

Frontiers of Multiscale Structural Biology: Order-disorder transitions and dynamic membrane interactions

With the support of Biotechnology and Biological Sciences Research Council (BBSRC), UK, and Osaka University, Japan

Date: 9th May, 2018

Venue: Hall of ICHO-Kaikan

9:00	9:10	Opening remarks	Atsushi Nakagawa	IPR, Japan
Session 1 Title (Chair: Genji Kurisu)				
9:10	9:40	Understanding negative feedback mechanism of ErbB signaling using mathematical modeling of cell population dynamics	Shigeyuki Magi	Osaka Univ., Japan
9:40	10:10	Dynamic protein structure: from protein disorder to membrane pores	Frank Sobott	Univ. Leeds, UK
10:10	10:40	Relaxation optimized SAIL-NMR method for studying structures and dynamics of protein complexes	Yohei Miyanoiri	Osaka Univ., Japan
10:40	11:00	Coffee Break		
Session 2 Title (Chair: Alex Breeze)				
11:00	11:30	Journey to the centre of the cell: Cryo-EM observation of a stepping protein on its track.	Hiroshi Imai	Osaka Univ., Japan
11:30	12:00	Understanding and Manipulating Protein-Protein Interactions Using Synthetic Molecules	Andrew Wilson	Univ. Leeds, UK
12:00	12:30	High-speed AFM imaging of bio-molecules in dynamic action	Noriyuki Kodera	Kanazawa Univ., Japan
12:30	13:30	Lunch / Poster viewing		
13:30	14:20	Poster Session 1		
Session 3 Title (Chair: Haruki Nakamura)				
14:20	14:30	Photo		
14:30	15:00	Simple electrostatic models for complex biological interactions	Gautam Basu	Bose Inst., India
15:00	15:30	A feature of free-energy landscape of intrinsic disordered proteins: computational study	Junichi Higo	Univ. Hyogo, Japan
15:30	15:50	Understanding the interactions of membrane proteins with lipids using multiscale molecular simulations	Antreas Kalli	Univ. Leeds, UK
15:50	16:20	Coffee Break		
Session 4 Title (Chair: David Westhead)				
16:20	16:50	Cryo-EM at Leeds- approaches and challenges for high resolution data acquisition	Rebecca Thompson	Univ. Leeds, UK
16:50	17:20	Protein Quality Control Nanomachines in Action Revealed by Near-atomic Resolution Cryo-EM	Yao Cong	Natl. Cent. Protein Sci. Shanghai. China
17:20	17:50	Creating Standards for Building, Validating and Archiving Large Macromolecular Complexes	Catherine Lawson	Rutgers Univ., USA
17:50	18:00	Closing remarks	Yuji Goto	IPR, Japan
18:30	20:30	Dinner (Restaurant Minerva)		

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Day 2: Bilateral Symposium between Astbury Center of Leeds and IPR, Osaka Univ.

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Date: 10th May, 2018

Venue: Lecture Hall of IPR

Interaction Session 1 (Chair: Asahina & Booth)					
9:20	9:30	0:10	Opening remarks	David Westhead	Univ. Leeds, UK
9:30	9:50	0:20	Construction of protein integrated nano-chip using DNA origami	Hisashi Tadakuma	IPR, Japan
9:50	10:10	0:20	Regulation of the fate of meiotic crossover intermediates on centromere-proximal region by multifunctional protein SLX4	Mika Higashide	IPR, Japan
10:10	10:30	0:20	Targeting Shank1 PDZ – Hot-Spot Prediction, Validation and Inhibitor Design	Zsofia Hegedus	Univ. Leeds, UK
10:30	10:45	0:15	Break		
Interaction Session 2 (Chair: Higashide & Burgess)					
10:45	11:05	0:20	Analysis and semi-synthesis of membrane protein	Hiroko Tamagaki	IPR/Institute for NanoScience Design, Japan
11:05	11:25	0:20	Generating compartmentalization in phospholipid vesicles using the ESCRT-III proteins – the influence of membrane tension	Andrew Booth	Univ. Leeds, UK
11:25	11:45	0:20	X-ray structure of an asymmetrical trimeric ferredoxin-photosystem I complex	Hideaki Tanaka	IPR, Japan
11:45	12:00	0:15	Break		
Interaction Session 2 (Chair: Tadakuma & Hegedus)					
12:00	12:20	0:20	Structure and rotational symmetry of the rotor of the bacterial flagellar motor revealed by electron cryomicroscopy	Akihiro Kawamoto	IPR, Japan
12:20	12:40	0:20	Molecular basis for regulation mechanisms of function of lipid transfer protein revealed by solution NMR spectroscopy	Toshihiko Sugiki	IPR, Japan
12:40	13:00	0:20	Applications of single domain antibodies	Selena Burgess	Univ. Leeds, UK
13:00	14:00	1:00	Lunch		
14:00	15:30	1:30	Poster Session II (13 from Leeds, 14 from IPR) ※Closed for Leeds and IPR		
Interaction Session 3 (Chair: Tadakuma & Burgess)					
15:30	17:50	2:20	Closed session for Leeds and IPR		
17:50	18:00	0:10	Closing remarks	Genji Kurisu	IPR, Japan