

CCP4/APS summer school program for 2015

Tuesday, 16th June

Data collection and processing lectures, Beamline orientation and data collection planning

All Lectures will be held in the Conference Center of Advanced Protein Characterization Facility, Building 446. All meals and refreshments will be arranged in the next room from the Conference Center, except for dinner on Tuesday the 16th, and all meals and refreshments on Tuesday, June 17. These will be served in the conference room C010 of Building 436.

Color code:

Meal or Coffee break

Lecture session

Practical session

Tutorial session

Other

Registration throughout the day		Sheila Trznadel
08:00 – 08:30	Welcome and Introduction	R. Fischetti & N. Sanishvili
08:30 - 09:00	Breakfast	<i>Building 446</i>
09:00 - 10:00	All about data (Data collection theory)	Z. Dauter
10:00 – 11:00	Overview of Beamline Controls and Data Collection Software	V. Nagarajan

11:00 – 12:00	Data processing with HKL2000/HKL3000	D. Borek
12:00 -12:45	Lunch	<i>Building 446</i>
12:45 – 13:45	Data processing with MOSFLM	A. Leslie
13:45 – 14:45	DIALS and BLEND	R. Gildea
14:50 – 15:30	Sector Orientation	M. Becker
15:30 – 16:00	Coffee	<i>Building 446</i>
16:00 – 16:45	Beamline tour	V. Nagarajan <i>Bld. 436, Sector 23</i>
16:45 – 18:15	Hands on training on Beamline Controls and Data Collection Software	V. Nagarajan; C. Ogata; N. Sanishvili <i>Beamlines 23ID-B and 23ID-D</i>
18:30 – 19:30	Dinner combined with data collection planning for next day. Short discussion of each project	N. Sanishvili, with all students and GMCA staff <i>Building 436, conference room C010</i>
19:30 – 22:00	Q&A session. Finish hands on training, prepare samples for next day	GM/CA staff <i>Building 436 conference room, GM/CA lab</i>

Wednesday, 17th June

Data collection and processing tutorials

Beamlines 23ID-B & 23ID-D

08:00 – 10:00	Beamline set up	GM/CA staff <i>Beamline 23ID-D</i>
08:30 – 09:00	Breakfast	<i>Building 436,</i>

		<i>conference room C010</i>
09:30 – 12:00	Experimental design, remote data collection, real-time processing and Tutorials	GM/CA staff, D. Borek, A. Leslie and R. Gildea rotating
12:00 – 12:45	Working Lunch with continued data collection and processing (Q&A session)	All participants <i>Building 436, conference room C010</i>
12:45 – 16:00	Experimental design, remote data collection and real-time processing	GM/CA staff, D. Borek, A. Leslie and R. Gildea rotating
16:00 – 16:30	Coffee	<i>Building 436, conference room C010</i>
16:30 – 19:00	Experimental design, remote data collection, real-time processing and tutorials	GM/CA staff, D. Borek A. Leslie and R. Gildea rotating
19:00 – 20:00	Dinner	<i>Building 436, conference room C010</i>
20:00 – 24:00	Experimental design, remote data collection and real-time processing	GM/CA staff, D. Borek, A. Leslie And R. Gildea rotating

Thursday, 18th June

Data collection and processing

08:00 – 09:00	Beamline set up	GM/CA staff <i>Beamlines 23ID-B, 23ID-D</i>
08:30 – 09:00	Breakfast	<i>Building 446</i>
09:00 – 12:00	Data collection, real-time processing and tutorials	GM/CA staff, D. Borek, A. Leslie and R. Gildea <i>Beamlines 23ID-B, 23ID</i>
12:00 – 12:45	Lunch	<i>Building 446</i>
12:45 – 16:00	Data collection, real-time processing and tutorials	GM/CA staff, D. Borek, A. Leslie and R. Gildea <i>Beamlines 23ID-B, 23ID-D</i>
16:00 – 16:30	Coffee	<i>Building 446</i>
16:30 – 19:00	Data collection, real-time processing and tutorials	GM/CA staff, D. Borek, A. Leslie and R. Gildea
19:00 – 20:00	Dinner	<i>Building 446</i>
20:00 – 24:00	Data collection, real-time processing and tutorials	GM/CA staff, D. Borek, A. Leslie and R. Gildea <i>Beamlines 23ID-B, 23ID-D</i>

Friday, 19th June

Data processing & Experimental phasing

08:30 – 09:00	Breakfast	<i>Building 446</i>
09:00 – 09:45	Twinning	Z. Dauter
09:45 – 10:30	Twinning and other pathologies, practical aspects	A. Lebedev(any examples from new data?)
10:30 – 12:00	All data processing	D. Borek, A. Leslie and R. Gildea
12:00 – 12:45	Lunch	<i>Building 446</i>
12:45 – 15:20	Finish all data processing	D. Borek, A. Leslie and R. Gildea
15:20 – 16:20	Coffee	<i>Building 446</i>
16:20 – 17:00	Crank/Crank2	G. Murshudov
17:00 – 17:40	ShelxC/D/E	G. Sheldrick
17:40 – 18:20	Phasing and automation Phenix	T. Terwilliger
18:20 – 19:00	Phaser – EP	A. McCoy
19:00 – 20:00	Dinner	<i>Building 446</i>
20:00 – 20:40	Parrot/Buccaneer	B. Lohkamp
20:40 – 20:55	Tutorial Crank/Crank 2	G. Murshudov
20:55 – 21:10	Tutorial Pirate Buccaneer	B. Lohkamp
21:10 – 21:25	Tutorial ChelxC/D/E	G. Sheldrick
21:25 – 21:40	Tutorial Phenix	T. Terwilliger
21:40 – 22:00	Tutorial Phaser EP	A. McCoy

Saturday, 20th June

Molecular replacement

08:30 – 09:00	Breakfast	<i>Building 446</i>
09:00 – 09:40	Molecular Replacement	A. Lebedev
09:40 – 10:20	Phaser MR	A. McCoy
10:20 – 10:50	SHELXE from Molecular Replacement	G. Sheldrick
10:50 – 11:20	MrBUMP/AMPLE	R. Keegan
11:20 – 11:50	BALBES	G. Murshudov
11:50 – 12:20	ARCIMBOLDO	G. Sheldrick
12:20 – 12:50	Tutorial: Molecular Replacement	A. Lebedev
12:50 – 13:20	Tutorial: Phaser MR	A. McCoy
13:15 – 14:15	Lunch	<i>Building 446</i>
14:15 -	Afternoon and evening: free time Chicago Bus Trip	

Sunday, 21st June

Refinement and Autobuilding

08:30 – 09:00	Breakfast	<i>Building 446</i>
09:00 – 09:45	Refmac	G. Murshudov
09:45 – 10:30	Phenix refinement and ligand building	P. Afonine
10:30 – 11:15	TLS and all that	E. Merritt
11:15 – 11:45	Auto-Rickshaw	J. Pereira
11:45 – 12:30	Automated Protein Model Building with ARP/wARP	J. Pereira
12:30 – 13:15	Lunch	<i>Building 446</i>
13:15 – 13:45	Coot: An Introduction	B. Lohkamp
13:15 – 14:15	CCP4MG: Introduction	S. McNicholas
14:15 – 14:30	Tutorial: Phenix	P. Afonine
14:30 – 14:45	Tutorial: TLS	E. Merritt
14:45 – 15:00	Tutorial: Classic Model Building in ARP/wARP	J. Pereira
15:00 – 15:15	Tutorial: Coot	B. Lohkamp
15:15 – 16:00	Hands on problem solving	All participants
16:00 – 16:30	Coffee	<i>Building 446</i>
16:30 – 19:00	Hands on problem solving	All participants
19:00 – 20:00	Dinner	<i>Building 446</i>
20:00 – 22:00	Hands on problem solving	All participants

Monday, 22nd June

Refinement, ligands and validation

08:30 – 09:00	Breakfast	Building 446
09:00 – 09:30	Ligands and ligand dictionary	G. Murshudov
09:30 – 10:00	Automatic Building of Ligands and Nucleotides in ARP/wARP	J. Pereira
10:00 – 10:45	Coot ligand building	B. Lohkamp
10:45 – 11:30	PDB-REDO and validation With Whatcheck	R. Joosten
11:30 – 12:00	Validation in Phenix	P. Afonine
12:00 – 12:45	Lunch	Building 446
12:45 – 13:00	Tutorials: Ligands and ligand dictionary	G. Murshudov
13:00 – 13:15	Tutorials: Automatic Building of Ligands and Nucleotides in ARP/wARP	J. Pereira
13:15 – 13:30	Tutorial: Coot ligand building	B. Lohkamp
13:30 – 13:45	Tutorial: PDB-REDO and validation	R. Joosten
13:45 – 16:00	Hands on problem solving	All participants
16:00 – 16:30	Coffee	Building 446
16:30 – 19:00	Hands on problem solving	All participants
19:00 – 20:00	Dinner	Building 446
20:00 – 22:00	Hands on problem solving	All participants

Tuesday, 23rd June

Structure Analysis, Molecular Graphics and Feedback

08:30 – 09:00	Breakfast	Building 446
09:00 – 09:20	CCP4 beyond structure solution	E. Krissnel
09:20 – 10:00	Analysis of macromolecular Complexes (PISA)	E. Krissnel
10:00 – 10:45	CCP4mg – Advanced options Demo and tutorial	S. McNicholas
10:45 – 11:00	Start backups	
11:00 – 12:00	Hands on problem solving	All participants
12:00 – 12:45	Lunch	Building 446
12:45 – 16:00	Hands on problem solving	All participants
16:00 – 16:30	Coffee	Building 446
16:30 – 18:30	Overview of problems covered Backups	All participants
18:30 – 19:30	Dinner	Building 446
19:30	Overview of problems covered Feedback and backups	

Wednesday, 24th July

Departure