

Solution X-ray scattering; Application to Structural Biology

Practical course in SAXS-data analysis

25 to 26 of May, 2009

School of Biological Sciences, Nanyang Technological University



Programm

Day 1: *Basics of small-angle X-ray scattering*, classroom 1 (Monday, 25 May)

Chair person: L. Nordenskiöld

09:00 – 09:05 **Welcome address by the chair of the School of Biological Sciences** – A. Law

09:05 – 09:50 **Basics of small-angle X-ray scattering from solutions.** *M. H. J. Koch, EMBL-Outstation Hamburg, Germany*

09:50 – 10:35 **Scattering data reduction and processing.** *M. Roessle, EMBL-Outstation Hamburg*

10:35 – 11:05 **Coffee break**

11:05 – 11:50 ***Ab initio* methods: how do they work?** *D. Svergun, EMBL-Outstation Hamburg*

12:00 – 13:30 **Lunch** in the lobby of SBS

Afternoon: ***Ab initio* methods**, computer laboratory of SBS

13:30 – 14:30 **Data processing tutorial.** *M. Roessle EMBL-Outstation Hamburg*

14:30 – 15:30 ***Ab initio* programs tutorial.** *M. Petoukhov, EMBL-Outstation Hamburg*

15:30 – 16:00 **Coffee break**

16:00 – 18:00 **Data processing and *ab initio* practical.** *M. Roessle and M. Gajda, EMBL-Outstation Hamburg*

18:15 – 19:00 **Seeing the unseeable: Immersion into biological structures through a virtual world.**
W. Müller-Wittig, CAMTech, NTU, Singapore

Day 2: **Rigid body modeling**, computer laboratory of SBS (Tuesday, 26 May)

09:00 – 09:45 **Rigid body refinement (basics).** *D. Svergun, EMBL-Outstation Hamburg*

09:45 – 11:00 **Rigid body programs tutorial.** *M. Petoukhov, EMBL-Outstation Hamburg*

11:00 – 11:30 **Coffee break**

11:30 – 12:30 **Rigid body modeling practical.** *M. Gajda & M. Roessle, EMBL-Outstation Hamburg*

12:30 – 13:30 **Lunch**

13:30 – 14:00 **Analysis of mixtures tutorial.** *M. Petoukhov, EMBL-Outstation Hamburg*

14:00 – 15:30 **Data analysis and modeling practical.** *M. Gajda & M. Roessle, EMBL-Outstation Hamburg*

15:30 – 16:00 **Coffee break**

Afternoon: ***X-rays in structural biology***, classroom 1

Chair person: G. Grüber

16:10 – 16:30 **Synchrotron source for biological macromolecules.** *H. O. Moser, SSLS, Singapore*

16:30 – 17:15 **Combining synchrotron radiation and electron microscopy to study biological energy conversion.** *D. Stock, Victor Chang Cardiac Research Institute Darlinghurst, Australia*

17:15 – 18:00 **Synchrotron SAXS remote data collection demonstration.** *D. Svergun, EMBL-Outstation Hamburg*

18:00 – 20:00 **Dinner** in the lobby of SBS

Organizer

G. Grüber, SBS, NTU, Singapore

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