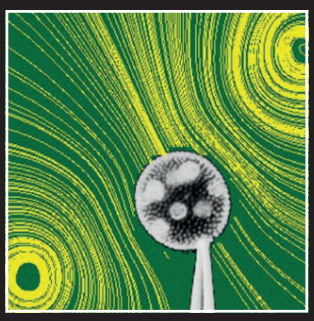

Physics Meets Biology 2019

9–11 September 2019

University of Oxford, Oxford, UK

Poster programme

Poster programme 1

Simpkins Lee Room, Beecroft Building

P1.1	**Diagnosis of malaria based on phase coherence between oscillations of instantaneous heart frequency and respiration** Yunus Abdulhameed, Lancaster University, UK
P1.2	**Proteoliposomes as energy transferring nanomaterials: enhancing the spectral range of light-harvesting proteins using lipid-linked chromophores** Peter Adams, University of Leeds, UK
P1.3	**Developing a model of hormone pulsatility using light for high throughput drug screening** Danothy Bennett, University of Bristol, UK
P1.4	**Deformation and DNA damage in migrating cancer cells** Rachel Bennett, University of Bristol, UK
P1.5	**Measuring the geometrical dimensions of the double helix in solution** Maria Bespalova, University of Oxford, UK
P1.6	**Defect dynamics of an active nematic confined to a spherical shell** Aidan Brown, University of Edinburgh, UK
P1.7	**The hard X-ray Nanoprobe at Diamond Light Source** Julia Parker, Diamond Light Source, UK
P1.8	**Antibacterial surfaces inspired by Cicada Wing nano-topography** Thomas Catley, University of Sheffield, UK
P1.9	**Microtubule cytoskeleton self-organisation is robust and depends on cell geometry alone** Lyubov Chumakova, University of Edinburgh, UK
P1.10	**Wavefront propagation speeds in a bacteriophage-bacteria system** Rory Claydon, University of Edinburgh, UK
P1.11	**Molecular reach as a control parameter for surface receptor signalling** Omer Dushek, University of Oxford, UK
P1.12	**Electric ecology and aerial electroreception in predator-prey interactions** Sam England, University of Bristol, UK
P1.13	**Fundamental insight into ionic transport through biological ion channels** William Gibby, Lancaster University, UK

P1.14 **Bioaerosol sensing using deep learning**
James Grant-Jacob, Optoelectronics Research Centre, UK

P1.15 **Super-resolution imaging using deep learning**
James Grant-Jacob, Optoelectronics Research Centre, UK

P1.16 **Tracking replication restart on crosslinked DNA in vivo at the single molecule level**
Alex Hargreaves, University of York, UK

P1.17 **What is brewing? – New insights into barley cell wall structure**
Erik Hedlund, Katholieke Universiteit Leuven, Belgium

P1.18 **Response to exogenous electromagnetic fields by planarian flatworms: is this a like dissolves like phenomenon?**
Victoria Hossack, Laurentian University, Canada

P1.19 **The 2B subdomain of Rep helicase links translocation along DNA with protein displacement**
Jamieson Howard, University of York, UK

P1.20 **Plant fertilizers affect the electric ecology of foraging bees**
Ellard Hunting, University of Bristol, UK

P1.21 **Peptide assembly directed and quantified using megadalton DNA nanostructures**
Juan Jin, University of Oxford, UK

Poster programme 2

Simpkins Lee Room, Beecroft Building

P2.1 **Gene circuits and multi-dimensional optical microscopy: Characterisation of cellular stress**
Sarah Lecinski, University of York, UK

P2.2 **In vivo single-molecule imaging of DNA gyrase**
Ji-Eun Lee, University of York, UK

P2.3 **Single-molecule real-time observations of DNA repair in E. coli**
Alessia Lepore, University of Edinburgh, UK

P2.4 **Selective interactions and disruption modes of peptides with model lipid membranes: Combination of coarse-grained simulations with experiments**
Mingrui Liao, University of Manchester, UK

P2.5 **Stochastic modeling of intracellular transport performed by kinesin-1 and mammalian dynein motor proteins**
Gina Monzon, Saarland University, South Africa

P2.6 **Transport along cytoskeletal networks**
Kristian Müller-Nedebock, Stellenbosch University, Germany

P2.7	**Dynamics of endoplasmic reticulum tubules in live cells** Hannah Perkins, University of Manchester, UK
P2.8	**Control of antigen discrimination by accessory receptors** Johannes Pettmann, University of Oxford, UK
P2.9	**Nonequilibrium correlations in minimal dynamical models of polymer copying** Jenny Poulton, Imperial College London, UK
P2.10	**Origin of asymmetry in tip cell mitosis** Christopher Revell, Boston University, USA
P2.11	**In vivo dynamics and assembly of the Ssn6-Tup1 global corepressor complex upon glucose repression in yeast Saccharomyces cerevisiae** Sviatlana Shashkova, University of York, UK
P2.12	**General sol to gel transition of liquid-liquid phase separated protein under shear** Yi Shen, University of Cambridge, UK
P2.13	**The emergence of sequence-dependent structural motifs in stretched, torsionally constrained DNA** Jack Shepherd, University of York, UK
P2.14	**An action principle for living systems** Richard Summers, University of Mississippi Medical Center, USA
P2.15	**From magnets to biological nanosprings** Marie Synakewicz, University of Cambridge, UK
P2.16	**New methods to harvest micro-algae in suspensions using depletion interaction** Naoual Taghi, Queen Mary University of London, UK
P2.17	**Electrofusion of escherichia coli giant spheroplast and giant unilamellar vesicle** Sho Takamori, University of Cambridge, UK
P2.18	**Glucose nanosensors and single-molecule microscopy to better understand glucose signal transduction and diabetes** Adam Wollman, University of York, UK
P2.19	**Modeling intrinsic biases in high-throughput sequencing data for chromatin accessibility** Chongzhi Zang, University of Virginia, USA
P2.20	**The conductivity of self-assembling peptide composites** Lin Zhang, University of Manchester, UK
P2.21	**Supracellular mechanical architecture of the intact bone microenvironment** Jamie Hobbs, University of Sheffield, UK