Program at a Glance

REVISION: MAY 06, 2009

MORNING	AFTERNOON
Friday July 24, 2009	
WK.01 (day 1) JANA - Incommensurate Crystal Structures (*Small Mol, Powder, Neutron*) – Chairs: Jim Kaduk, Olivier Gourdon	**WK.01 (day 1)** JANA - Incommensurate Crystal Structures (*Small Mol, Powder, Neutron*) – Chairs: Jim Kaduk, Olivier Gourdon
Saturday July 25, 2009	
WK.01 (day 2) JANA - Incommensurate Crystal Structures (*Small Mol, Powder, Neutron*) – Chairs: Jim Kaduk, Olivier Gourdon	**WK.01 (day 2)** JANA - Incommensurate Crystal Structures (*Small Mol, Powder, Neutron*) – Chairs: Jim Kaduk, Olivier Gourdon
WK.02 Handling Twinning in Macromolecular Crystallography (*Biomac, Small Mol, Indust*) – Chairs: George Sheldrick, Garib Murshudov, Peter Zwart	**WK.02** Handling Twinning in Macromolecular Crystallography (*Biomac, Small Mol, Indust*) – Chairs: George Sheldrick, Garib Murshudov, Peter Zwart

Sunday July 26, 2009

MORNING

SP.01 Warren Award to Shih-Lin Chang
Chair: Bruce Noll

02.01 General Interest I (*General Interest*) – This session is for all broad crystallography that does not "fit" within the areas covered by the individual SIG's – Chair: Bruce Noll

01.01 Exciting Structures (*BioMac*) – Difficult and new macromolecular structures – Chairs: Zhe Yang, Ladislau Kovari

06.02 Shape – Memory Materials (*Neutron, Materials*) – Structure and dynamics. Characterization of materials, phase transitions, phonons, engineering applications, and their relationship to underlying structural properties. Chair: Steve Shapiro

06.01 Supramolecular Chemistry (*Small Mol, Indust*) – Crystal growth, molecular assembly, and crystal function. Crystal engineering. Chair: Christer Aakeröy

AFTERNOON

06.01 Supramolecular Chemistry (*Small Mol, Mats*) – Crystal growth, molecular assembly, and crystal function. Crystal engineering. Chair: Christer Aakeröy

06.03 Complementary Methods for Macromolecular Crystallography (*Synchrotron, SAS, BioMac*) – Primary methods: SAS, electron microscopy, nmr, XAS, XANES, EXAFS. Chairs: Hiro Tsuruta, Wah Chiu

06.17 Accuracy & Standards in Powder Diffraction (*Industrial, Powder*) Standards, pitfalls, and accuracy of data obtained in powder diffraction experiments. Chair: Pam Whitfield

01.02 Vaccine Design (*BioMac*) AIDS and other viruses have proven difficult to deter. Crystallography is being used to pursue antigens for vaccines. Chairs: Peter Kwong, Ian Wilson

Monday July 27, 2009

MORNING

SP.02 Etter Early Career Award Symposium – **Svilen Bobev** (*YSSIG, General Interest*) Chair: Robert Huether

TR.01 Phase Transitions (**Transaction**) (*Powder, Mats, Service, Small Mol, SAS, General Interest*) General session on phase transitions covering the whole range of phenomena from soft materials and proteins to hard materials and alloys etc. Chair: Ross Angel

01.03 Crystallization Methods (*BioMac*) Crystallization and protein expression. Chair: Alec McPherson

06.04 Diffraction Studies & Mechanical Properties of Engineering Materials (*Powder, Neutron, Mats, Synchro*) Studies of residual stress in engineering materials and components, including failure analysis and instrumentation. Chair: Ron Rogge

AFTERNOON

06.05 Structure-based Drug Design (*BioMac, Indust*) Structural results provide valuable insight in the drug discovery process. This session will present examples of such insights. Fragment-based screening will be emphasized. Chairs: Duncan Mcree, Eddy Arnold

TR.01 Phase Transitions (**Transaction**) (*Powder, Mats, Service, Small Mol, SAS, General Interest*) General session on phase transitions covering the whole range of phenomena from soft materials and proteins to hard materials and alloys etc. Chair: Ross Angel

06.19 Membranes & Associated Proteins (*SAS, BioMac, Synchrotron*) Biologically relavent membranes; Association between membranes and membrane proteins; Assembly of membrane protein complexes; Lipids and copolymers for drug delivery; Characterization. Chair: Thomas Weiss

06.01 Supramolecular Chemistry (*Small Molecule*) – Crystal growth, molecular assembly, and crystal function. Crystal engineering. Chair: Gary Enright

EVENING

06.06 Would you Publish This? (*Small Mol, Service, General*) Chairs: Carla Slebodnick

Tuesday July 28, 2009

MORNING

SP.03 Plenary Lecture: Ted Baker
Chair: Bill Duax

06.10 Instrumentation: (*Syncrotron, BioMac*) Recent developments and future plans for X-ray sources, optics, data collection equipment, robotics and detectors. Chairs: Marc Allaire and Craig Ogata

06.07 Superconducting Materials (*Materials, Neutron*) Studies on the crystal and magnetic structures of superconducting materials old and new. Chair: John Mitchell

06.08 Problem Structures (*Service, Small Mol*) Solution and refinement of particularly difficult small molecule structures. Chair: Richard Staples

06.09 Refinement (Computational) (*BioMac, YSSIG*) Refinement software and difficult refinements Chairs: Edward Collins, Peter Horanyi

AFTERNOON

06.10 Instrumentation: (*Syncrotron, BioMac*) Recent developments and future plans for X-ray sources, optics, data collection equipment, robotics and detectors. Chairs: Marc Allaire and Craig Ogata

06.11 Cooperative Phenomena in Magnetic Materials (*Neutron, Powder*) Magnetic structural studies and the interplay with structural phase transitions. Chair: Ovidiu Garlea

06.12 Professional Directions (*YSSIG, Industrial*) Panel discussion on Academic and Industrial careers. Chairs: Ryan Jackson and Tim Rydel

06.13 Large Small Molecules (*Small Mol, Service*) At what point does one call a small molecule a macromolecule? High Z' structures, "small" macromolecules, large unit cell structures. Chairs: Christine Beavers, Ilia Guzei

Wednesday July 29, 2009

MORNING

SP.04 Plenary Lecture: Philip Coppens
Chair: Sine Larson

06.14 Diagnostics during Data Collection (*Synchrotron, BioMac*) Indicators of problems during data collection. Methods for analysis of macromolecular diffraction data during data collection. Early indicators of data quality. Is something going wrong? Can I solve the structure with these data? Chairs: Michel Fodje, Ernst Bergmann

06.15 Energy Related Materials (*Powder, Materials*) Battery materials, materials for hydrogen storage, solar power, thermoelectrics, etc. Chair: Ashfia Huq

06.16 Tips & Tricks of the (Computing) Trade (*Service, General Interest, Smol Mol*) Individual solutions to individual problems at any stage of crystal structure determination, with emphasis on computing, i.e. short programs written to solve a problem. Chair: Xiaoping Wang

05.01 Cool Structures (*Small Molecule*) Any unusual, interesting, or unique structures that the author might think would be of interest to the audience. Chair: Peter Müller

AFTERNOON

03.01 Application of new technologies in Industry (*Industrial*) Brief description of new technologies in crystallography followed by its application. Topics can include instrumentation, process improvements, and the communication of structural results. Chair: Matt Peterson

04.01 Structure of Nanophase Materials (*SAS*) Synthesis and analysis of nanophase materials with emphasis on the correlations between structure and function and between method of synthesis and uniformity/predictability. Chair: Tad Koga

02.01 General Interest II (*General Interest*) – This session is for all broad crystallography that does not "fit" within the areas covered by the individual SIG's – Chair: Bruce Noll

01.04 "Green" Biochemistry (BioMac) Structures relevant to biofuel production and bioremediation. Chairs: Carrie Wilmot, Bernie Santarsiero

Thursday July 30, 2009

MORNING

SP.05 Buerger Award to Mike James
Chair: Emil Pai

06.20 Structural Enzymology (*BioMac*) Structures that give insight into enzyme mechanism. Chairs: Emil Pai, Felix Vajdos

04.03 SAS Modeling & Simulation (*SAS*) Modeling and prediction of small angle data. Low resolution envelope by *a-priori* methods; PDB crystal structures and SAS data; 2D modeling and fitting; New fitting methods and models with applications. Chairs: Gregory Beaucage, Jan Ilavsky

01.05 Chromatin Remodeling (*BioMac*) Protein and/or DNA structures involved in modifying chromatin – controlling gene expression. These structures are important to understand epigenetics. Chairs: Jinrong Min, Jean-François Couture

06.21 Educational Outreach in Crystallography (*Powder, General Interest*) Discuss software, demonstrations, webtools and ideas for teaching crystallography. Chairs: Cora Lind, Joseph Ng

AFTERNOON

06.18 Ferroic & Multiferroic Materials (*Materials, Neutron*) Structural studies of ferroic/multiferroic materials, dynamics of lattices, coupling between ferroic properties and structures, new materials, etc. Chair: Peter Gehring

06.20 Structural Enzymology (*BioMac*) Structures that give insight into enzyme mechanism. Chairs: Emil Pai, Felix Vajdos

04.04 Advances in Small-Angle Scattering (*SAS*) Advances in experimental technique for SAS: Grazing incidence, XPCS / combined SAS-spectroscopy, focusing/ microfocusing, extreme/ special sample environments. Chairs: Ken Littrell, Soenke Seifert

01.06 Carbohydrate Recognition (*BioMac*) Carbohydrates are important in recognition of cells, enzymes, and so forth. Although they are not as well studied as other macromolecules, they are attracting more interest. Chairs: Ken Ng, Stephen Evans