Poster Presentations
Tuesday 25 March, Poster Session 2, Drinks Reception and Exhibition

Poster No.	First Name	Last Name	Organisation	Paper Title	Topic
90	Dorothy	Aboagye-Mensah	University College London	Unravelling the effect of divalent salt on the structure of negatively supercoiled DNA	Physics of Disease
2	Jaime	Agudo-canalejo	UCL	Biomolecular condensates mediate bending and scission of endosome membranes	Biomolecular assemblies and condensates
57	Hadi	Al-Sagur	University of Hull	Complementary insights into Silicosis gained with revisit of Cytotoxic Effects of Silica	Emerging Areas in the Physics of Life
3	Henry	Alston	Laboratoire de Physique de l'Ecole Normale Supérieure (LPENS)	Making fast decisions with phase separation	Biomolecular assemblies and condensates
30	Henry	Andralojc	University of Bristol	Dynamics of Wound Closure in Active Nematic Epithelia	Cell architecture and forces
98	Shohreh	Askari	Aalto University	Soft matter physics of immune cell aggregates	Tissue growth, mechanics and mechanosensing
4	Roi	Asor	The University of Oxford	Cooperativity and induced oligomerization control the interaction of SARS-CoV-2 with its cellular receptor and patient-derived antibodies	Biomolecular assemblies and condensates
58	Prasoon	Awasthi	University of Southern Denmark	Tuning the collective cell behavior by surface functionalization	Emerging Areas in the Physics of Life
31	Filip	Ayazi	University of Cambridge	Automated High-Throughput Flickering Spectroscopy for Measurements of Red Blood Cell Membrane Properties	Cell architecture and forces
32	Innes	Bakkali	University of St Andrews	A Platform for Studying Cellular Responses to Mechanical Cues	Cell architecture and forces
33	Matthew	Barker		The Biophysics of the Main Synthase During Gram-Positive Bacterial Cell Division Using AFM	Cell architecture and forces
34	Charlotte	Benney	University of Bristol	Stress patterns in a model of epithelial cell sheets.	Cell architecture and forces
5	Stefano	Bo	King's College London	Single-molecule trajectories of reactants in chemically active condensates	Biomolecular assemblies and condensates
99	Douglas	Brown	Oxford University	Friction controls spatial patterning in active fluids	Tissue growth, mechanics and mechanosensing
100	Luisa	Bruno	Institut Cochin, Cnrs	Lymph node mechanics and its impact on immune cells	Tissue growth, mechanics and mechanosensing
6	Antonio	Calabrese	University of Leeds	Uncovering protein conformational dynamics within two-component viral biomolecular condensates	Biomolecular assemblies and condensates
59	Zoya	Cassidy	University of Cambridge	Functionalising DNA Nanostructures for Lysosomal Escape and Tankyrase Inhibition	Emerging Areas in the Physics of Life
7	Rosa	Catania	University of Leeds	Optimising hybrid vesicles for membrane protein reconstitution: applications and insights	Biomolecular assemblies and condensates
101	KVS	Chaithanya		Homeostasis in confined environments	Tissue growth, mechanics and mechanosensing
76	Jinju	Chen	Loughborough University	The Physics of Bacterial Survival: A Mechanical Mystery	Microbes across length scales
8	Nga Man	Cheng	University of Nottingham	Impact of mRNA structures on the interaction with lipids and nanoparticle formulation properties	Biomolecular assemblies and condensates

102	Michael	Chiang	University of Edinburgh	Intercellular Friction and Motility Drive Orientational Order in Cell Monolayers	Tissue growth, mechanics and mechanosensing
35	Lee-Ya	Chu	The Francis Crick Institute	Microtubule Tip-Generated Forces Drive Bipolar Spindle Organization and Chromosome Segregation	Cell architecture and forces
77	Cameron	Colclough	University of Sheffield	Uncovering the Fungal Cell Wall at the Nanoscale	Microbes across length scales
60	Fabian	Coupette		Optimising fixational eye movements	Emerging Areas in the Physics of Life
61	Jiahe	Cui	University of Oxford	A multi-functional AOSLO for high-resolution imaging and stimulation in the living human retina	Emerging Areas in the Physics of Life
103	Isabella	Davis	University of Sheffield	How does chemoresistance emerge as a product of matrix stiffness in pancreatic cancer?	Tissue growth, mechanics and mechanosensing
36	Oleg	Dobrokhotov	Francis Crick Institute	Structural integration of integrins and cadherins at cell-cell junction sites	Cell architecture and forces
37	Franziska	Dorn	University of Rostock	The influence of electrostimulation and conductive surfaces on the membrane fluctuation of osteoblast-like cells with a scanning ion conductance microscope	Cell architecture and forces
78	Yulin	Du	University of Cambridge	Spatio-Temporal Dynamics of Gene Expression in Biofilm under Varying Environments	Microbes across length scales
38	Jocelyn	Etienne	Univ Grenoble Alpes–cnrs	Surfing one's own wave: Initiation of motility on a compliant substrate	Cell architecture and forces
9	Catherine	Fan	University of Cambridge	Protein Capture using Synthetic Co-Transcriptionally Folded RNA Condensates in Mammalian cells	Biomolecular assemblies and condensates
104	Jonathan	Fouchard	Sorbonne Université	Active and passive response of soft fibrous tissue in compression	Tissue growth, mechanics and mechanosensing
10	Lewis	Frame	University of York	Biophysics of liquid-phase bacterial Protein-RNA droplets	Biomolecular assemblies and condensates
62	Polina	Gaindrik	Albert Ludwig University of Freiburg	Multi-Source Data Fusion and Dimensionality Reduction Predictive Microbial Modeling	Emerging Areas in the Physics of Life
11	Subhadip	Ghosh	University College London	Molecular mechanisms of condensate membrane interaction and mutual reshaping	Biomolecular assemblies and condensates
39	Rini	Ghosh	University of Cambridge	Exploring Dynamic Cellular Response of Erythrocytes to Rapid Deformations	Cell architecture and forces
122	Gabriela	Gomes	University of Strathclyde	The effects of individual nonheritable variation on fitness estimation and coexistence	Evolution ecology and epidemiology
91	Yaniv	Grosskopf	Weizmann Institute of Science	PTSD as a Bias Toward Perceiving a Dangerous World: An Evolutionary and Mathematical Perspective	Physics of Disease
105	Valeriia	Grudtsyna	Niels Bohr Institute, University of Copenhagen	Local Density as a Determinant of YAP Mechanotransduction in Multicellular Assemblies	Tissue growth, mechanics and mechanosensing
87	Jeremy	Guntoro		The Interplay of Heterogeneity and Product Detachment in Templated Polymer Copying	Natural and synthetic molecular machines
106	Himadri Shikhar	Gupta	Queen Mary, University of London	Uncovering the coordinated nanoscale fibrillar mechanical response in the bone-cartilage unit during physiological loading	Tissue growth, mechanics and mechanosensing
12	Ehud	Haimov	Imperial College London	Homology recognition through intrinsic interactions - kinetics, equilibrium and stability properties	Biomolecular assemblies and condensates
13	Ellie	Hansen	University of York	The roles of Ribosomal Proteins L2 and L15 in regulating Bacterial Aggresomes	Biomolecular assemblies and condensates

79	Richard	Henshaw	ETH Zurich	How small is too small: a spatio-temporal spectroscopic quantification of single-cell exchange between marine microbes	Microbes across length scales
63	Alexander	Houston	University of Glasgow	Seeing through the noise: how fixational eye movements can aid the acquisition of visual information	Emerging Areas in the Physics of Life
14	Matt	Hughes	Univeristy of Leeds	Capturing Dynamic Assembly of Protein Network Formation	Biomolecular assemblies and condensates
80	Rita	Invernizzi	Humanitas University	Spatiotemporal Dynamics of Bacterial Growth in Non-Well-Mixed Environments	Microbes across length scales
54	Panayiotis	Ioannou	University of Cambridge	HyperGenie: A new method for predicting enzymatic gene essentiality using Hypergraph neural networks and Genome-scale metabolic models	Cell metabolism and growth
15	Pranay	Jaiswal	University Ausgburg	Theory of spatial aggregation and shell formation	Biomolecular assemblies and condensates
74	Aparna	Kaaraal Mohan	University of Cambridge	Single-cell analysis of the effects of cellular dormancy on the efficacy of bacteriophages	Imaging and single molecule biology
40	Yohalie	Kalukula		The actin cortex acts as a mechanical memory of morphology in confined migrating cells	Cell architecture and forces
88	Thomas	Kolbe	Ulb- Universite Libre De Bruxelles	Influenza A Virion Dynamics at the Cell Surface	Natural and synthetic molecular machines
16	Gaurav	Kumar	University of York	The stickers and spacers of Rubisco condensation in CO2-fixing organelles	Biomolecular assemblies and condensates
64	Oliver	Kurilov	University of Cambridge	Collective molecular dynamics behind biofilm dynamics: using anisotropic to model mixed bacterial interfaces	Emerging Areas in the Physics of Life
17	Alvaro	Lanza	King's College London	Measuring Entropy from Coarse-grained Single-molecule Statistics in Langevin Systems	Biomolecular assemblies and condensates
107	Francesca Cecilia	Lauta	Humanitas University	Macrophage behavior in 3D biomaterial microenvironments	Tissue growth, mechanics and mechanosensing
108	Rachel	Lawson	University of Sheffield	Investigating the mechanical and adhesive properties of mitosis within a tissue, and the role of oncogenic Ras in regulating these	Tissue growth, mechanics and mechanosensing
109	Mathieu	Le Verge-serandour	Technical University of Munich	Dynamical Network Remodeling of Slime Mold	Tissue growth, mechanics and mechanosensing
110	Jiayu	Li	Queen Mary University of London	A computational model for deformation of cancer cells in microchannels	Tissue growth, mechanics and mechanosensing
111	Sulaimaan	Lim	Imperial College London, Francis Crick Institute	Heartbeat driven self organisation of the Endocardium during Zebrafish heart morphogenesis	Tissue growth, mechanics and mechanosensing
41	Calum	Lloyd	University of Sheffield	Exploring Bacterial Resistance: Mechanisms of Reduced Susceptibility in Staphylococcus aureus During Stationary Phase	Cell architecture and forces
112	Ivan	Lobaskin	University of Cambridge	A statistical theory of human lung branching morphogenesis from organ-scale imaging	Tissue growth, mechanics and mechanosensing
42	Euan	Mackay	University of Dundee	Modelling Actomyosin Oscillations in Morphogenetic Dynamics Using an Active Elastomer Framework	Cell architecture and forces
43	Bhagyashri	Mahajan	Ncbs, Bangalore, India And Cmcb, University of Warwick	Exploring the role of class I myosins in plasma membrane organization using an in vitro reconstitution approach	Cell architecture and forces
44	Bhagyashri	Mahajan	Ncbs, Bangalore, India And Cmcb, University of Warwick	The role of class I myosins in plasma membrane organization	Cell architecture and forces
18	Najet	Mahmoudi	Rutherford Appleton Laboratory	Structure and stability of self-assembled multidomain peptide fibres	Biomolecular assemblies and condensates
65	Francesco	Marcolli	University of Genova	Evidence of Stochastic Resonance in Multi-Sensor Odor Source Localisation	Emerging Areas in the Physics of Life

66	Tom	Mason	Loughborough University	Active particles in nematic fluids	Emerging Areas in the Physics of Life
113	Khushboo	Matwani	University of Cambridge	Mechanical force measurements of tandem-repeat proteins	Tissue growth, mechanics and mechanosensing
45	Waleed Ahmad	Mirza	European Molecular Biology Laboratory	Active self-organization of focal adhesions driving cell shape changes	Cell architecture and forces
46	Benjamin	Mitchell	Univeristy of Strathclyde	Simulation of Monoglyceride-Induced Bilayer Deformation in Model Membrane Systems	Cell architecture and forces
114	Elise	Muller	Cnrs	Dual role of the FERONIA cell wall sensor in the regulation of plant mechanical properties and growth	Tissue growth, mechanics and mechanosensing
67	Amritpal Singh	Nafria	Lovely Professional University	Astrobiological Adaptation: Biophysical Dynamics of Life Migration in a Evolving Solar System.	Emerging Areas in the Physics of Life
89	Brian	Ng	University of Cambridge	Co-transcriptional assembly and dissolution of computational RNA condensates	Natural and synthetic molecular machines
68	Katharine	Ninham	University of Cambridge	Probing hydrodynamics of early development in C. elegans using diamond quantum sensors	Emerging Areas in the Physics of Life
47	Ryota	Orii		Structural response of microtubule and actin cytoskeletons to direct intracellular loads	Cell architecture and forces
19	Miguel	Paez Perez		Benchmarking viscosity-sensitive optical probes to quantify the structural architecture of lipid interfaces	Biomolecular assemblies and condensates
48	Eleni	Papafilippou	University of Cambridge	Characterising the rupture, fatigue and recovery of intercellular junctions using a stochastic bond model	Cell architecture and forces
49	Laia	Pasquina-Lemonche	University of Sheffield	Quantitative imaging of bacterial cell wall with AFM : function of PBP1a synthase	Cell architecture and forces
20	Alex	Payne-Dwyer	University of York	The single-molecule biophysics of turbocharged, carbon-fixing condensates	Biomolecular assemblies and condensates
81	Joe	Pollacco	University of Oxford	RecA filament kinetics explain heterogenous SOS response induction and cell death	Microbes across length scales
82	Rebecca	Poon		Multiscale dynamics in filamentous cyanobacteria: from filament to aggregate motility	Microbes across length scales
1	Anna	Radjenovic	University of Bristol	Electroreceptive Sensitivity Analysis of Mechanosensory Hair Arrays	Bioelectricity across scales
93	Callum	Rafferty	The University of Edinburgh	Identifying biophysical mechanisms in health-to-disease (MASLD-MASH) transition of human HepaRG cells	Physics of Disease
21	Saminathan	Ramakrishnan	University of Edinburgh	Investigating IHF-DNA Interactions at Biofilm pH Using Single-Molecule Techniques	Biomolecular assemblies and condensates
75	Ankita	Ray	University of Sheffield	The curious case of alternative mode of cell division in Staphylococcus aureus	Imaging and single molecule biology
115	Avishuman	Ray	University of Southern California	Mechanics of force sensing in Piezo ion channels	Tissue growth, mechanics and mechanosensing
55	James	Rayner	Queen Mary University of London	Modelling the role of the SOS response on bacterial filamentation and survival under antibiotic stress	Cell metabolism and growth
83	Steven	Redford	University College London	Investigating the physical underpinnings of collective function in synthetic microbial communities	Microbes across length scales

22	David	Regan	Cardiff University	Supported lipid bilayer tubular network dynamics measured by quantitative differential interference contrast microscopy	Biomolecular assemblies and condensates
116	Leon	Rembotte	IOGS	Deformation cytometry for high-throughput rheological analysis of 3D multicellular systems	Tissue growth, mechanics and mechanosensing
84	Abigail	Roberts	University of Sheffield	AFM to probe structural changes involved in Clostridium sporogenes germination	Microbes across length scales
23	James Aaron	Robins	University of Nottingham	Molecular Dynamics Simulations to Investigate Interactions Between Polymers and RNA in Polymer Nanoparticles	Biomolecular assemblies and condensates
117	Jan	Rozman	University of Oxford	Dissipation, Flows, and Sorting in an Active Nematic Vertex Model	Tissue growth, mechanics and mechanosensing
69	Riddhima	Sadhu	Birla Institute of Technology,mesra	Optical Coherence Tomography:An Emerging Modality in Deep Tissue Imaging	Emerging Areas in the Physics of Life
24	Ignacio	Sanchez Burgos	University of Cambridge	Charged peptides enriched in aromatic residues can decelerate condensate ageing	Biomolecular assemblies and condensates
94	Jenna	Schafers	University of Edinburgh	Turning up the heat; mechanistic insights from thermal inactivation of influenza A virus	Physics of Disease
118	Aakanksha	Shetty		Fluorescence spectroscopy of cell membranes under dynamic mechanical perturbation: investigating modulations to cell signalling	Tissue growth, mechanics and mechanosensing
95	Zhiyuan	Song	University of Cambridge	AI-Driven Temporal Feature Analysis for Forecasting of Alzheimer's Disease Progression	Physics of Disease
25	Alisdair	Stevenson	Eth Zürich	Synchronisation of chemical reactions in a population of condensates	Biomolecular assemblies and condensates
50	Jess	Stone		Exploring the Impact of Tumour Mechanics on Immunological Synapse Formation	Cell architecture and forces
70	Yuening	Su	Sidney Sussex College	DNA nanostructures targeting activated platelets	Emerging Areas in the Physics of Life
71	Zachary	Sun	Yale University	Feedback between F-actin organization and active stress govern criticality and energy localization in the cell cytoskeleton	Emerging Areas in the Physics of Life
26	Bidisha	Tah Roy	university of Leeds	Crowding and Its Role in Calcium Carbonate Crystallization Processes	Biomolecular assemblies and condensates
27	Andres R.	Tejedor	University of Cambridge	Optimized residue-resolution coarse-grained model for electrostatic-driven biomolecular condensates	Biomolecular assemblies and condensates
28	Damien	Thompson	University of Limerick	Modelling-guided engineering and rerouting of biomolecular assemblies	Biomolecular assemblies and condensates
56	Keshav	Todi	University of Edinburgh	Is the energetics of E.coli influenced by the nature of stress that stops it from growing?	Cell metabolism and growth
51	Ayama	Tokuyasu	Yokohama City University	Force propagation inside a living cell	Cell architecture and forces
85	William	Trewby	University College London	Direct, nanoscale mapping of molecular organisation and biogenesis in the Escherichia coli outer membrane	Microbes across length scales
119	Rahil	Valani	University of Oxford	Intermittent migration of a cell cluster in a confluent tissue	Tissue growth, mechanics and mechanosensing
96	Mo	Vali	University of Cambridge	Characterising the microbial composition of follicular fluid using 16srRNA sequencing and its importance for IVF outcomes	Physics of Disease
72	Mengxin	Wang	University of Oxford	From physics to vision: using ISETBio to predict visual performance from physical information	Emerging Areas in the Physics of Life

73	Celeste	Watson		Developing a modular platform of DNA-protein nanostructures for targeted protein degradation	Emerging Areas in the Physics of Life
52	Andreas	Weber	University College London	Molecular determinants of mechanics and shape changes during cell division	Cell architecture and forces
97	Peter	Weightman	University of Liverpool	Can AI classification of cancerous tissue yield chemical insight and prognosis?	Physics of Disease
86	Anne	Williams	University of Sheffield	Spore germination: what can we learn from live spore imaging?	Microbes across length scales
29	Thomas	Williamson	University of Edinburgh	Quantifying the Mechanical Properties of Stress Granules in Live Cells	Biomolecular assemblies and condensates
53	Rebecca	Wurr	King's College London	Extracellular matrix alignment regulates cellular mechanotransduction	Cell architecture and forces
120	Richa	Yeshvekar	University of Leeds	Mechanobiology of Tomato Fruit Cell Walls During Ripening: Insights into Callose and Cellulose Dynamics	Tissue growth, mechanics and mechanosensing
121	Dražen	Zanchi	Msc, Université Paris Cité	Bionics of Plant Tendrils	Tissue growth, mechanics and mechanosensing