**6th Ringberg Workshop on Structural Biology with XFELs**

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| **Wednesday, February 27th, 2019** |
| > 15:00 | *Coffee, cake, Garden room* |
| **Chair: Makina Yabashi** |
| 16:20 | Ilme Schlichting |  Welcome |
| 16:30 | Johan Bielecki | First year of operation at SPB/SFX |
| 17:00 | Jaehyun Park | Current operation status of serial femtosecond crystallography at the PAL-XFEL |
| 17:30 | Christopher Milne | First serial femtosecond crystallography experiments at SwissFEL |
| 18:00 | Andrew Martin | Probing the real-space angular structure of liquids and the lipidic cubic phase at LCLS  |
| 18:30 | *Dinner* |
|  | **Chair: Paul Fuoss** |
| 20:00 | Beata Ziaja-Motyka | Femtosecond dissociation of disulfide bridges within X-ray irradiated protein crystals |
| **Thursday, February 28th, 2019** |
|  | **Chair: Marc Messerschmidt** |
|  9:00 | Gabriela Nass-Kovacs | Observations of ultrafast light-induced events in bacteriorhodopsin using time-resolved serial femtosecond crystallography |
|  9:30 | Yoshitaka Bessho | XFEL analysis of light-mediated pyrimidine dimer repair by DNA photolyase |
| 10:00 | Martin Weik | Excited-state structural dynamics of a fluorescent protein |
| 10:30  | *Coffee break* |
|  | **Chair: Adrian Mancuso** |
| 11:00 | Eriko Nango | Toward understanding of enzyme reaction mechanism: serial crystallography using mixing injectors |
| 11:30 | Andrew Aquila | Perspective on Single Particle Imaging |
| 12:00 | Richard Kirian | Phase retrieval algorithms for inter-Bragg diffraction measurements |
| 12:3012:40 | *Group photo (depending on weather)**Lunch* |
| 14:00 | *Discussion rounds / Hiking* |
| 18:30 | *Dinner* |
|  | **Chair: Loes Kroon-Batenburg** |
| 20:00 | James Holton | Bending the Rules |
| 20:30 | Discussion round | Data quality, analysis, …Teaser: Karol Nass |
| **Friday, March 1st, 2019** |
| **Chair: Bruce Doak** |
|  9:00 | Salah Awel | Optical guiding of nano-particles to the X-ray focus |
|  9:30 | Alexandra Ros | Microfluidic Tools for Serial Crystallography with Proteins |
| 10:00 | Michael Heymann | Ultracompact 3D Microfluidics for time-resolved structural biology |
| 10:30 | *Coffee break* |
| **Chair: Sebastien Boutet** |
| 11:00 | Benjamin Stauch | Rapid determination of GPCR structures |
| 11:30 | Michael Brown | Challenges in Time-Resolved Solution X-ray Scattering of Proteins |
| 12:00 | Valerie Panneels | Towards rhodopsin dynamics using an XFEL |
| 12:30 | *Lunch* |
| **Chair: Kensuke Tono** |
| 14:00 | Doeke Hekstra | Progress on probing the mechanics of proteins using strong electric fields |
| 14:30 | Michael Thompson | Using temperature-jump and X-ray scattering to study dynamic enzymes  |
| 15:00 | Jacques-Philippe Colletier | Insights into the in vivo crystallization pathway and mechanism of toxicity of Cyt1A, a naturally-crystalline mosquitocidal & oncocidal toxin |
| 15:30 | *Coffee break*  |
|  **Chair: Radoslav Enchev** |
| 16:00 | Tim Grüne | An EIGER X 1M detector turns a Transmission Electron Microscope into an Electron Diffractometer for Chemistry and Biology |
| 16:30 | Emma Beale | Electron diffraction from three-dimensional protein crystals |
| 17:00 | Daniel Asarnow | Towards time-resolved cryo-EM: single-particle dynamics and synchronization |
| 17:30 | Thomas Barends | SFX data and structure quality: standards for nonstandard experiments |
| 18:00 | *Tour of the castle* |
| 18:45 | *Conference Dinner* |
|  |  |  **Chair: Sebastian Günther** |
| 20:30 | Discussion round | Sample deliveryTeaser: Takashi Tomizaki |
| **Saturday, February 2nd, 2019** |
| **Chair: Ilme Schlichting** |
|  9:00 | Richard Neutze | Time-resolved SFX studies of ultrafast motions in photosynthetic reaction centres |
|  9:30 | Yulia Pushkar | Biological spectroscopy and Imaging at free electron laser |
| 10:00 | Raimund Fromme | Towards Molecular Movies of Biomolecules 'in Action' with X-Ray Free Electron Lasers |
| 10:30 | Jan Kern | Structural and spectroscopic studies of intermediates in the water oxidizing reaction of photosystem II using XFELs |
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| 11:15 End of meeting, lunch packages if desired |