

7th Ringberg Workshop on Structural Biology (with XFELs)

<u>Wednesday, February 14th, 2024</u>		
> 15:00	<i>Coffee, cake, Garden room</i>	
Chair: Richard Bean		
16:20	Ilme Schlichting	Welcome
16:30	John Beale	Fun and games with fixed-targets at SwissFEL's Cristallina experimental station
17:00	Sebastian Günther	Room temperature X-ray fragment screening with serial crystallography
17:30	Frédéric Poitevin	The data reduction challenge for LCLS-II imaging experiments - current and future strategies for end-to-end online analysis
18:00	Lois Pollack	Watching RNA fold: a new approach to time-resolved solution scattering at XFELs
18:30	<i>Dinner</i>	
<u>Thursday, February 15th, 2024</u>		
Chair: Jaehyun Park		
9:00	Rick Kirian	Nanojet Fluctuation X-Ray Scattering
9:30	Kartik Ayyer	Single particle X-ray imaging: The road to sub-nm resolution
10:00	Helmut Grubmüller	De novo structural ensemble determination from single-molecule X-ray scattering: A Bayesian approach
10:30	<i>Coffee break</i>	
Chair: Eriko Nango		
11:00	Philip Johnson	Ultrafast optical excitation of photoactive proteins
11:30	Thomas Barends	Influence of Illumination Conditions on Myoglobin in TR-SFX-experiments
12:00	John Kennis	Facile two-photon absorption and photoionization of a bacterial phytochrome: implications for time-resolved X-ray crystallography and spectroscopy

12:30	<i>Group photo (depending on weather)</i>	
12:40	<i>Lunch</i>	
Chair: Jennifer Wierman		
14:00	Emina Stojković	Capturing bacterial phytochrome in action
14:30	TJ Lane	Time-resolved crystallography captures light-driven DNA repair
15:00	Dominique Bourgeois	Conformational heterogeneity in phototransformable fluorescent proteins viewed by NMR, optical spectroscopy and crystallography.
15:30	<i>Coffee break</i>	
Chair: Nanna List		
16:00	Helen Ginn	Teasing out the secrets of subtle protein dynamics
16:30	James Holton	Untangling models for less noisy maps
17:00	Derek Mendez	Deep residual networks for crystallography trained on synthetic data
17:30	Frank Noé	What can Generative AI do for structural biology?
18:00	<i>Tour of the castle</i>	
18:45	<i>Dinner</i>	
Chair: Miquel Huix-Rotllant		
20:00	Mark Wilson	Open Questions about Quantum Mechanical Charge Transfer in Proteins
	Alice Walker	Large-scale quantum mechanics simulations of extended electronic effects in ICH Ralstonia
<u>Friday, February 16th, 2024</u>		
Chair: Karin Kühnel		
9:00	Radoslav Enchev	Time-resolved cryo-EM: methods development and applications
9:30	Ulrich Lorenz	Microsecond time-resolved cryo-EM
10:00	Holger Stark	Breaking the ice: CryoEM's quest for better resolution and quality

10:30	<i>Coffee break</i>	
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Chair: Adi Natan		
11:00	Henry Chapman	Opportunities for imaging at high temporal and spatial resolution
11:30	Andrew Aquila	X-ray Quantum Imaging
12:00	Doeke Hekstra	Mapping the reaction coordinates of proteins by X-ray crystallography
12:30	<i>Lunch</i>	
14:00	<i>Discussion rounds / Hiking</i>	
18:30	<i>Conference Dinner</i>	

Chair: Marco Cammarata		
20:30	Philip Anfinrud	What can we learn from temperature-dependent, time-resolved SAXS/WAXS studies of biomolecules using synchrotron radiation?

<u>Saturday, February 17th, 2024</u>		
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Chair: Allen Orville		
9:00	Clare Megarity	Electrical Control of Enzyme Cascades under Crowded Nanoconfinement
9:30	Stephen Carr	Finely poised: How electrochemical control can reveal intermediates of Redox catalysis
10:00	Alec Follmer	X-ray investigations of Regulatory Dynamics in P450s
10:30	Patrick Rabe	Monitoring penicillin ring formation through a crystallographic and spectroscopic lens
11:15	End of meeting, lunch packages if desired	