

Wednesday 9th July

11:45		Check in, registration and sandwiches		
		Stream 1	Stream 2	
12:45	13:45	Plenary	The respiratory enzyme chain: a triumph for biophysics Professor Sir John Walker FRS (MRC, Cambridge)	
13:45	15:15	Session 1	PROBE MICROSCOPY/AFM <i>Chairs: Stephanie Allen, Dr Phil Williams</i>	
13:45	14:15		MEMBRANE PROTEINS / MAGNETIC RESONANCE <i>Chairs: Antony Watts, Ann Dixon</i>	
			Vertical Probe Force Microscopy: High-Speed Non-Contact To 4π Holo Tweezer AFM Mervyn Miles (University of Bristol)	Activation and Inactivation of a Potassium Channel Ann McDermott (Columbia University)
14:15	14:35		Nanomechanics and interfaces of biological systems with dynamic AFM: from native membranes to live cells. Sonia Contera (University of Oxford)	Daniel Nietlispach (University of Cambridge)
14:35	14:55		Unravelling mechano-allostery using atomic force microscopy David Brockwell (University of Leeds)	Interaction of the allosteric ligand chlorin e6 with the G protein coupled receptor rhodopsin Judith Klein-Seetharaman (University of Warwick)
14:55	15:05		High Resolution Imaging of Membrane Protein Structure using Scanning Probe Microscopy Khizar Sheikh (University of Leeds)	Investigating how lipids modulate G protein coupled receptor (GPCR) function. Juan H. Bolivar (University of Oxford)
15:05	15:15		Nanomechanical Investigation of Soft Biological Cell Adhesion using Atomic Force Microscopy Lefteris Siamantouras (University of Warwick)	Connecting cell signalling, alternative splicing and apoptosis: a structural approach Cyril Dominguez (University of Leicester)
15:15	15:45	Coffee & posters		

15:45	17:15	Session 2	MODELLING AND THEORY <i>Chairs: Mark Rodger, Jonathan Essex</i>	FIBROUS STRUCTURES <i>Chairs: Louise Serpell, Adam Squires</i>
15:45	16:15		The sequence-dependence of DNA structure and flexibility: lessons from the ABC3 dataset. Charles Laughton (University of Nottingham)	Multicomponent Dipeptide Hydrogels Dave Adams (University of Liverpool)
16:15	16:35		Can we a priori predict the conductances of potassium ion channels? Phil Fowler (University of Oxford)	The structure of cross- β tapes and tubes formed by a fragment of alpha-synuclein Kyle Morris (University of Warwick)
16:35	16:55		Fluctuating Finite Element Analysis: Continuum modelling of Biomacromolecules. Robin Richardson (University of Leeds)	Protein-lego: The self-assembly of linear repeat proteins in fibrous nanostructures. Ewan Main (Queen Mary College, London)
16:55	17:05		Modelling chemotactic motion of cells in biological tissues Bakhtier Vasiev (University of Liverpool)	Cystatin C and Alzheimer's Disease Abi Williams (University of Sheffield)
17:05	17:15		Mutual Modulation between Embedded Receptor Clustering and Ligand Binding in Lipid Membranes Salvador Tomas (ISMB and Birbeck, University of London)	A de novo designed self assembling peptide nanotube system Natasha Burgess (University of Bristol)
17:15	18:15	Poster Flash Presentations		
18:15	18:45	Wine		
19:15	20:15	Dinner		

Thursday 10th July

09:00	10:00	Microbial Rhodopsins: Molecular Mechanism and Optogenetics Professor Ernst Bamberg, (Max Planck Institute of Biophysics, Frankfurt)		
10:15	11:45	Session 3	SINGLE MOLECULE IMAGING <i>Chairs: Mark Leake, Rob Cross</i>	SCATTERING / HYDRODYNAMICS <i>Chairs: David Scott, Olwyn Byron</i>
10:15	10:45		New single-molecule imaging methods for studying DNA processing Achillefs Kapanidis (University of Oxford)	A SAXS Perspective of Large Amplitude Motions in Proteins Pau Bernado (CBS, Montpellier)
10:45	11:05		Interferometric scattering microscopy: From high-speed single particle tracking to label-free detection, imaging and tracking of single proteins Philipp Kukura (University of Oxford)	The solution structures of MASP (mannose-binding lectin-associated serine protease) and MBL (mannose-binding lectin) provides insight on the activation of the lectin pathway of complement Ruodan Nan (University College, London)
11:05	11:25		Single-molecule visualization of transcription initiation by human mitochondrial RNA polymerase Andrey Revyarkin (University of Leicester)	Utilising neutrons for the study of a membrane protein complex Tim Knowles (University of Birmingham)
11:25	11:35		Single molecule TIRFM reveals the dynamic behaviour of G-protein coupled receptors and potassium ion channels in live cultured cells and tissue explants Gregory Mashanov (National Institute for Medical Research)	Oral 1
11:35	11:45		Single-molecule reconstruction of nucleic acid secondary structure by atomic force microscopy	Oral 2

			Alice Pyne (UCL)	
11:45	12:15	Coffee & Posters		
12:15	13:45	Session 4	MODELLING AND THEORY <i>Chairs: Mark Rodger, Jonathan Essex</i>	EM / TOMOGRAPHY <i>Chairs: Elena Orlova and Robert Ford</i>
12:15	12:45		Biomolecular simulation: interactions, dynamics and spectroscopy Jonathan Hirst (University of Nottingham)	Why direct electron detection makes such a difference in electron cryo-microscopy. Greg McMullan (MRC LMB Cambridge)
12:45	13:05		Multicell theory to calculate the entropy of biomolecular hydration John Higham (University of Manchester)	New achievements in techniques - Achievements in structural EM Elena Orlova (Birkbeck College, London)
13:05	13:25		Multi-scale simulations of bacterial membranes: successes and outlook for the future Syma Khalid (University of Southampton)	Uncoating of clathrin-coated vesicles is mediated through the action of the molecular chaperone, Hsc70, together with its co-factor, auxilin. Corinne Smith (University of Warwick)
13:25	13:35		Functional dynamics of hexameric helicases probed by hydrogen exchange and simulation Gael Radou (University of Leeds)	Structure of Mitochondrial Ribosome, Large Subunit Alexey Amunts (MRC Laboratory of Molecular Biology)
13:35	13:45		Global Low Frequency Protein Motions in the Allosteric Regulation of CRP/FNR family transcription factors Tom McLeish (Durham University)	
13:45	14:45	Lunch & British Biophysical Society AGM		
14:45	15:45	Structure and molecular biology of secretion nanomachines in Gram-negative bacterial pathogens Plenary: Professor Gabriel Waksman FRS (Birkbeck College, London)		
15:45	17:15	Session 5	SINGLE MOLECULE IMAGING <i>Chairs: Mark Leake, Rob Cross</i>	FIBROUS STRUCTURES <i>Chairs: Louise Serpell, Adam Squires</i>
15:45	16:15		Membrane mechanisms as revealed by single-molecule tracking in living cells Akihiro Kusumi (Kyoto University)	Protein-based Fibres and Tubes by Design Dek Woolfson (University of Bristol)

16:15	16:35		Investigating the Molecular Mechanism of Adaptive Immunity in T-cell Triggering with Single-molecule Imaging Steven Lee (University of Cambridge)	The mechanism of amyloid fibril fragmentation and the stability of amyloid fibrils toward breakage Wei Feng Xue (University of Kent)
16:35	16:55		Molecular membrane dynamics studied by super-resolution STED microscopy Christian Eggeling (University of Oxford)	Structural analysis of fibrillar biomaterials using polarised Raman and infrared spectroscopy on aligned samples Adam Squires (University of Reading)
16:55	17:05		Dynamics of the bound head of myosin 5 during processive motion along actin revealed by interferometric scattering microscopy Joanna Andrecka (University of Oxford)	James Carr-Smith (University of Birmingham)
17:05	17:15		One (patchy) ring to rule them all: investigating the structure and function of the bacterial cell division machinery using 3D super-resolution microscopy Seamus Holden (EPFL)	
17:15	17:45		Coffee & Posters	
17:45	19:15	Session 6	SELF ASSEMBLY <i>Chair: Jennifer Potts & Dek Woolfson</i>	SCATTERING / HYDRODYNAMICS <i>Chairs: David Scott, Olwyn Byron</i>
17:45	18:15		Assembly of membrane pore-forming complexes Helen Saibil (Birkbeck College, London)	Optimizing utilizable information from small angle solution scattering of biological macromolecules Emre Brookes (UTHSCSA)
18:15	18:35		SasG forms a single chain protein nanorod of tunable length Jennifer Potts (University of York)	Formation of bacterial translocon: a view from the end of scattered beam Alexandra Solovyova (University of Newcastle)
18:35	18:55		De novo construction of virus-like particles Bruce Turnbull (University of Leeds)	Using phospholipid nanodiscs as a platform for Small-angle scattering based structural studies of membrane proteins Lise Arleth (University of Copenhagen)
18:55	19:05		Fatty acid membrane assembly on coacervate micro-droplets as a step towards a hybrid	Oral 1

			protocell model Dora Tang (University of Bristol)	
19:05	19:15		Sugars self-assembling like a proteins Steve Harding (University of Nottingham)	Oral 2
19:30	20:15	Conference Gala Dinner		

Friday 11th July

09:15	10:45	Session 7	SELF ASSEMBLY <i>Chairs: Jennifer Potts & Dek Woolfson</i>	EM / TOMOGRAPHY <i>Chairs: Elena Orlova and Ford</i>
09:15	09:45		The Design of Highly Symmetric Self-Assembling Protein Materials Todd Yeates (UCLA)	Investigating the mechanisms of the proteasome by cryo-EM Paula da Fonseca (MRC-LMB, Cambridge)
09:45	10:05		Structural and evolutionary versatility in protein complexes with uneven stoichiometry Joseph Marsh (EMBL, EBI)	Cryo-EM study of a polysaccharide chain length-determining membrane protein, Wzz. Robert Ford (University of Manchester)
10:05	10:25		Guiding the folding pathway of DNA origami. Jon Bath (University of Oxford)	Cryo-EM analysis of the PiIF ATP-ase components of the Thermus Type IV pilus assembly system Richard Collins (University of Manchester)
10:25	10:35			Structure and Mechanism of Action of BRCA2 Breast Cancer Tumour Suppressor Taha Shahid (Imperial College London)
10:35	10:45			
10:45	11:15		Coffee & Posters	
11:15	12:15	British Biophysical Society, 2014 Young Investigator's Medal and Lecture Tuomas Knowles (Cambridge)		
12:45		Electron Cryomicroscopy: From Molecules to Cells Professor Wolfgang Baumeister (Max Planck Institute of Biochemistry, Martinsried)		