Scattering  Yongqiang Cheng  Oak Ridge National Lab | | Break (3:30 – 3:45) | | Lecture (3:45 – 4:45)  Engineering Diffraction  Andrew Payzant | | Break (4:45 – 5:00) | | Lecture (5:00 – 6:00)  Writing Proposals for Beamtime  John D. Budai | |
| 6:30 - 8:00 | Dinner and Discussion | Dinner and Discussion | Melton Hill Lake picnic  Bus departure from  Comfort Inn: 5:30 PM | Dinner and Discussion | Dinner &Social in the SNS lobby / Auditorium |