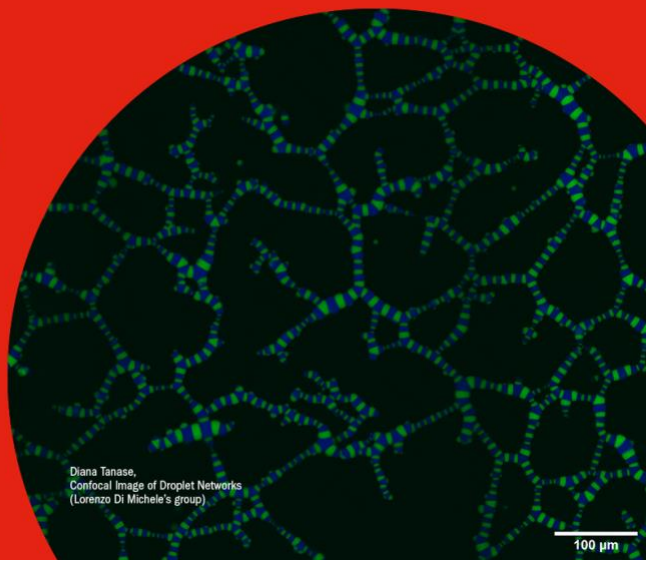
Advanced School in Liquids and Complex Fluids: Solutions in the Spring

10–13 June 2024
Institute of Physics, London, UK



Programme

Monday 10th June

12:00	Registration
12:30	Lunch
13:30	**Welcome** Guido Bolognesi, University College London
13:45	**Gibbs and Colloidal Nucleation** Daan Frenkel, University of Cambridge
14:45	**Lecture 1:** From weak intermolecular interactions to protein assembly: Mapping phase transitions for globular, membrane and de novo proteins Jen McManus, University of Bristol
15:30	Refreshment break
16:00	**Lecture 2:** From weak intermolecular interactions to protein assembly: Mapping phase transitions for globular, membrane and de novo proteins Jen McManus, University of Bristol
16:45	End of day

Tuesday 11th June

9:00	**Workshop**: From weak intermolecular interactions to protein assembly: Mapping phase transitions for globular, membrane and de novo proteins Jen McManus, University of Bristol
9:45	**Lecture 1**: Rheology and flow instabilities of complex and active fluids Suzanne Fielding, Durham University

10:30	Refreshment break
11:00	**Lecture 2**: Rheology and flow instabilities of complex and active fluids Suzanne Fielding, Durham University
11:45	Poster Session
12:45	Lunch
13:45	**Workshop**: Rheology and flow instabilities of complex and active fluids Suzanne Fielding, Durham University
14:30	**Lecture 1**: A Brief Introduction to the Physics of Active Colloids Giorgio Volpe, University College London
15:15	**Lecture 2**: A Brief Introduction to the Physics of Active Colloids Giorgio Volpe, University College London
16:00	Refreshment break
16:30	**Workshop**: A Brief Introduction to the Physics of Active Colloids Giorgio Volpe, University College London
17:15	Networking, Drinks Reception and Poster Presentations
18:30	End of day

Wednesday 12th June

9:00	**Anti-Diffusion in an Algae-Bacteria Microcosm: Photosynthesis, Chemotaxis, and Expulsion** Ray Goldstein, University of Cambridge
10:00	**Lecture 1**: Continuum mechanics of active matter Anton Souslov, University of Cambridge
10:45	Refreshment break
11:15	**Lecture 2**: Continuum mechanics of active matter Anton Souslov, University of Cambridge
12:00	Poster Session
12:45	Lunch
13:45	**Workshop**: Continuum mechanics of active matter Anton Souslov, University of Cambridge
14:30	**Structure of Liquid and Amorphous Materials using Pair-Distribution Function Analysis**

	Phil Salmon, University of Bath
15:30	Poster Prizes Alexander de Bruin, Johnson Matthey
15:45	End of day
19:00	Social Evening Dinner Hilton Hotel Euston

Thursday 13th June

9:45	**Lecture 1**: Structure of liquids measured using neutron scattering Tom Headen, STFC
10:30	Refreshment break
11:00	**Lecture 2**: Structure of liquids measured using neutron scattering Tom Headen, STFC
11:45	**Workshop**: Structure of liquids measured using neutron scattering Tom Headen, STFC
12:30	Closing Guido Bolognesi, University College London
12:45	End of School

Poster Programme

P1 **Using Contactless Manipulation of binary droplets to deposit single crystals**

Jaume Cos Cavada – University College London, UK

P2 **Amorphous aggregation as a precursor to nucleation in Keggin-type ions**

Laure-Anne Hayes and Klaas Wynne – University of Glasgow, UK

P3 **Mutual information as a measure of mixing efficiency in viscous fluids**

Yihong Shi, Ramin Golestanian, Andrej Vilfan – Max Planck Institute for Dynamics and Self-Organization, Germany

P4 **Exploring the impact of colloidal silica monodispersity on crystal quality: towards sustainable synthesis of colloidal crystals for energy storage applications**

Mariam Arif – University of Edinburgh, UK

P5 **Exploring the Marangoni Effect in foams**

Chaima Nasri, Christophe Oguey – LPTM, CNRS, France

P6 **Liquid Crystal-Ferrofluid Emulsions**
Varun Chandrasekar, Jian Lu, Ingo Dierking – University of Manchester, UK

P7 **Percolation in Suspensions of Carbon-Black Aggregates under Shear Flow**
Victor Tänzel, Fabian Coupette, Tanja Schilling – University of Freiburg, Germany

P8 **SGR active generalization for modelling cytoskeletal rheology**
Raffaele Mendozza, Peter Sollich – Georg August Universität and International Max-Planck Research School for Physics of Biological and Complex Systems, Germany

P9 **New Experimental Results of Movement on Hydrodynamics at Interfaces**
Michael Hale

P10 **Utilizing Machine Learning to Estimate Colloidal Interaction Parameters from Small Angle X-Ray Scattering Curves**
Kelvin Wong, Runzhang Qi, Yang Ye, Luo Zhi, Stefan Guldin, Keith Butler – University College London, UK

P11 **Liquid-liquid phase separation in peptide-oligonucleotide mixtures: the role of nucleic acids**
Daniele Asnicar, Alberta Ferrarini, Simone Codispoti, Giuliano Zanchetta – University of Padova, Italy

P12 **Geometrically projected population dynamics in a one-dimensional system of particles**
Sam Cameron, Elsen Tjhung – The Open University, UK

P13 **Equilibrium and Non-equilibrium Behaviour in Polymer/Small-molecule Mixtures for Organic Photovoltaic (OPV) Applications**
Oliver Anyanor, Anthony Higgins – Swansea University, UK

P14 **Estimating dissipation from single-molecule statistics across phase boundaries**
Alvaro Lanza, Lars Hubatsch, Frank Jülicher, Stefano Bo – King's College London, UK

P15 **Making the hard sphere nucleation discrepancy disappear**
Lars Kürten, Antoine Castagnède, Frank Smallenburg, C. Patrick Royall – Gulliver UMR 7083, CNRS, ESPCI Paris, France

P16 **Periodic Behavior of an Anisotropic Trumbbell Settling Under Gravity**
Piotr Zdybel, Maria Ekiel-Jezewska – Institute Of Fundamental Technological Research, Polish Academy Of Sciences, Poland

P17 **Understanding Fluid Flow Dynamics in Partially Saturated Media for Improved Design in Paper Diagnostics**
Amina Farooq, Goran Vladisavljević, Guido Bolognesi – University College London, UK

P18 **Anomalous and Biased Nanoparticles Motion in Alginate Hydrogels**
Chiara Pezzotti, Guido Bolognesi, Massimiliano Giona – La Sapienza University of Rome, Italy

P19 **Continuous manipulation and characterization of colloidal beads via diffusiophoresis and diffusioosmosis in junction microchannels**

Christina Puijk, Adnan Chakra,Goran Vladisavljevic, Francois Nadal, Cecile Cottin-Bizonne, Christophe Pirat, Guido Bolognesi – University College London, UK

P20 **Orientational fluctuations of a magnetic dimer**

James Tett, Alice Thorneywork – University of Oxford, UK

P21 **Revealing 3D opposing vortices through reconstruction of 3D free sperm dynamics**

Xiaomeng Ren

P22 **Elastohydrodynamics of a free cylinder near a viscoelastic wall**

Quentin Ferreira, Bharti Bharti, Yacine Amarouchene, David Dean, Andreas Carlson, Tak Shing Chan, Thomas Salez – University of Bordeaux, France

P23 **Theoretical analysis of flow through a cross-slot**

Xintong Ji, Helen Wilson – University College London, UK