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SCHEDULE FOR SATURDAY, August 11, 2012

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 Argonne Guest House. Food and beverages will be provided. All School participants and program presenters are invited to attend.

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ARGONNE SCHOOL OPENING - SUNDAY, AUGUST 12, 2012

APS Building 401, Room A1100

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| --- | --- | --- | --- | --- | --- |
| Time/Date | Sunday, August 12 | Time/Date | Sunday, August 12 | Time/Date | Sunday, August 12 |
| 8:00 AM | Breakfast Buffet  Argonne Guest House  Restaurant | 9:15 - 10:15 | Lecture  Interaction of X-rays and  Neutrons with Matter  S. K. Sinha  University of California, San Diego | 2:45 - 3:30 | Lecture  X-ray Detection  P. P. Denes  Lawrence Berkley National  Laboratory |
| 9:00 AM | Opening Remarks  Dr. Brian Stephenson  Associate Laboratory Director  Advanced Photon Source  Argonne National Laboratory  Dr. Suzanne G.E. te Velthuis  Physicist  Materials Science Division  Argonne National Laboratory  Dr. Jonathan C. Lang  Physicist  X-ray Science Division Advanced Photon Source Argonne National Laboratory |
| 10:15 – 10:30 | Break | 3:30 - 3:45 | Break |
| 10:15 - 11:15 | Lecture Continued  Interaction of X-rays and  Neutrons with Matter  S. K. Sinha  University of California  San Diego | 3:45 - 4:30 | Lecture Continued  X-ray Detection  P. P. Denes  Lawrence Berkeley National  Laboratory |
| 11:15 - 11:30 | Break | 4:30 - 4:45 | Break |
| 11:30 - 12:30 | Lecture  X-ray Generation/Instrumentation  D. M. Mills  Argonne National Laboratory | 4:45 - 6:00 | Advanced Photon Source  (APS) Tour |
| 12:30 - 1:30 | Lunch | 6:00 - 7:00 | Dinner |
| 1:30 - 2:30 | Lecture Continued  X-ray Generation/Instrumentation  D. M. Mills  Argonne National Laboratory |  | |

Program Week 1 - August 13-18, 2012

APS Building 401 Room A1100

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| --- | --- | --- | --- | --- | --- | --- |
| Time/Date | Monday  August 13 | Tuesday  August 14 | Wednesday  August 15 | Thursday  August 16 | Friday  August 17 | Saturday  August 18 |
| 8:30 - 9:30 | Lecture Continued  Interaction of X-rays and  Neutrons with Matter  S. K. Sinha  University of California, San Diego | Lecture  Surface Scattering  P. Miceli  University of Missouri | Lecture  X-ray Abs. Spectroscopy  G. B. Bunker Illinois Institute of Technology | Lecture  X-ray Imaging  I. McNulty Argonne National  Laboratory | Lecture  High Pressure Techniques  M. Guthrie  Carnegie Institute - Washington | Bus Travel to  Oak Ridge  Bus departs Argonne Guest House - 9:00 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  S. K. Sinha  University of California, San Diego | Lecture Continued  Surface Scattering  P. Miceli  University of MIssouri | Lecture Continued  X-ray Absorption  Spectroscopy  G. B. Bunker Illinois Institute of  Technology | Lecture Continued  X-ray Imaging C. I. McNulty Argonne National  Laboratory | Lecture  Time Resolved Scattering  P. Evans  Univ. of Wisconsin |
| 10:45 - 11:00 | Break | Break | Break | Break | Break |
| 11:00 - 12:00 | Lecture  Single Crystal Diffraction  A. Schultz  Argonne National Lab | Lecture  Powder Diffraction  B. Toby  Argonne National Lab | Lecture  Magnetic Spectroscopy  E. Arenholz  Lawrence Berkley National Lab | Lecture  XPCS  L. Lurio  Northern Illinois University | Lecture  X-ray Emission Spectroscopy  G. Siedler  Univ. of Washington |
| 12:00 - 1:15 | Lunch | Group Photo/Lunch | Lunch | Lunch | Lunch |
| 1:30 - 6:00 | Lecture  Small Angle Scattering  D. Schaffer  Univ. of Cincinnati  1:30 -2:30 pm | Free Afternoon in  Chicago (Optional)  Buses depart Argonne Guest House for down- town Chicago - 1:30 PM  Buses depart downtown Chicago for Argonne Guest House - 8:00 PM | X-ray Experiment 2  1:30 – 6:00  See Experiments Schedule | X-ray Experiment 3  1:30 – 6:00  See Experiments Schedule | X-ray Experiment 4  1:30 – 6:00  See Experiments Schedule |
| Break 2:30 - 2:45 |
| 6:00 - 7:00 | X-ray Experiment 1  2:45 – 6:30  See Experiments Schedule | Dinner | Dinner | Dinner  Week 1 wrap-up Picnic |

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SCHEDULE FOR SATURDAY, August 18, 2012

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.

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OAK RIDGE SCHOOL OPENING - SUNDAY, August 19, 2012

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

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| --- | --- | --- | --- |
| Time/Date | Sunday, August 19 | Time/Date | Sunday, August 19 |
| 9:30 - 11:30 | -Badging  -Safety Training (PFE) | 1:00 - 1:45 | Lecture  Neutron Generation and Detection  J. M. Carpenter  Argonne National Laboratory |
| 11:30 - 12:00 | Lunch | 1:45 - 2:00 | Break |
| 12:00 - 1:00 | Welcomes  Dr. Kelly Beierschmitt  Associate Laboratory Director  Neutron Directorate  Oak Ridge National Laboratory  Dr. Thom Mason  Director  Oak Ridge National Laboratory  Opening Remarks  Dr. Bryan C. Chakoumakos  Group Leader  Structure of Matter  Quantum Condensed Matter Div.  Oak Ridge National Laboratory | 2:00 - 2:45 | Lecture  Neutron optics and Instrumentation  L. Roberston  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 |

Program Week 2 - August 20-25, 2012

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

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| --- | --- | --- | --- | --- | --- | --- |
| Time/Date | Monday  August 20 | Tuesday  August 21 | Wednesday  August 22 | Thursday  August 23 | Friday  August 24 | Saturday  August 25 |
| 8:30 - 9:30 | Lecture  Quasi-elastic Neutron  Scattering  K. W. Herwig  Oak Ridge National  Laboratory | Lecture  Magnetic Scattering  B. D. Gaulin  McMaster University | Lecture  PDF Analysis  T. Proffen  Oak Ridge National Laboratory | Lecture  Materials Engineering  D. Brown  Los Alamos National  Laboratory | Lecture  Writing Proposals for Neutron & X-ray Beamtime  J. D. Budai  Oak Ridge National  Laboratory | School participants depart for home |
| 9:30 - 9:45 | Break | Break | Break | Break | Break |
| 9:45 - 10:45 | Lecture  Inelastic Neutron  Scattering  B. D. Gaulin  McMaster University | Lecture  Reflectivity  C. F. Majkrzak  National Institute of Standards and Technology | Lecture  Diffuse Scattering  G. E. Ice  Oak Ridge National  Laboratory | Lecture  Applications of Small Angle Scattering  V. S. Urban  Oak Ridge National  Laboratory | Lecture  Powder Diffraction  Applications  A. Huq  Oak Ridge National  Laboratory |
| 10:45 - 11:00 | Break | Break | Break | Break | Break |
| 11:00 - 12:00 | Lecture Continued  Inelastic Neutron  Scattering  B. D. Gaulin  McMaster University | Lecture  Neutron Polarization  C. F. Majkrzak  National Institute of Standards and Technology | Lecture  Micro-Diffraction  G. E. Ice  Oak Ridge National  Laboratory | Lecture  Imaging with Neutrons  H. Bilheux  Oak Ridge National  Laboratory | Presentation preparation |
| 12:00 - 12:45 | Lunch  J. J. Rhyne  Los Alamos National  Laboratory | Lunch | Lunch | Lunch | Lunch |
| 12:45 - 6:30 | HFIR/SNS Experiment 1  (16 Instruments) | HFIR/SNS Experiment 2  (16 Instruments) | HFIR/SNS Experiment 3  (16 Instruments) | HFIR/SNS Experiment 4  (16 Instruments) | Student Presentations |
| Break |
| Student Presentations |
| 6:30 - 8:00 | Dinner and Discussion | Dinner and Discussion | Dinner and Discussion | Dinner and Discussion | Dinner in the SNS Cafeteria &  Social on the Patio |