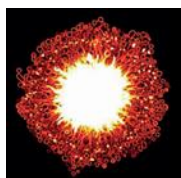


The Physics of Soft and Biological Matter

14–16 April 2014

Homerton College, Cambridge, UK

Organised by IOP Biological Physics Group, IOP Liquids and Complex Fluids Group,
IOP Molecular Physics Group and IOP Polymer Physics Group



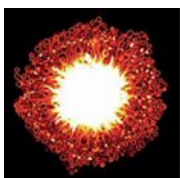
The Physics of Soft and Biological Matter

Contents

Contacts.....	2
Location.....	3
Accommodation.....	4
Travel.....	5-6
Registration.....	7
Venue facilities.....	7
Catering.....	8
Social programme.....	8
Exhibition.....	9
Information for presenters.....	9-10
Safety and security.....	10
IOP Membership.....	11
Programme.....	12-19

Appendix 1 – Homerton College Site Plan

Appendix 2 – Homerton College Accessibility



The Physics of Soft and Biological Matter

Contacts

General organisation

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76 Portland Place
London W1B 1NT, UK
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Fax: +44 (0)20 7470 4848
E-mail: joanne.hemstock@iop.org

Organising committee

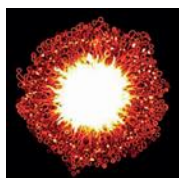
Michael Allen, University of Warwick, UK
Giuseppe Battaglia, University College London, UK
Martin Buzza, University of Hull, UK
Pietro Cicuta, University of Cambridge, UK
Neil Hunt, University of Strathclyde, UK
Joseph Keddie, University of Surrey, UK

Disclaimer

The Institute of Physics, Homerton College and their approved representatives cannot take responsibility for any accident, loss or damage to participants or their property during the conference.

Complaints

We hope that your time at the conference is enjoyable. However, should you encounter any problems during your stay, please report them to the conference registration desk as soon as possible. The conference team will make every effort to rectify any issues as soon as possible.



The Physics of Soft and Biological Matter

Location

The conference will be held at Homerton College in Cambridge. The talks will be held in the Auditorium and John Hammond Lecture Theatre. Posters, exhibitors and refreshments will be located in Boulind Suite and lunches and dinners will be held in the Great Hall. Accommodation will also be located on-site at Homerton College.

Delegates should enter Homerton College via main entrance and check-in and/or register at the Porter's Lodge located within the Mary Allen building reception area.

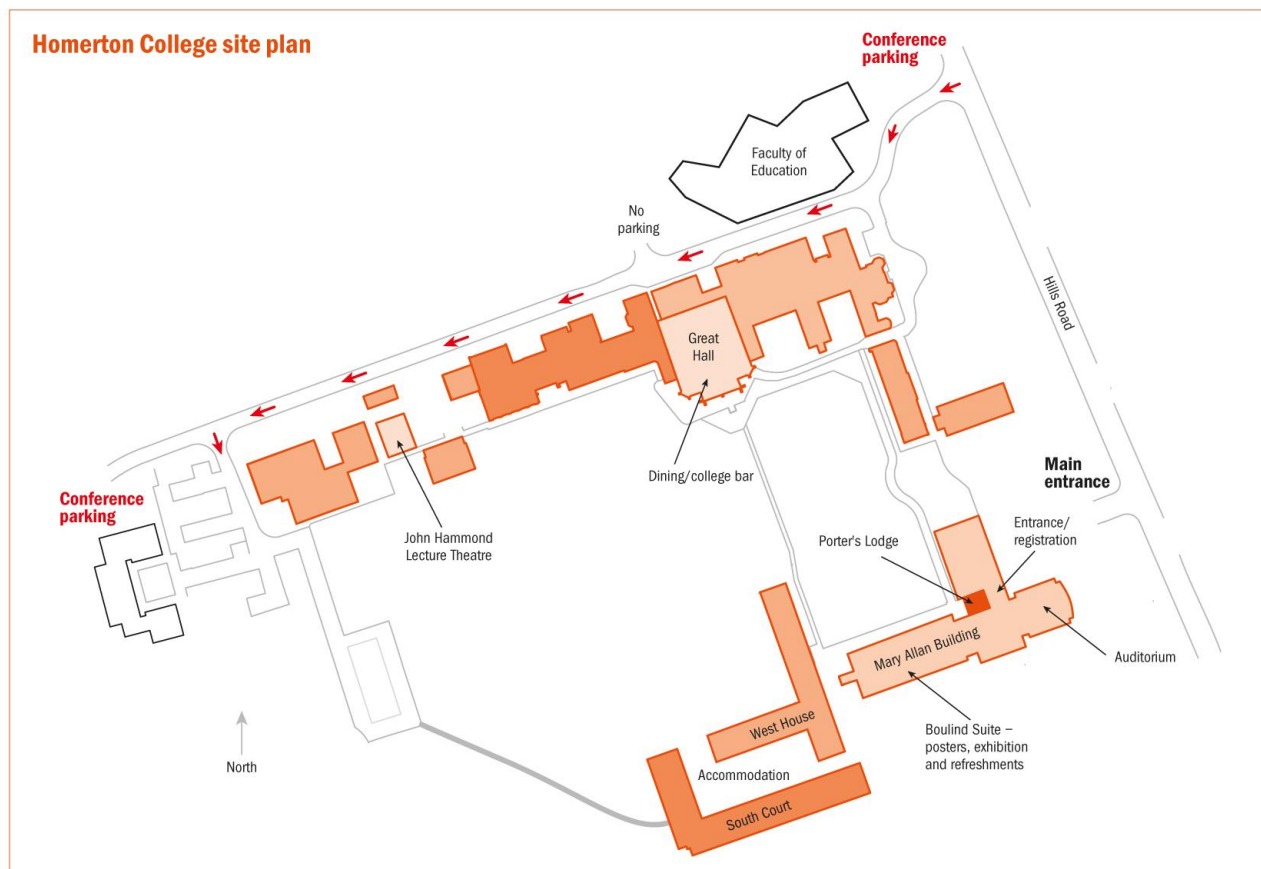
Venue

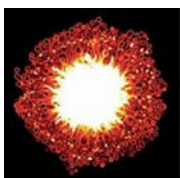
Homerton College
Hills Road
Cambridge
CB2 8PH
Tel: +44 (0)1223 747111

For information about the venue, please visit their website: www.homerton.cam.ac.uk

A venue delegate information sheet can be downloaded at
<http://www.homertonconference.com/assets/hc01/img/downloads/delegate%20info.pdf>

A map of the College site highlighting the conference areas can found below and is appended at the back of this handbook.





The Physics of Soft and Biological Matter

Accommodation

Accommodation packages on a bed and breakfast basis will be allocated at Homerton College for residential participants. Rooms are en-suite and for single occupancy only. Accommodation must be pre-booked online when registering to attend the conference.

All rooms are decorated in a contemporary style and come with an en-suite shower room or 'wet room'; each floor houses specially adapted wheelchair-friendly rooms and facilities. Tea and coffee making facilities are standard in each bedroom along with a telephone, ethernet point and toiletries.

Bedrooms will be available from 14:00 on arrival and should be vacated by 09:00 on the day of departure. Please note that lost keys will be charged at £30 each. Please check in and out at the Porters Lodge.

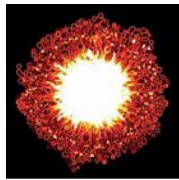
Tourist information

The city of Cambridge is a university town and the administrative centre of the county of Cambridgeshire, England. It lies in East Anglia, on the River Cam, about 50 miles (80 km) north from London. Cambridge is most widely known as the home of the University of Cambridge, founded in 1209 and consistently ranked one of the top five universities in the world. The university includes the renowned Cavendish Laboratory, King's College Chapel, and the Cambridge University Library. The Cambridge skyline is dominated by the last two buildings, along with the chimney of Addenbrooke's Hospital in the far south of the city and St John's College Chapel tower.

For more information, please visit the Visit Cambridge Tourist Information website at <http://www.visitcambridge.org>

Useful local information

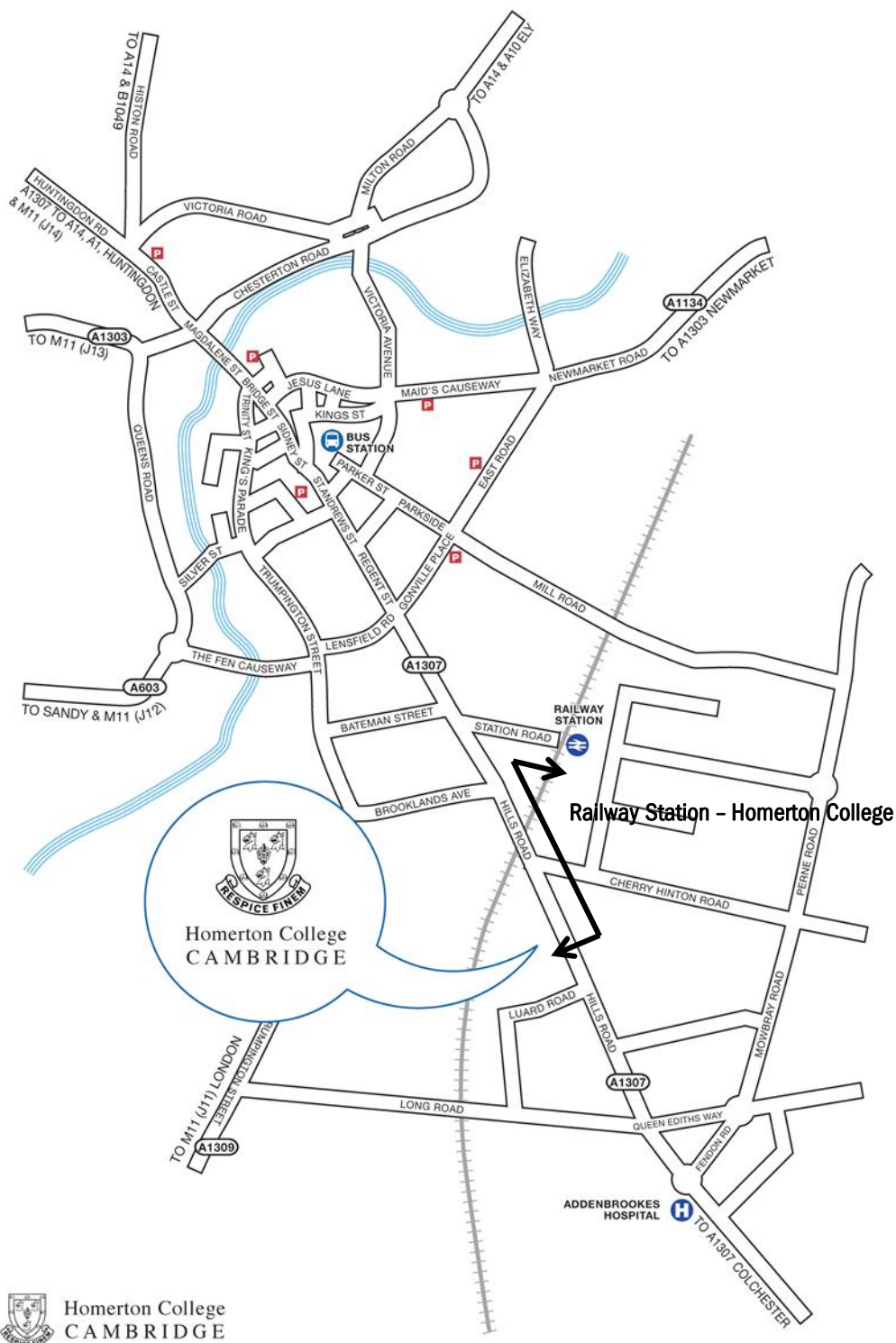
- Money - Britain's currency is the pound sterling (£). There are cash machines throughout Cambridge and major credit cards are accepted.
- Electricity - British electrical standards are 50Hz 230 volts, so some North American and European electrical devices may require converters; all will require plug adapters.
- Medical services - Some medicines are available over the counter from pharmacists. For medical advice, try NHS direct by telephone on 0845 4647 (24-hour within the UK) or www.nhsdirect.nhs.uk
- Emergencies - Visitors should be aware of their personal safety. In an emergency, the police, fire or ambulance services can be reached from any phone by dialling 999.



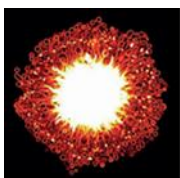
The Physics of Soft and Biological Matter

Travel

The city of Cambridge is in the south east of England, 50 miles north of London. It is well served by road and rail links, and is within an easy distance of the major London airports. Homerton College is situated on Hills Road just outside the City Centre between the main railway station and Addenbrookes Hospital, offering easy access by any means of transport.



Homerton College
CAMBRIDGE



The Physics of Soft and Biological Matter

By air - from London airports

The airport closest to Cambridge is Stansted (www.stanstedairport.com), from where there are good train and taxi connections to Cambridge.

By coach

National Express (www.nationalexpress.co.uk) manages routes from many UK cities to Cambridge.

By train

Homerton College is conveniently located for travel by train, it is only a 15 minute walk away from Cambridge's main station. There are regular trains to London King's Cross (approximate journey time 50 minutes) or less frequently from London Liverpool Street (approximate journey time 40 minutes). There are also good connections from Peterborough, Birmingham, Manchester and Edinburgh. For information contact National Rail Enquiries (www.nationalrail.co.uk, Tel: +44 (0)8457 484950).

By car

From London: Follow directions to Cambridge along the M11. At Junction 11 take the A1309 into Cambridge. At the second set of major traffic lights, ignoring all pedestrian lights, keep in the right hand lane and turn right into Long Road (signposted to Addenbrookes Hospital). Continue to next main crossroads. Turn left into Hills Road and Homerton College is approximately half a mile on the left hand side.

From the North: Follow directions to the A1 south and follow the A1 and A1(M) until it joins the A14. Take the A14 as far as the M11, and then take the M11 to Junction 11 and follow the A1309 into Cambridge. At the second set of major traffic lights, ignoring all pedestrian lights, keep in the right hand lane and turn right into Long Road (signposted to Addenbrookes Hospital). Continue to next main crossroads. Turn left into Hills Road and Homerton College is approximately half a mile on the left hand side.

Parking

For conference visitors and long term parking, please enter the College via Harrison Drive, 100 yards from the main entrance, and continue to the end of this road where you will find the visitor's car park on the left hand side. A site map of the College highlighting the location of the conference parking is appended in the back of this handbook. Parking is free of charge, but you will need a code to enter and exit the car park as follows;

Car Park Codes:

7 April until 08:00 on 14 April - 2683

from 0:800 14 April - 1610

Taxis

A1 Cabco Taxis +44 (0) 01223 52 55 55 / +44 (0) 1223 31 31 31

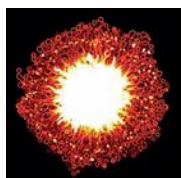
Panther Taxis - +44 (0) 1223 715715

Visas

Citizens of the European Union do not need a visa to enter Britain. If you are from any other country, find out about visa requirements before you travel by visiting <http://www.ukba.homeoffice.gov.uk/visas-immigration/>

Travel from Homerton College to Cambridge train station and city centre

From the bus stop outside Homerton College you can get buses 1, 3, 7 and 8 to the train station and city centre, these cost around £2 for a single and £3.70 for a Day Rider. Bus service is limited in the evening and usually stops around midnight. If you would like to use Taxis from Homerton College, a trip to the city centre will cost around £7 - £8.



The Physics of Soft and Biological Matter

Registration

Registration will be held in the Mary Allen Building Foyer from Monday 14 to Wednesday 16 April. Times are as follows:

Date	Times
Monday 14 April	11:30 – 19:30
Tuesday 15 April	08:30 – 19:30
Wednesday 16 April	08:30 – 13:00

On arrival, each participant will receive a delegate pack containing a pen and pad, a programme and a lanyard badge. Please wear your badge at all times because this will help with security, catering and enable you to identify your fellow delegates. Replacement badges can be issued at the registration desk. On your departure, please return your badge to the registration desk so that it can be recycled.

Messages

A message board will be placed near the registration desk. Participants should check the board for messages as an attempt to locate participants will only be made in the case of an emergency. During registration times, messages can be left by email to joanne.hemstock@iop.org or by telephone to +44 (0)7884 268232

Venue facilities

Internet

All meeting rooms, communal areas and bedrooms include complimentary wi-fi access, please use the following log in details which are case sensitive:

Network: Homerton Hospitality
Username: ConferenceE1
Password: leaves21

Cloakroom

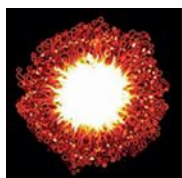
Homerton College does not facilitate a manned cloakroom. A coat rail will be available near the IOP registration desk and there are coat hooks available in the entrance to the Auditorium. A luggage storage room will be available throughout the conference near the Boulind Suite. All goods left in these areas are left at the owner's risk and neither the IOP nor Homerton College accept any liability for any loss or damage to personal goods.

Prayer room

There isn't a dedicated prayer room in Homerton College, anyone wishing to make use of a meeting room facility should make a request to the IOP registration desk and the IOP staff will direct delegates accordingly.

Banking facilities

There are several ATMs (cash points) at Cineworld Cinema/Travelodge site on Hills Road by the Cherry Hinton Road interchange (located on Hills Road between Homerton College and Cambridge mainline station).



The Physics of Soft and Biological Matter

Catering

Refreshments, lunches and dinners are included in the registration fee and are served at set times during the conference programme.

Monday 14 April	Times	Location
Breakfast (<i>residential delegates only</i>)	07:30 – 08:45	TBC on site
Lunch	12:00 – 13:20	Great Hall
Afternoon refreshment break	15:35 – 16:15	Boulind Suite
Drinks reception	17:30 – 18:30	Boulind Suite
Dinner (two course, informal)	19:30	Great Hall
Tuesday 15 April	Times	Location
Breakfast (<i>residential delegates only</i>)	07:30 – 08:45	Great Hall
Arrival refreshments (<i>non-residential delegates</i>)	08:30 – 09:00	Boulind Suite
Morning refreshment break	10:50 – 11:30	Boulind Suite
Lunch	12:45 – 14:00	Great Hall
Afternoon refreshment break	15:35 – 16:15	Boulind Suite
Drinks reception	17:50 – 18:30	Boulind Suite
Conference Dinner (three course, formal)	19:30	Great Hall
Wednesday 16 April	Times	Location
Breakfast (<i>residential delegates only</i>)	07:30 – 08:45	Great Hall
Arrival refreshments (<i>non-residential delegates</i>)	08:30 – 09:00	Boulind Suite
Morning refreshment break	10:35 – 11:15	Boulind Suite
Lunch	12:50 – 14:00	Great Hall

On Monday and Tuesday evening a cash bar service will be available in the Griffin Bar located in the Buttery area outside the Great Hall (Monday 18:30 – 23:00 and Tuesday 18:30 – midnight).

Dietary requirements

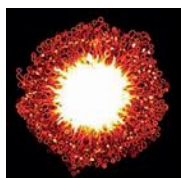
Participants with special dietary requirements are asked to notify the conference office by e-mail prior to their arrival if they have not already done so when registering. Those with special dietary requirements other than vegetarian are asked to make themselves known to the catering team. It will not be possible to provide an alternative menu unless prior notification has been received.

We are aware that nut allergies in particular present a serious problem to some people. Homerton College can provide details of the ingredients of any particular dish, but cannot provide assurances that the food has not been cross contaminated with traces of nuts during ingredient processing at manufacturer's site or during food preparation/service on site. For these reasons, we regret we are unable to provide guarantees that any of the food we serve is free from nuts or trace elements. Please e-mail joanne.hemstock@iop.org if you have any queries.

Social programme

Monday 14 April

A drinks reception will be held at 17:30 in the Boulind Suite, followed by a two course dinner in the Great Hall. An evening cash bar service will be available until 23:00 in the Griffin Bar located in the Buttery area outside the Great Hall.



The Physics of Soft and Biological Matter

Tuesday 15 April

A drinks reception will be held at 17:50 in the Boulind Suite, followed by a three course formal conference dinner in the Great Hall. An evening cash bar service will be available until midnight in the Griffin Bar located in the Buttery area outside the Great Hall. If you would like to book accompanying places at the dinners, please contact Joanne Hemstock via e-mail to joanne.hemstock@iop.org

Exhibition

A table top exhibition will be held in the Boulind Suite on Monday 14 and Tuesday 15 April. Please take the time to talk to the exhibitors should you have any enquiries.

Confirmed exhibitors

Biolin Scientific



Biolin Scientific is a premium instrument provider and our products are high-tech precision instruments for research within surface, material and bio-science, drug discovery and diagnostic applications. We focus on service and application support for our customers, as well as on technology development and knowledge. Our products are based on advanced measurement techniques, and all of our technologies are unique, patented or have earned industry leadership through long term experience and development.

HORIBA Scientific



The HORIBA Group of worldwide companies provides an extensive array of instruments and systems for applications ranging from automotive R&D, process and environmental monitoring, in-vitro medical diagnostics, semiconductor manufacturing and metrology, to a broad range of scientific R&D and QC measurements. Proven quality and trustworthy performance have established widespread confidence in the HORIBA Brand.

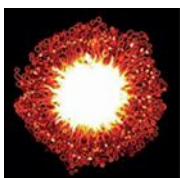
IOP Publishing



IOP Publishing provides a range of journals, magazines, books, websites and services that enable researchers and research organisations to reach the widest possible audience for their research.

We combine the culture of a learned society with global reach and highly efficient and effective publishing systems and processes. With offices worldwide, we serve researchers in the physical and related sciences in all parts of the world.

IOP Publishing is a wholly owned subsidiary of the Institute of Physics. Any profits generated by IOP Publishing are used by the Institute to support science and scientists.



[LOT-QuantumDesign](#)



LOT-QuantumDesign is a supplier of leading edge scientific instrumentation throughout the UK and Europe. We offer a wide range of equipment for biological and life science applications including Confocal Raman microscopes, Imaging CCD and sCMOS cameras, Light sources and filters for analysing fluorescence.

Instructions for presenters

Oral presentations

The lecture theatres are equipped with the following audio-visual equipment:

- Data projector and screen
- PC or laptop with Windows XP
- Remote mouse/laser pointer
- Lectern and microphone
- Lapel and/or hand-held radio microphones

Speakers are requested to bring their presentation on a USB memory stick in either Office 2010 or .pdf format and preload it onto the PC/laptop located in the lecture theatre. Speakers should save their presentation into the appropriate pre-named session folders pre-set on the desktop and files should be saved by speakers surname and initial. To optimise compatibility, particularly for the inclusion of multimedia components, speakers should include the original files so that it can be re-embedded if necessary. Direct connection of personal laptops (with set up in the break prior to the corresponding session) is an acceptable but not preferred alternative. Mac users should ensure that they bring the correct connection cable (VGA) with them.

The lecture theatre is reasonably large, and speakers should use a minimum 16-point font size in PowerPoint slides to ensure legibility. Presenters are asked to prepare their talks to match the allocated times which will be rigidly enforced.

Poster presenters

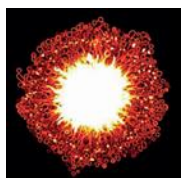
Posters will be on display in the Boulind Suite with dedicated poster sessions as scheduled in the programme. There will be two poster sessions (A and B), so please check which session your poster presentation is allocated to.

Please note that during this poster session, authors should stand close to their boards to answer questions and facilitate discussions on their work. If you are presenting a poster please ensure that you display your poster on the board number that matches your poster number in the programme.

Posters must be no larger than A0 in size (118.9 x 84.1cm / 46.8 x 33.1 inches), in a portrait format. If your poster does not fit within these dimensions, we cannot guarantee it will be displayed. Fixing material will be supplied.

Poster Session A - Presenters in Poster Session A should mount their posters between 12:00 and 15:30 on Monday 14 April. All posters from **Poster Session A must be removed by 13:30 on Tuesday 15 April.**

Poster Session B - Presenters in Poster Session B should mount their posters between 13:30 and 15:30 on Tuesday 15 April. All posters from **Poster Session B must be removed by 13:00 on Wednesday 16 April.**



Safety and security

Personal property

Homerton College and the Institute of Physics do not accept responsibility for the loss of or damage to personal property. Visitors are advised to keep personal possessions with them.

Evacuation policy

In the event of a fire you should evacuate the building by the nearest safe fire exit and report to the Fire Assembly Point A (car park outside Auditorium). Delegates should not re-enter the building until the Fire Service or Security team confirms that it is safe to do so. The fire alarm is tested on Thursday mornings, should this occur during your stay you do not need to act unless you are otherwise instructed.

First aid

There are first aid trained staff available 24 hours a day - contact the Porter's Lodge on 47111 or the Conference Office on 47218 if an emergency arises. They will assist with first aid and can call an ambulance if required.

Security

Security staff are on duty 24-hours a day, 7-days a week. Should you need to contact them in an emergency, please call the Porter's Lodge on 47111. Should an accident, theft or other incident occur on the University premises, it must be reported without delay to a Duty Porter.

Smoking

In compliance with the current UK legislation, smoking is not permitted within any enclosed area of the Homerton Site. Smoking areas are indicated away from buildings, doors and windows.

Behaviour and conduct

The Institute of Physics and Homerton College reserve the right to charge in full for loss or damage to the college. Whilst on the Homerton College site, all guests should show respect that this is a working environment, even in vacation periods.

IOP membership

Non-member registrants attending this conference will automatically become affiliate members of the Institute of Physics for 12 months and will receive copies of Physics World. As an affiliate member you will be entitled to attend IOP conferences at the members' rate for the period of your membership and to use MyIOP – the member-only network.

Full details will be sent to you after the conference. In order to take advantage of this affiliate membership, payment for the conference registration fee must be received in accordance with our payment terms.

Membership of the Institute of Physics is open to all those with an interest in Physics. For further information, please visit <http://members.iop.org> or e-mail membership@iop.org.

Programme

Monday 14 April

11:30	Registration <i>Porter's Lodge, Mary Allen Building</i>	
12:00	Lunch <i>Great Hall</i>	
13:20	Welcome address J L Keddie, University of Surrey, UK	
Chair: M P Allen, University of Warwick, UK		
13:30 – 14:15	(Invited) Hydrodynamics and phase behaviour of active suspensions S Fielding, Durham University, UK <i>Auditorium</i>	
	Rheology of Active and Biological Matter <i>Auditorium</i> Chair: M P Allen, University of Warwick, UK	Confined Fluids and Interfacial Phenomena <i>John Hammond Lecture Theatre</i> Chair: M Buzza, University of Hull, UK
14:20	Rheology and shear-induced diffusion of dense red blood cell suspensions T Krueger, University of Edinburgh, UK	Capillary force on a micrometric sphere trapped at a fluid interface exhibiting arbitrary curvature gradients M Nobili, CNRS / Université Montpellier 2, France
14:35	Motility fractionation of bacteria by centrifugation C Maggi, Università di Roma “Sapienza”, Italy	Capillary fluctuations, interface potential and the film height dependent surface tension of adsorbed liquid films L G MacDowell, Universidad Complutense de Madrid, Spain
14:50	Bacterial delivery of colloids over anisotropic barriers N Koumakis, Università di Roma “Sapienza”, Italy	Relaxation of surface tension in the liquid-solid interfaces of Lennard-Jones liquids A V Lukyanov, University of Reading, UK
15:05	Active matter at high density S Henkes, University of Aberdeen, UK	Off-equilibrium surface tension in colloidal suspensions D Truzzolillo, CNRS / Université Montpellier 2, France
15:20	Viscoelastic response of actin networks at intermediate distances A Sonn-Segev, Tel Aviv University, Israel	Structure of photo-responsive semifluorinated alkanes at the water-air interface A Theodoratou, FORTH / University of Crete, Greece
15:35	Poster session A, exhibition and refreshments <i>Boulind Suite</i>	
	Biological Systems <i>Auditorium</i> Chair: G Battaglia, University College London, UK	Colloids and Nanoparticles <i>John Hammond Lecture Theatre</i> Chair: M P Allen, University of Warwick, UK
16:15	Similar emergent states in swarming animals and thermophoretic colloids M S Turner, University of Warwick, UK	Near-wall dynamics of spherical colloids: Translational and rotational diffusion M Lisicki, University of Warsaw, Poland
16:30	Emergent run-and-tumble in a simple model of Chlamydomonas R Bennett, University of Oxford, UK	Asphaltene deposition in microfluidic capillary flow experiments and particulate computer simulation C M Seifried, Imperial College London, UK
16:45	Microswimmer motility in rigid and elastic confinement R Ledesma-Aguilar, Northumbria University, UK	Colloidal musical chairs - String- and loop-like cooperative motion in locally perturbed 2D colloidal crystals J Sprakel, Wageningen University, The Netherlands
17:00	Clathrin aggregation by rotational brownian dynamics I M Ilie, University of Twente, The Netherlands	How do platinum janus particles swim? A Brown, University of Edinburgh, UK
17:15	Self-organisation of swimming bacteria in confined geometries H Wioland, University of Cambridge, UK	Hydrodynamic synchronisation of simple rotors S Box, University of Bristol, UK
17:30	Poster session A, exhibition and refreshments <i>Boulind Suite</i>	
18:30	Break	
19:30	Dinner <i>Great Hall</i>	

Tuesday 15 April

08:00	Breakfast (residential guests only) <i>Great Hall</i>	
Chair: J L Keddie, University of Surrey, UK		
09:00 - 09:45	(Invited) Capillary-driven flow in thin polymer films K Dalnoki-Veress, McMaster University, Canada <i>Auditorium</i>	
	Polymers, Polyelectrolytes and Biomolecules <i>Auditorium</i> Chair: J L Keddie, University of Surrey, UK	Self-Assembly, Biomimetics and Pattern Formation <i>John Hammond Lecture Theatre</i> Chair: G Battaglia, University College London, UK
09:50	Unwinding dynamics of polymers: a model for single biomolecules? J-C Walter, University Montpellier 2, France	Enzyme-driven chemotactic synthetic vesicles D Cecchin, University College London, UK
10:05	Threading dynamics of ring polymers in a gel D Michieletto, University of Warwick, UK	Encapsulating hydrogenase active site analogues in peptide-based supramolecular hydrogels: a photochemical study P W J M Frederix, University of Strathclyde, UK
10:20	New method to predict the surface tension of complex synthetic and biological polyelectrolyte/surfactant mixtures R A Campbell, Institut Laue-Langevin, France	Motility-induced phase separation in an active dumbbell fluid G Gonnella, Università di Bari, Italy
10:35	Kinetic control over out-of-equilibrium self-assembled hydrogels V D Nguyen, Wageningen University, The Netherlands	Atom-scale computer-aided design of organic-inorganic interfaces D Thompson, University of Limerick, Ireland
10:50	Poster session A, exhibition and refreshments <i>Boulind Suite</i>	
	Biological Systems <i>Auditorium</i> Chair: N Hunt, University of Strathclyde, UK	Rheology and Non-equilibrium Phenomena <i>John Hammond Lecture Theatre</i> Chair: P Cicuta, University of Cambridge, UK
11:30	The role of intrinsically disordered proteins under conditions of abiotic stress F Yuen, University of Cambridge, UK	Length-scale dependent aging and plasticity of a colloidal polycrystal under cyclic shear E Tamborini, Université Lyon 1, France
11:45	Traffic jams on the microtubule network D Miedema, University of Amsterdam, The Netherlands	Particle response during the yielding transition of colloidal glasses D V Denisov, Van der Waals-Zeeman Institute, The Netherlands
12:00	Multiscale self-assembly of fibrin governs its polymerization kinetics, fiber and network structure, as well as nonlinear rheological properties N A Kurniawan, FOM Institute AMOLF, The Netherlands	Molecular dynamics simulations of flow in nanopores D A Ross, Imperial College London, UK
12:15	Nanoscale ligand spacing influences receptor triggering in immunological synapses I E Dunlop, Imperial College London, UK	Microfluidic-SANS: in situ molecular insight into non-equilibrium phenomena in complex fluids C G Lopez, Imperial College London, UK
12:30	Exploring the molecular bases of cytoskeleton-cell membrane interactions, by live imaging approach L Chierico, University College London, UK	Interfacial rheology of model particles at liquid interfaces J H J Thijssen, University of Edinburgh, UK
12:45	Lunch <i>Great Hall</i>	
Chair: G Battaglia, University College London, UK		
14:00 - 14:45	(Invited) Scaling laws of polymer membranes: from synthetics to nuclear envelopes and mechanotransduction D E Discher, University of Pennsylvania, USA <i>Auditorium</i>	
	Self-Assembly, Biomimetics and Pattern Formation <i>Auditorium</i> Chair: G Battaglia, University College London, UK	Confined Fluids and Interfacial Phenomena <i>John Hammond Lecture Theatre</i> Chair: M P Allen, University of Warwick, UK
14:50	Orientational texture of lipid membrane domains A Cohen Simonsen, University of Southern Denmark, Denmark	Crystal-liquid interfacial free energy via thermodynamic integration R Benjamin, Heinrich-Heine Universitaet, Germany

Tuesday 15 April continued

15:05	Phase separation within hybrid polymer/lipid vesicles used as biomimetic membranes J F Le Meins, Bordeaux University, France	Circularly confined quasi-hard-discs: the role of boundary adaptivity I Williams, University of Bristol, UK
15:20	Photo cross-linked and pH sensitive polymersomes - nanoreactor and membrane studies J Gaitzsch, University College London, UK	Displacement mechanisms in micro-models from micro-fluidic experiments and pore scale lattice Boltzmann simulations E S Boek, Imperial College London, UK
15:35	Poster session B, exhibition and refreshments <i>Boulind Suite</i>	
Chair: M Buzza, University of Hull, UK		
16:15 - 17:00	(Invited) Directed assembly in soft matter K J Stebe, University of Pennsylvania, USA <i>Auditorium</i>	
	Surfactants, Foams and Vesicles <i>Auditorium</i> Chair: M Buzza, University of Hull, UK	Optical Methods and Imaging <i>John Hammond Lecture Theatre</i> Chair: N Hunt, University of Strathclyde, UK
17:05	Unveiling the bifurcation diagram of pattern formation in surfactant monolayer transfer M H Koepf, École Normale Supérieure, France	Exploring soft matter with X-ray scanning micro- and nano-diffraction techniques E Di Cola, European Synchrotron Radiation Facility (ESRF), France
17:20	Extreme deformation of giant unilamellar vesicles in a complex shear flow A Pommella, Imperial College London, UK	Single cell monitoring of redox potential using Surface-enhanced Raman Spectroscopy K Fisher, University of Edinburgh, UK
17:35	Foams stabilized by mixtures of nanoparticles and oppositely charged surfactants: Relationship between bubble shrinkage and foam coarsening A Maestro, University of Cambridge, UK	Optical Coherence Tomography Velocimetry of complex fluids A V Malm, University of Manchester, UK
17:50	Poster session B, exhibition and refreshments <i>Boulind Suite</i>	
18:30	Break	
19:30	Conference dinner <i>Great Hall</i>	

Wednesday 16 April

08:00	Breakfast (residential guests only) <i>Great Hall</i>	
Chair: M Buzza, University of Hull, UK		
09:00 - 09:45	(Invited) Self-assembly of patchy colloids D J Pine, New York University, USA <i>Auditorium</i>	
	Colloids and Nanoparticles <i>Auditorium</i> Chair: M Buzza, University of Hull, UK	Self-Assembly <i>John Hammond Lecture Theatre</i> Chair: G Battaglia, University College London, UK
09:50	Phase diagrams for magnetic nanofilaments J J Cerdà, Universidad de las Islas Baleares, Spain	Epitaxy and polymorph selection in heterogeneous crystal nucleation J P Mithen, University of Surrey, UK
10:05	Colloidal aggregation and dynamics in anisotropic fluids O Mondain-Monval, University of Bordeaux, France	Simulation of polymer network formation: Phase behavior of aggregating chains H Mortazavi, Eindhoven University of Technology, The
10:20	The effects of polydispersity and metastability on colloidal crystallization R M L Evans, University of Leeds, UK	Dynamic renormalisation group theory reveals sequential mechanism of oligomer generation in protein aggregation T C T Michaels, University of Cambridge, UK

Wednesday 16 April continued

10:35	Poster session B and refreshments <i>Boulind Suite</i>	
Chair: J L Keddie, University of Surrey, UK		
11:15 - 12:00	(Invited) Single molecule studies of protein aggregation D Klenerman, University of Cambridge, UK <i>Auditorium</i>	
	Colloids and Nanoparticles <i>Auditorium</i> Chair: J L Keddie, University of Surrey, UK	Liquid Crystals <i>John Hammond Lecture Theatre</i> Chair: M P Allen, University of Warwick, UK
12:05	Ligand-mediated nanoparticle interactions at fluid-fluid interfaces V Garbin, Imperial College London, UK	On phase behaviour and dynamical signatures of charged platelet suspensions S Jabbari-Farouji, University of Joseph-Fourier, France
12:20	Studying complex nanoparticle adsorption at liquid interfaces A Nelson, ETH Zürich, Switzerland	Knotted defects in nematic liquid crystals T Machon, University of Warwick, UK
12:35	Design of a fluorinated magneto-responsive material with tuneable ultrasound scattering properties K Zimny, University of Bordeaux, France	Double twist liquid crystal model of collagen structure A Brown, Dalhousie University, Canada
12:50	Lunch <i>Great Hall</i>	

Poster Session A (afternoon of 14 April and morning of 15 April)

Biological systems

P.01 Mechanotransduction of deformable nano-structured elastic membrane surfaces on proliferation of osteoblast cells

G K Toworfe, Flowers School of Technology and Management, Germany / University of Pennsylvania, USA

P.02 Streaming potential in human dentin

Z Feng, Xiamen University, China

P.03 Structure and evolution of high-density protein systems

J Ioannou, University of Cambridge, UK

P.04 Dynamics of filopodium-like protrusion and endothelial cellular motility on 1-D extracellular matrix fibrils

YY S Huang, University of Cambridge, UK

P.05 Modelling of the Nuclear Pore Complex

D Osmanovic, University College London, UK

P.06 Effect of solvent on the self-assembly of D-alanine and Diphenylalanine Peptides

A N Rissanou, University of Crete, Greece / IACM FORTH, Greece

P.07 Double-belt a novel structure of membrane pore

R Vacha, Masaryk University, Czech Republic

P.08 Induced guidance of NIH 3T3 fibroblasts on Polydimethylsiloxane (PDMS) ridge-groove substrates: a time-lapse live-cell study

C-K Huang, University of Cambridge, UK

P.09 Influence of Ibuprofen on the structure of phospholipid layers

S Jaksch, Forschungszentrum Jülich GmbH, Germany

P.10 Study of cellular differentiation of embryonic carcinoma stem cells by AFM nanocytomechanics and Raman spectroscopy

E Canetta, St Mary's University College, UK

P.11 New insight into the structure and function of Hfq carboxyl terminus

V Arluison, University Paris Diderot, France/CEA, France

P.12 Single cell measurements of intracellular signaling, and motility, in activated macrophages

E Cammarota, University of Cambridge, UK

Colloids and nanoparticles

P.13 Restricted diffusion of small probe particles in a laponite dispersion

S Kaloun, SAEED Ecole Supérieure de Technologie Essaouira, Université Cadi Ayyad, Morocco

P.14 Dynamic properties of concentrated microgel suspensions and protein solutions

J Riest, Forschungszentrum Jülich GmbH, Germany

P.15 Detachment energies of spheroidal particles from liquid-liquid interfaces

G Davies, University College London, UK

P.16 Bicontinuous emulsions stabilized by nanoparticles

M Reeves, University of Edinburgh, UK

P.17 Controlling ink properties to achieve a 'flatter' film profile for applications in P-OLED displays

A D Eales, University of Cambridge, UK

P.18 Influence of magnetic field on the orientation of anisotropic magnetic particles at liquid interfaces

B J Newton, University of Hull, UK

Confined fluids and interfacial phenomena

P.19 Effective interaction between a colloid and a soft interface near criticality

A D Law, Max-Planck-Institut für Intelligente Systeme, Germany

P.20 Adsorption energies of poly(ethylene oxide)-based surfactants and nanoparticles on an air-water surface

A Nelson, ETH Zurich, Switzerland

P.21 Analysis of an axisymmetric two-phase flow model for particle transport at fluid interfaces

L Botto, Queen Mary University of London, UK

Optical methods and imaging

P.22 Dual-mode microviscosity measurements in lipid monolayer and bilayer systems with a molecular rotor

A Vysniauskas, Imperial College London, UK

P.23 Imaging dynamic patterns in lipid membranes using molecular rotors

M R Dent, Imperial College London, UK

P.24 A Label-Free Microfluidic Assay to quantitatively study antibiotic diffusion through lipid membranes

J Cama, University of Cambridge, UK

P.25 Simple continuum descriptions of macromolecule complexes for imaging techniques

C Prior, Durham University, UK

Polymers, polyelectrolytes and biomolecules

P.26 Modifications of the study of dielectric properties of a polycarbonate plastic (Makrofol KG) induced by Si^{7+} heavy ion irradiation

M Mujahid, University of Tabuk, Saudi Arabia

P.27 Pickering emulsion polymerized core-shell structured smart composite particles and their suspension rheology under electric and magnetic fields

H J Choi, Inha University, Korea

P.28 Passive and active microrheology of a polymer melt studied by molecular dynamics simulation

A Kuhnhold, Martin-Luther-Universitaet Halle-Wittenberg, Germany

P.29 Microscopic probing of melting and gelation processes in well-defined biopolymer network

H E Cingil, Wageningen University, The Netherlands

P.30 Tunable reversible hydrogels from metal-coordinated polymers

M Bohdan, Wageningen University, The Netherlands

P.31 Two-fluid model for ions distribution on a charged surface: A Monte Carlo study and modified Poisson-Boltzmann theory

C-H Cheng, National Changhua University of Education, Taiwan

P.32 The role of confinement and interaction range on polarisation and alignment of stiff chains and networks

K K Müller-Nedebock, Stellenbosch University, South Africa

P.33 Inert-tail effect on the thermodynamics of DNA hybridisation

L Di Michele, University of Cambridge, UK

P.34 Large-area patterning of the tackiness of a colloidal nanocomposite adhesive by sintering of nanoparticles under IR radiation

J L Keddie, University of Surrey, UK

P.35 Lubrication by polymersomes under nanoconfinement

J E Bartenstein, University of Bristol, UK

Rheology and non-equilibrium phenomena

P.36 Spatio-temporal dynamics of collective flow across a bacterial carpet

Y-T Hsiao, National Central University Taiwan, China

P.37 Surface roughening due to patchy particles in (1+1) dimensions - A computational study

M J Kartha, University of Pune, India

P.38 Lipid bilayer membranes under shear flow from molecular simulations

A Botan, Université Lyon 1, France

P.39 The tube axis and entanglements in polymer melts

A Likhtman, University of Reading, UK

Self-assembly, biomimetics and pattern formation

P.40 From wound healing to artificial muscles: Modelling bio- and biomimetic materials with polar and nematic order parameters

M H Koepf, École Normale Supérieure, France

P.41 Dynamical Landau theory for the assembly and disassembly kinetics of supramolecular polymers

N Tiwari, Eindhoven University of Technology, The Netherlands

P.42 Engineering DNA-linked janus liposome clusters towards applications in drug delivery

T Wild, University of Leeds, UK

P.43 All-optical manipulation of photonic membranes

B Kirkpatrick, University of St. Andrews, UK

P.44 Self-assembly of nanoparticles on fluid membranes

A Saric, University of Cambridge, UK

P.45 Inherent variability in the kinetics of autocatalytic protein self-assembly

J Szavits-Nossan, University of Edinburgh, UK

P.46 Understanding the self-assembly and structure of interfacial films formed from the bacterial hydrophobin BsIA

R J Morris, University of Edinburgh, UK

P.47 Self-assembly of naphthalene-dipeptides to form hydrogel films at the air-water interface

T Li, University of Edinburgh, UK

Surfactants, foams and emulsions

P.48 Dynamic wetting of hydrophobic polymers by aqueous surfactant and superspreader solutions

X Wang, Technical University Darmstadt, Germany

P.49 Atomistic description of the solubilisation of testosterone propionate in a sodium dodecyl sulfate micelle

D Allen, King's College London, UK

Poster Session B (afternoon of 15 April and morning of 16 April)

Biological systems

P.01 Force localization in contracting cell layers

C Dunlop, University of Surrey, UK

P.02 Orientational order and motility in active droplets

D Khoromskaia, University of Warwick, UK

P.03 Fluctuating finite element analysis: Modelling biomacromolecules with continuum mechanics

D Read, University of Leeds, UK

P.04 Dynamics of oblate and prolate capsules in shear flow

Y Sui, Queen Mary University of London, UK

P.05 Mechanical properties of keratin fibres in complex environments

R Notman, University of Warwick, UK

P.06 Ion channel gating by electrokinetic interactions

D J Bonthuis, University of Oxford, UK

P.07 Variable temperature single molecule force spectroscopy of an extremophilic protein

K Tych, University of Leeds, UK

P.08 Modelling the transport of nanoparticles across the blood-brain barrier

G Fullstone, University College London, UK

P.09 Folding of cellular monolayers

S Hoehn, University of Cambridge, UK

P.10 Active polar fluid flow in deformable droplets

C A Whitfield, University of Sheffield, UK

P.11 Is it possible the hydrodynamic synchronization of colloidal rotors describing rigid trajectories? - an experimental proof

A Maestro, University of Cambridge, UK

P.12 Short-time dynamics E. coli chromosomal loci reveal a dependence on coordinate and indicate the presence of a sporadic but ubiquitous super-diffusive motion

A Javier Godinez, University of Cambridge, UK

Colloids and nanoparticles

P.13 Design concepts for nanostructured colloidal composites

J L Keddie, University of Surrey, UK

P.14 Nucleation of hard colloidal cubes

C Karner, University of Vienna, Austria

P.15 The reciprocal theorem for two objects

D Papavassiliou, University of Warwick, UK

P.16 PNIPAM microgels: A novel insight into their adsorption at fluid interfaces

A Maestro, University of Twente, The Netherlands / University of Cambridge, UK

P.17 Unusual order in squeezed spheres

W G Ellenbroek, Eindhoven University of Technology, The Netherlands

P.18 Deposition of colloidal asphaltene in capillary flow from computer simulation and homogeneous deposition models

E S Boek, Imperial College London, UK

Confined fluids and interfacial phenomena

P.19 Predicting anomalous fluid densities in carbon nanotubes

G J Wang, MIT, USA

P.20 Direct effects of non-equilibrium aggregates on Pdadmac/SDS layers at the air/water interface

I Varga, Eötvös Loránd University, Hungary

P.21 A Landau-Squire nanojet

N Laohakunakorn, University of Cambridge, UK

P.22 Hindered diffusion coefficients of spherical particles confined by microchannels

K Misiunas, University of Cambridge, UK

Liquid crystals/Liquids and glasses

P.23 Crystallization mechanism in melts of short n-alkane chains

M Anwar, Université du Luxembourg, Luxembourg

P.24 Effect of temperature on orientational ordering in a modified Gay-Berne fluid

R C Singh, Vidya College of Engineering, India

P.25 Electron transitions in Cr^{2+} in the aqueous solutions of $\text{MgSO}_{3.6}\text{H}_2\text{O}:\text{Cr}$

I Ismailov, Shumen University, Bulgaria

Polymers, polyelectrolytes and biomolecules

P.26 Cross-sectional imaging of organic solar cells:

Understanding efficiency and lifetime issues

T Glen, University of Cambridge, UK

P.27 Computational studies on the effect of stereotacticity of poly(N-isopropylacrylamide) in aqueous solution

V Botan, RWTH University, Germany

P.28 MD and COSMO-RS contact statistics for

poly(N-isopropylacrylamide) in solvents

V Botan, RWTH University, Germany

P.29 Transition path sampling with core-modification aimless shooting for a homopolymer chain

C Leitold, University of Vienna, Austria

P.30 Self-assembly of degalatosylated xyloglucan from tamarind seeds

D Bulone, Biophysics Institute, National Research Council, Italy

P.31 Key factors regulating the mass delivery of macromolecules to model cell membranes: gravity and electrostatics

R A Campbell, Institut Laue-Langevin, France

P.32 Hydration dynamics of proteins in solutions studied in 220–325 GHz band

O Sushko, Queen Mary University of London, UK

P.33 Nanostructuring thin polymer films with 2 and 3-beam single pulse laser interference lithography

I Martín-Fabiani, Instituto de Estructura de la Materia (IEM-CSIC), Spain

Rheology and non-equilibrium phenomena

P.34 Active nematic dynamics in a viscoelastic background

E Hemingway, Durham University, UK

P.35 Simulation of the linear and non-linear rheology of viscoelastic polymer solutions

B W Fitzgerald, University of Twente, the Netherlands

P.36 Plastic deformation mechanisms in glassy and semi-crystalline polymers

S Jabbari-Farouji, University of Joseph-Fourier-Grenoble, France

P.37 Dynamics and structure: a study of gelation in a non-aqueous colloidal system

F R Bartholomew, University of Cambridge, UK

Self-assembly, biomimetics and pattern formation

P.38 Lattice model of nucleation via partially disordered precursor

Y Lifanov, University of Warwick, UK

P.39 Fibrous scaffolds for neural tissue engineering in the auditory system

K Ngamkham, University College London, UK

P.40 Hierarchical morphogenesis of a hybrid peptide/protein system

K E Inostroza, Queen Mary University of London, UK;
Nanotechnology Platform, Parc Científic de Barcelona, Spain

P.41 Synthetic DNA viruses for targeting breast cancer cells

L Guan, University College London, UK

P.42 Design of patchy polymersomes with topological surface patterns at the nanoscale

L Messenger, University College London, UK

P.43 Fabrication of “intelligent nanosurfaces” for controlled cell- substrate interaction

P Mokarian-Tabari, University College Cork and Tyndall
National Institute, Ireland; Centre for Research on Adaptive
Nanostructures and Nanodevices (CRANN), Trinity College
Dublin, Ireland

P.44 Artificial DNA membrane nanopores

K Göpfrich, University of Cambridge, UK

P.45 Out of equilibrium pattern formation in lipid membranes

L Parolini, University of Cambridge, UK

Surfactants, foams and emulsions

P.46 Surfactants and aqueous solubility enhancement of drugs: importance of the hydrophilic “head group”

Y Saaka, King's College London, UK

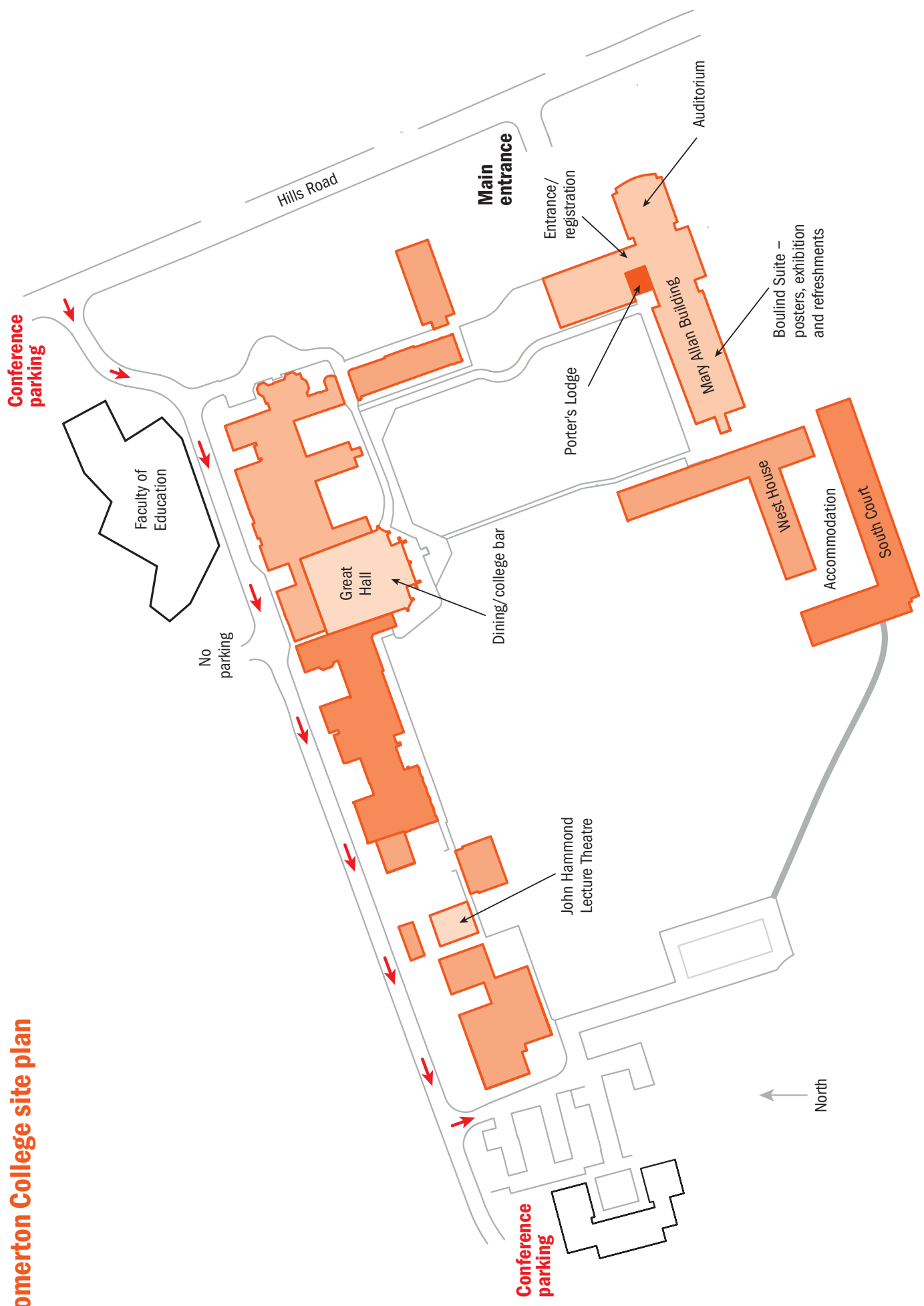
P.47 Pickering emulsion by arresting phase separation using anisotropic particles

S V Daware, Indian Institute of Technology, India

P.48 Immiscible lipids control the morphology of patchy emulsions

L-L Pontani, New York University, USA

Homerton College site plan





ACCESSIBILITY FOR ALL

On arrival/Parking

The Conference Centre is located within extensive grounds off the main A1307 road into the city centre. The conference car park is accessed along Harrison Drive where there are a number of speed bumps. Turning left into the car park there is a barrier which can be accessed by a pre-authorised code. If, for some reason, you do not have the code, there is a buzzer through to the Porters' Lodge. If disabled parking is required this is available either within the conference car park or at the front of the College. Both can be pre-booked by contacting the Lodge on 01223 747111.

The Mary Allen Building

Access to the meeting rooms are via flat surfaces and above ground floor level are accessible by lifts. There are disabled toilets on each of the 3 levels. A hearing loop is available for hearing impaired delegates.

The Conference Centre

There is a slight gradient to access the Conference Centre where 4 of the meeting rooms and all 3 dining rooms are on ground level. The further 3 meeting rooms are on the 1st and 2nd floors and all have lift access directly to the rooms. There is a disabled toilet close to the main reception area and a further one close to the Great Hall. Both are alarmed. As before a hearing loop is available for hearing impaired delegates.

Bedrooms

Bedrooms at Homerton are located within 6 accommodation blocks and all are accessible via lift. Of the 500 en-suite bedrooms, some of which are designed for easy wheelchair access with easily accessible showers. For hearing or sight impaired residents vibrating pillows are available at the Porters' Lodge which will activate in the event of a fire alarm.

The Exterior

All areas are accessed via a card-swipe system. The control panels for this are located at a sensible height for wheelchair users.

Dietary needs

Our catering team are well aware that people have different dietary requirements and are happy to meet these needs if indicated in advance.

Healthcare

There are a number of First Aiders on site in the event of an emergency. There is a College Nurse on site during term time and there is a large A & E department at Addenbrookes Hospital which is a 2 minute drive from the Conference Centre.

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