



INTERNATIONAL SOFT MATTER CONFERENCE

3-7 JUNE 2019

#ISMC2019
WWW.ISMC2019.ED.AC.UK

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27th May 2019

Dear delegate

Welcome to the International Soft Matter Conference 2019 in Edinburgh. This is the fifth in a series of triennial meetings organised under the auspices of the SoftComp Network. Our generous sponsors are gratefully acknowledged on the following pages (and links to their websites can be found on the conference app).

The rest of this booklet gives you all the essential information you will need to navigate your way through the Conference. If you want a hard copy, you need to print it for yourself. Note that this pdf is searchable; in particular, you can find your presentation slot, whether talk or poster, by searching for your name. More detailed information, including all the abstracts, can be found on the conference app (free, search for ISMC on Android and Apple app stores) for downloading to your device.

On behalf of all the organisers, I wish you a fruitful and enjoyable conference.

Yours

Chair, International Programme Committee

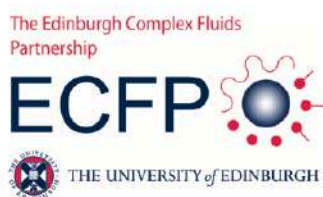
Wilson C K Poon, FRSE
Professor of Natural Philosophy

Our Sponsors

Soft Matter

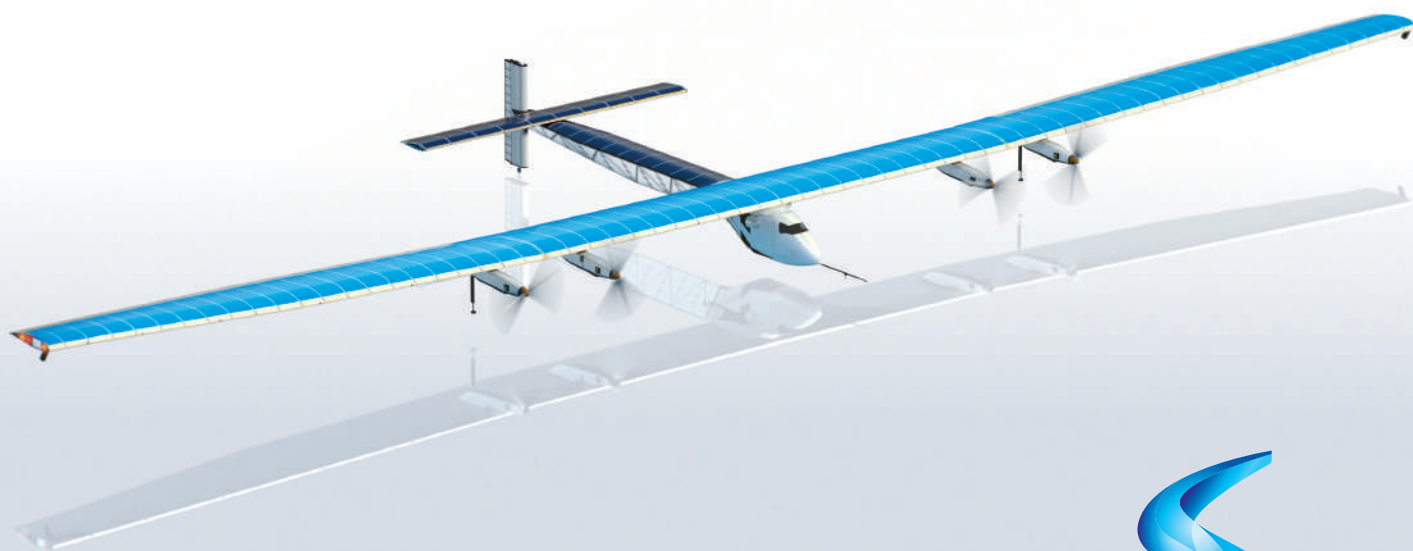


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Venues

Registration and Information

Registration (Monday 3rd June 10:00-12:00): **McEwan Hall**

Help Desks (throughout): **McEwan Hall** and **Appleton Tower**

Scientific Programme

Plenary lectures: **McEwan Hall**

Keynote and contributed talks: **Appleton Tower**

Poster sessions: **McEwan Hall**

Exhibitions: **Appleton Tower**

Catering

Monday lunch: **McEwan Hall**

Tuesday to Thursday lunch: **McEwan Hall** and **Appleton Tower**

Vegetarian options are available at both venues; other special dietary requirements are catered for at the Appleton Tower (please identify yourselves to the catering staff, who will advise).

Friday lunch: **Appleton Tower**

Coffee/tea breaks: **McEwan Hall** and **Appleton Tower**

Reception (Monday 3rd June, 7 pm): **Teviot Row House**

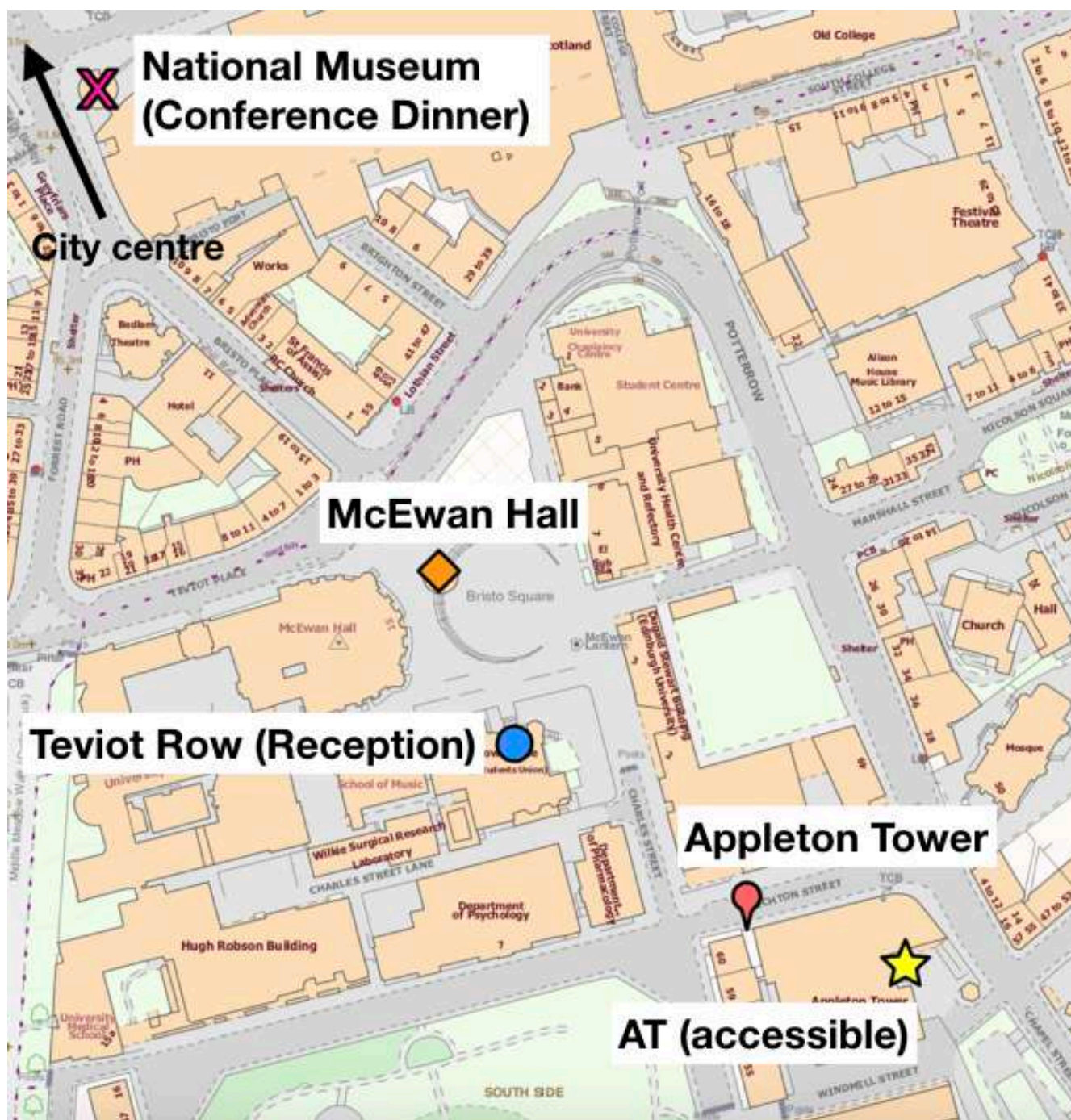
Refreshments @ posters (Tuesday 4th, Wednesday 5th June; sponsored by Zeiss): **McEwan Hall**

Gala Dinner (Thursday 6th June, 7 pm, sponsored by Solvay): **National Museum of Scotland**
(Beyond drinks included, there will be a cash bar at both the Reception and the Gala Dinner.)

Wireless access

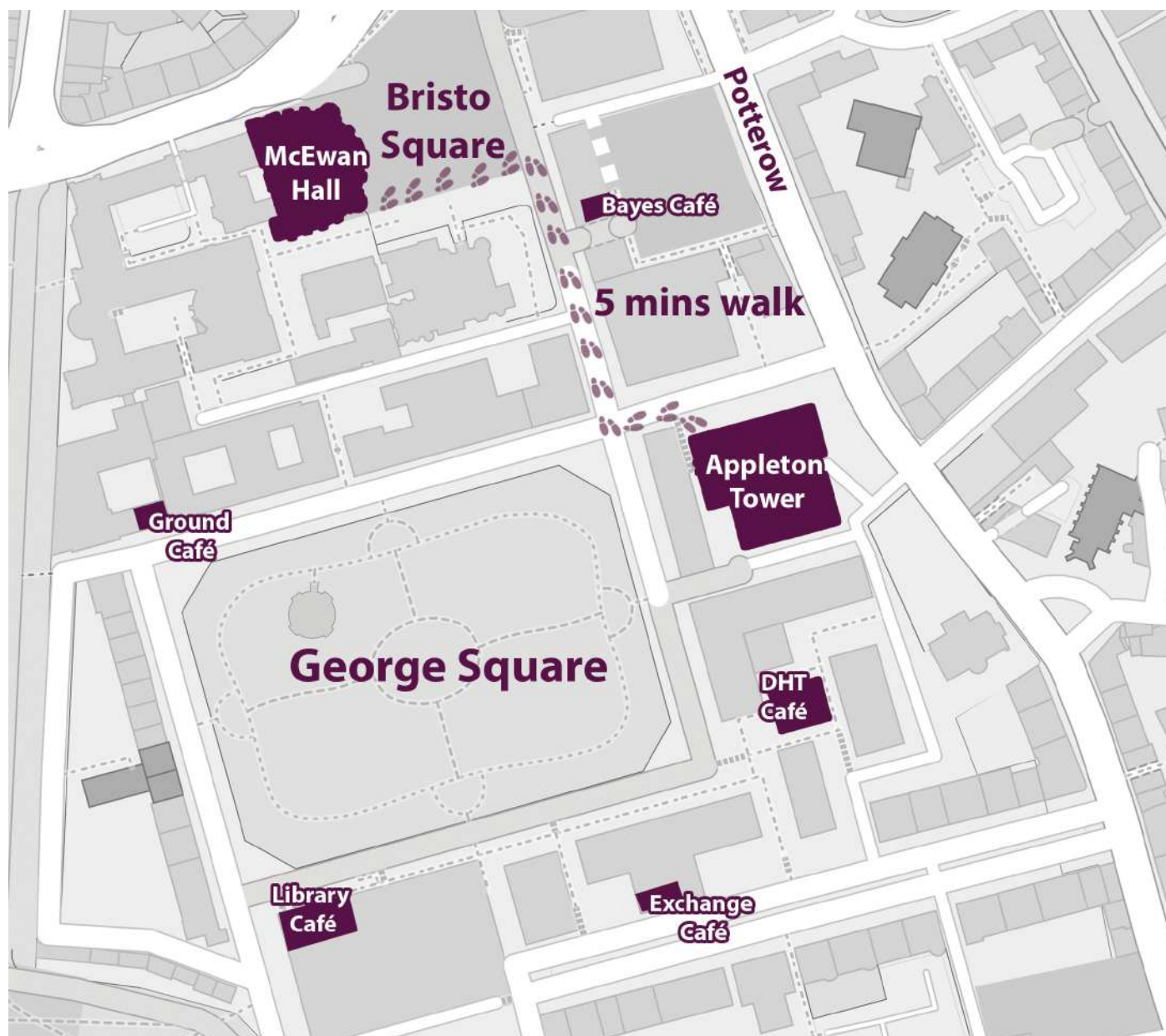
The eduroam network is available at any of the above sites except the National Museum. You can pick up a wifi pass for the University's Central network at registration, which also works at all University sites. The Optify network is available in the McEwan Hall only (no password needed). The city's EdiFreeWiFi network is available in the central areas shown on the right.





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University cafés nearby



Information for presenters

Information for plenary speakers

All plenary talks will take place in the **McEwan Hall auditorium**. Presentations are **45 minutes** long followed by 15 minutes of questions. The chair will indicate when 5 minutes of presentation time remains and stand up and approach the stage when 1 minute remains.

Please meet local staff in the auditorium 20 minutes before your lecture to connect your laptop, check your presentation and attach wireless microphone.

Connection to the projection equipment is via an HDMI or VGA; we ask that presenters *bring their own adapters* if such are needed to make these connections.

We will provide a clicker/laser pen (if required). This will connect via a USB-A connector; again please bring suitable adaptors if such are needed for your laptops.

Information for keynote and contributed talks speakers

All talks will take place in the **Appleton Tower** (Lecture Theatres 1, 2, 4 and 5).

Keynote talks are **30 minutes** long followed by 10 minutes for questions and changeover. **Contributed** talks are **15 minutes** long with 5 minutes for questions and changeover. The chair will indicate when 5 minutes presentation time remain and stand up when 1 minute remains.

Speakers should go to the relevant lecture theatre during the catering break (coffee/tea or second half of lunch) prior to the session to check their presentations display correctly from their laptops. (In addition, the lecture theatres will be staffed on the morning of Monday 3rd June – so do feel free to go there and try out your presentation immediately after you have registered.)

Connection to the projection equipment is via HDMI or VGA; we ask that presenters *bring their own adapters* if such are needed to make these connections.

The laptop of a contributed talk speaker will be disconnected during questions to allow the next speaker to connect up.

For presenters without their own laptops we have a Windows 10 guest machine onto which PDF and PowerPoint (2016 edition) files can be loaded. In this case, please bring a USB-A compatible pen- or hard-drive at the start of the catering break prior to their session to load up.

We will provide a clicker/laser pen (if required). This will connect via a USB-A connector; again please bring suitable adaptors if such are needed for your laptops.

Information for poster presenters

There will be two posters sessions: 17:00-19:00 on Tuesday 4th and Wednesday 5th June. There are numbered poster boards in the McEwan Hall basement Foyers 1-4. Check the code of your poster (most easily from the poster index in the Conference Booklet pdf) and put it up from 9 am of the day of your presentation. We will provide the means for you to attach the posters to the boards. As noted in the original email sent to you accepting your contribution, we can accommodate up to A0 (841 wide x 1189 height mm) posters only **in portrait (vertical) format**.

Please take down your posters at the end of each session. Any posters not taken down will be removed and discarded.

The winners of ‘most popular poster’ prizes (one per session) will be notified by email on Thursday 6th June, and the prizes will be presented to them before the plenary lecture on Friday 7th.

| | | | | | | | | | | | | |
|-----------|---|--|------------------------------|---|--|--|--|--|--|--|--|--|
| | Monday 3rd | | | | | | | | | | | |
| Location: | McEwan Hall | Appleton Tower 1 | Appleton Tower 2 | Appleton Tower 4 | Appleton Tower 5 | | | | | | | |
| 09:00 | | | | | | | | | | | | |
| 09:30 | | | | | | | | | | | | |
| 10:00 | Registration | | | | | | | | | | | |
| 10:30 | | | | | | | | | | | | |
| 11:00 | | | | | | | | | | | | |
| 11:30 | | | | | | | | | | | | |
| 12:00 | Lunch | | | | | | | | | | | |
| 12:30 | | | | | | | | | | | | |
| 13:00 | Opening/ Welcome | | | | | | | | | | | |
| 13:30 | | | | | | | | | | | | |
| 14:00 | Cipelletti | | | | | | | | | | | |
| 14:30 | | | | | | | | | | | | |
| 15:00 | Coffee Break | | | | | | | | | | | |
| 15:30 | | Colloidal Soft Matter A | Arrested Soft Matter A | Active Soft Matter A | Making Soft Matter A | | | | | | | |
| 16:00 | | | | | | | | | | | | |
| 16:30 | | | | | | | | | | | | |
| 17:00 | | | | | | | | | | | | |
| 17:30 | Break | | | | | | | | | | | |
| 18:00 | Ramaswamy | | | | | | | | | | | |
| 18:30 | | | | | | | | | | | | |
| 19:00 | Reception (Teviot) | | | | | | | | | | | |
| | Tuesday 4th | | | | | | | | | | | |
| Location: | McEwan Hall | Appleton Tower 1 | Appleton Tower 2 | Appleton Tower 4 | Appleton Tower 5 | | | | | | | |
| 09:00 | Bocquet | | | | | | | | | | | |
| 09:30 | | | | | | | | | | | | |
| 10:00 | Coffee Break | | | | | | | | | | | |
| 10:30 | | Processing Soft Matter A | Self-assembled Soft Matter A | Living Soft Matter C | Polymeric Soft Matter A | | | | | | | |
| 11:00 | | | | | | | | | | | | |
| 11:30 | | | | | | | | | | | | |
| 12:00 | | | | | | | | | | | | |
| 12:30 | Lunch | | | | | | | | | | | |
| 13:00 | | Self-assembled Soft Matter C | Polymeric Soft Matter C | Active Soft Matter B | Colloidal Soft Matter B | | | | | | | |
| 13:30 | | | | | | | | | | | | |
| 14:00 | | | | | | | | | | | | |
| 14:30 | | | | | | | | | | | | |
| 15:00 | Coffee Break | | | | | | | | | | | |
| 15:30 | White | | | | | | | | | | | |
| 16:00 | | | | | | | | | | | | |
| 16:30 | | | | | | | | | | | | |
| 17:00 | | | | | | | | | | | | |
| 17:30 | Poster Session I | | | | | | | | | | | |
| 18:00 | | | | | | | | | | | | |
| 18:30 | | | | | | | | | | | | |
| 19:00 | | | | | | | | | | | | |
| | Wednesday 5th | | | | | | | | | | | |
| Location: | McEwan Hall | Appleton Tower 1 | Appleton Tower 2 | Appleton Tower 4 | Appleton Tower 5 | | | | | | | |
| 09:00 | Perkin | | | | | | | | | | | |
| 09:30 | | | | | | | | | | | | |
| 10:00 | Coffee Break | | | | | | | | | | | |
| 10:30 | | Making Soft Matter B | Polymeric Soft Matter B | Arrested Soft Matter C | Active Soft Matter C | | | | | | | |
| 11:00 | | | | | | | | | | | | |
| 11:30 | | | | | | | | | | | | |
| 12:00 | | | | | | | | | | | | |
| 12:30 | Lunch | | | | | | | | | | | |
| 13:00 | | Processing Soft Matter B | Arrested Soft Matter D | Interfacial Soft Matter C | Self-assembled Soft Matter B | | | | | | | |
| 13:30 | | | | | | | | | | | | |
| 14:00 | | | | | | | | | | | | |
| 14:30 | | | | | | | | | | | | |
| 15:00 | Coffee Break | | | | | | | | | | | |
| 15:30 | Craig | | | | | | | | | | | |
| 16:00 | | | | | | | | | | | | |
| 16:30 | | | | | | | | | | | | |
| 17:00 | | | | | | | | | | | | |
| 17:30 | Poster Session II | | | | | | | | | | | |
| 18:00 | | | | | | | | | | | | |
| 18:30 | | | | | | | | | | | | |
| 19:00 | | | | | | | | | | | | |
| | Thursday 6th | | | | | | | | | | | |
| Location: | McEwan Hall | Appleton Tower 1 | Appleton Tower 2 | Appleton Tower 4 | Appleton Tower 5 | | | | | | | |
| 09:00 | Ito | | | | | | | | | | | |
| 09:30 | | | | | | | | | | | | |
| 10:00 | Coffee Break | | | | | | | | | | | |
| 10:30 | | Arrested Soft Matter B | Colloidal Soft Matter C | Interfacial Soft Matter A | Living Soft Matter A | | | | | | | |
| 11:00 | | | | | | | | | | | | |
| 11:30 | | | | | | | | | | | | |
| 12:00 | | | | | | | | | | | | |
| 12:30 | Lunch | | | | | | | | | | | |
| 13:00 | | Making Soft Matter C | Processing Soft Matter C | Interfacial Soft Matter B | Living Soft Matter B | | | | | | | |
| 13:30 | | | | | | | | | | | | |
| 14:00 | | | | | | | | | | | | |
| 14:30 | | | | | | | | | | | | |
| 15:00 | Coffee Break | | | | | | | | | | | |
| 15:30 | Dogterom | | | | | | | | | | | |
| 16:00 | | | | | | | | | | | | |
| 16:30 | | | | | | | | | | | | |
| 17:00 | | | | | | | | | | | | |
| 19:00 | Gala Dinner (National Museum of Scotland) | | | | | | | | | | | |
| | Friday 7th | | | | | | | | | | | |
| Location: | McEwan Hall | Appleton Tower 1 | Appleton Tower 2 | Appleton Tower 4 | Appleton Tower 5 | | | | | | | |
| 09:00 | MacPhee | | | | | | | | | | | |
| 09:30 | | | | | | | | | | | | |
| 10:00 | Coffee Break | | | | | | | | | | | |
| 10:30 | | Polymeric Soft Matter D & Self-assembled Soft Matter D | Interfacial Soft Matter D | Active Soft Matter D & Living Soft Matter D | Colloidal Soft Matter D & Processing Soft Matter D | | | | | | | |
| 11:00 | | | | | | | | | | | | |
| 11:30 | | | | | | | | | | | | |
| 12:00 | | | | | | | | | | | | |
| 12:30 | Lunch | | | | | | | | | | | |
| 13:00 | | | | | | | | | | | | |
| 13:30 | | | | | | | | | | | | |

Schedule of Talks

Organisation of topics into sessions

Each of the nine conference topics attracts three or four sessions, A, B, C and sometimes D. Sessions A and B each opens with a keynote talk followed by 4 contributed talks, while sessions C and D each comprises 6 contributed talks. Under each topic, the programme lists the sessions in their chronological order, which is sometimes not alphabetical; thus, e.g., the sessions for Interfacial Soft Matter are ordered C, A, B, D. In a few cases, the D session of two topics, e.g., Colloidal and Processing & Stressed Soft Matter, are joint.

Plenary Talks

All plenary talks are held in McEwan Hall.

- Monday, June 3 14:00 *Why soft solids fail*
 Luca Cipelletti (University of Montpellier)
- Monday, June 3 18:00 *Fast, Elastic, Defective, Active Matter*
 Sriram Ramaswamy (Indian Institute of Science, Bengaluru)
- Tuesday, June 4 9:00 *Flow and rheology at ultimate scales*
 Lydéric Bocquet (CNRS, ENS)
- Wednesday, June 5 9:00 *A Cabinet of Curiosities: Stories of Electrostatics in Soft Matter*
 Susan Perkin (University of Oxford)
- Wednesday, June 5 16:00 *Macromolecular Mechanochemistry*
 Stephen Craig (Duke University)
- Thursday, June 6 9:00 *Tough topological polymers and their applications to energy-efficient vehicles and medicine*
 Kohzo Ito (University of Tokyo)
- Thursday, June 6 16:00 *Building synthetic cells*
 Marileen Dogterom (TU Delft)
- Friday, June 7 9:00 *Biofilms: Whats in it for Soft Matter?*
 Cait MacPhee (University of Edinburgh)

Special Session: The 2019 RSC Soft Matter Lecture

(McEwan Hall)

- Tuesday, June 4 16:00 *Pixelated Polymers: Programming Function into Liquid Crystalline Polymer Networks and Elastomers*
 Tim White (University of Colorado Boulder)

Active Soft Matter

Session A: *The Appleton Tower Lecture Theatre 4*

Monday, June 3

15:30 **Keynote:** *Spontaneous and driven active matter flows*

CLÉMENT, Eric

16:10 *Group formation and cohesion of active particles with visual perception-dependent motility*

LAVERGNE, Francois A.

16:30 *Controlling efficiently active soft matter with light: from optical microfibers to photokinetic cells*

MAGGI, Claudio

16:50 *Active apolar doping determines routes to colloidal clusters and gels*

MASSANA-CID, Helena

17:10 *Resonant motion of magnetocapillary swimmers: lattice-Boltzmann simulations*

SUKHOV, Alexander

Session B: *The Appleton Tower Lecture Theatre 4*

Tuesday, June 4

13:30 **Keynote:** *Optimal navigation strategies of active colloids in complex environment*

LÖWEN, Hartmut

14:10 *Lattice Boltzmann simulations of collective phenomena in microswimmer suspensions*

BARDFALVY, Dora

14:30 *Bottom-up mechanisms for the emergence of swarming*

CHARLESWORTH, Henry

14:50 *Effective Interactions and Dynamics of Active Colloids in Phase Separating Medium*

NARAYANAN, Theyencheri

15:10 *Self-propelled particles in 3D: phase behaviour and dynamics*

SAKAI, Nariaki

Session C: *The Appleton Tower Lecture Theatre 5*

Wednesday, June 5

10:30 *Bistability in wall aggregation of active Brownian particles*

CHELAKKOT, Raghunath

10:50 *Dial-a-plume: Localised Photo-Bio-Convection On Demand*

POLIN, Marco

11:10 *Optimizing dissipation in active matter: dynamical phase transitions, clustering and collective motion*

FODOR, Etienne

11:30 *Acoustic confinement of swimming bacteria*

HOYOS, Mauricio

11:50 *Active matter and active materials: Emerging behavior in intrinsically out of equilibrium systems*

PAGONABARRAGA, Ignacio

12:10 *Active filaments: Emergent conformational and dynamical properties*

WINKLER, Roland G.

Session D (shared with Living Soft Matter): *The Appleton Tower Lecture Theatre 4*

Friday, June 7

10:30 *Defect dynamics and reconfigurable flows in confined active soft matter*

IGNÉS-MULLOL, Jordi

10:50 *Correlation length of bacterial turbulence*

MARTINEZ, Vincent Arnaud

11:10 *Wave Front Propagation Speeds in a Bacteriophage - Bacteria System*

CLAYDON, Rory

11:30 *Active vesicles: a minimal model for cell motility*

ABAURREA-VELASCO, Clara

11:50 *Stress management in composite biopolymer networks*

TAUBER, Justin

12:10 *Hydrodynamic coupling between artificial cilia*

VILFAN, Mojca

Arrested Soft Matter

Session A: *The Appleton Tower Lecture Theatre 2*

Monday, June 3

15:30 **Keynote:** *Topology, softness and rigidity in gel networks*

DEL GADO, Emanuela

16:10 *Strain localisation during yielding of soft materials*

BARLOW, Hugh

16:30 *Multi-scale relaxation in aging gels: from localized plastic events to system-spanning ‘quakes’*

BUZZACCARO, Stefano

16:50 *Microscopic Force Measurements in Colloidal Gels*

DONG, Jun

17:10 *Using sequential gelation as a method to direct gel structure and mechanics*

IMMINK, Jasper

Session C: *The Appleton Tower Lecture Theatre 4*

Wednesday, June 5

10:30 *Surface Active Microgels: a step towards soft stabilisers*

CROSBY, David

10:50 *Strongly heterogeneous motion at the depinning transition in dense dispersions*

FUCHS, Matthias

11:10 *The microscopic role of deformation in the dynamics of soft colloids*

GNAN Nicoletta

11:30 *Relaxation of weakly self-propelled particles dramatically changes at glass transition*

LEOCMACH, Mathieu

11:50 *Sheared colloidal gels: Effects of having a viscoelastic matrix*

MASSARO, Roberta

12:10 *Anisotropic Dynamics and Kinetic Arrest of Dense Colloidal Ellipsoids in the Presence of an External Field Studied by Differenti*

PAL, Antara

Session D: *The Appleton Tower Lecture Theatre 2*

Wednesday, June 5

13:30 *Chain-length dependent relaxation dynamics and glass-formation in polymers*

MATTSSON, Johan

13:50 *Correlations and forces in sheared fluids with or without quenching*

ROHWER, Christian

14:10 *Orthogonal superposition rheometry of model colloidal glasses with short-ranged attractions*

PETEKIDIS, George

14:30 *Shear-stress relaxation in free-standing polymer films*

WITTMER, J. P.

14:50 *Jamming in star polymer solutions and melts*

GURY, Leo

15:10 *Jamming and yielding in an athermal dense suspension of amorphous particles*

MAJUMDAR, Sayantan

Session B: *The Appleton Tower Lecture Theatre 1*

Thursday, June 6

10:30 **Keynote:** *Towards an Understanding of the Glass Transition? Insights from Experiment and Simulation*

ROYALL, Paddy

11:10 *Microscopic pathways for stress relaxation in repulsive colloidal glasses*

DALLARI, Francesco

11:30 *Arresting colloidal model systems*

NIKOLAENKOVA, Anna

11:50 *Slowing down supercooled liquids by manipulating their local structure*

SMALLENBURG, Frank

12:10 *How active forces influence nonequilibrium glass transitions*

SZAMEL, Grzegorz

Colloidal Soft Matter

Session A: *The Appleton Tower Lecture Theatre 1*

Monday, June 3

15:30 **Keynote:** *Law and Disorder: The unusual behaviour of ultraweak crystals*

SPRAKEL, Joris

16:10 *Nanoscale optical imaging of individual and densely packed microgel colloids*

SCHEFFOLD, Frank

16:30 *Distributions of first passage times reveal underlying free energy landscapes*

THORNEYWORK, Alice

16:50 *Aggregation of colloidal particles in the presence of hydrophobic anions*

TREFALT, Gregor

17:10 *Vertically-vibrated granular rods: topological defects and influence of imposed geometry*

VELASCO, Enrique

Session B: *The Appleton Tower Lecture Theatre 5*

Tuesday, June 4

13:30 **Keynote:** *Mix and Melt Colloidal engineering*

SACANNA, Stefano

14:10 *Assembly of patterned colloids close to a patterned substrate*

BIANCHI, Emanuela

14:30 *Reentrant transitions of adaptive dsDNA colloids*

LAURATI, Marco

14:50 *Dynamics of a forced large colloidal particle in a bath of colloidal hard spheres: Simulations and theory*

PUERTAS, Antonio

15:10 *An electric field responsive colloidal metamaterial*

ROGIER, Faranaaz

Session C: *The Appleton Tower Lecture Theatre 2*

Thursday, June 6

10:30 *Environmental nanoparticle-induced toughening and pinning of a crack in a biopolymer hydrogel*

BAUMBERGER, Tristan

10:50 *Hard times for hard spheres: Enhanced crystallization of the Laves phase from soft colloids*

COLI, Gabriele Maria

11:10 *Dynamics of soft and permeable particles suspensions*

NAEGELE, Gerhard

11:30 *Modification of wave velocity in a string fluid*

SCHWABE, Mierk

11:50 *What controls the response of soft microgels to overcrowded environments: cross-link density or architecture?*

SCOTTI, Andrea

12:10 *Shape is coupled to diffusion for flexible colloidal chains*

VERWEIJ, Ruben W.

Session D (shared with Processing & Stressed Soft Matter): *The Appleton Tower Lecture Theatre 5*

Friday, June 7

10:30 *Reversible cluster formation, gelation and glassy dynamics in colloidal dispersions*

CASTAÑEDA-PRIEGO, Ramón

10:50 *Structure of colloidal dispersions under shear probed by X-ray cross-correlation analysis*

KOOF, Michael

11:10 *Advanced modelling of microgel structure across the volume phase transition*

NINARELLO, Andrea

11:30 *External and internal deformations of colloidal crystals*

BUTTINONI, Ivo

11:50 *Extrusion of shear thickening suspensions: Variations in local solid concentrations*

O'NEILL, Rory

12:10 *Dynamics of non-spherical particles in non-Newtonian fluids with applications to microfluidic separations*

NARSIMHAN, Vivek

Interfacial Soft Matter

Session C: *The Appleton Tower Lecture Theatre 4*

Wednesday, June 5

13:30 *Capillary phenomena in miscible fluids*

CARBONARO, Alessandro

13:50 *Investigating the aging of model liquid infused porous surfaces*

GOODBAND, Sarah

14:10 *Phase transitions on non-uniform curved surfaces: Coupling between phase and location*

LAW, Jack O.

14:30 *Thermophoresis in self-associating systems*

PIAZZA, Roberto

14:50 *Time-resolved charging dynamics of confined electric double layer*

TIVONY, Ran

15:10 *Biologically Active Liquid Crystal Droplets*

SHARMA, Kamendra

Session A: *The Appleton Tower Lecture Theatre 4*

Thursday, June 6

10:30 **Keynote:** *Growing and shrinking bubbles, enhanced Ostwald ripening via mass transport in nanometer thick films*

DAGASTINE, Ray

11:10 *How to unify diffusio-phoresis, Marangoni and osmotic flows with interfacially driven transport of soft matter?*

BACCHIN, Patrice

11:30 *The effect of interfacial viscosity on the dynamics, rheology, and breakup of droplets*

NARSIMHAN, Vivek

11:50 *Soluble surfactant spreading: How the amphiphilicity sets the Marangoni hydrodynamics*

SAINT-JALMES, Arnaud

12:10 *Dynamics of Membrane Wrapping of Microparticles*

SPANKE, Hendrik

Session B: *The Appleton Tower Lecture Theatre 4*

Thursday, June 6

13:30 **Keynote:** *Demixing on curved surfaces*

KRAFT, Daniela

14:10 *Formation of Suspended Bilayers at the Air-Water Interface: A Novel Bacterial Membrane Mimic*

AYSCOUGH, Sophie

14:30 *Ions can generate large membrane curvatures*

MARZIEH Karimi

14:50 *Collective dynamics in a mixed lipid bilayer*

NAGAO, Michihiro

15:10 *Nanoparticle engulfment by bilayer membranes with compositional asymmetry*

SREEKUMARI, Aparna

Session D: *The Appleton Tower Lecture Theatre 2*

Friday, June 7

10:30 *How are salivary pellicles affected by surfactants of different ionic character?*

BOYD, Hannah

10:50 *Anisotropic self-assembly from isotropic colloidal building blocks*

BUZZA, Martin

11:10 *Microgels adsorbed at liquid-liquid interfaces: insights from realistic modelling and experiments*

CAMERIN, Fabrizio

11:30 *Confocal microscopy study of the interaction between particle-stabilised droplets and a solidification front*

DICKINSON, Katy

11:50 *Ionic Coulomb blockade as a fractional Wien effect*

KAVOKINE, Nikita

12:10 *Tribological properties of nanoconfined ionic liquids at metallic interfaces*

LAINE, Antoine

Living Soft Matter

Session C: *The Appleton Tower Lecture Theatre 4*

Tuesday, June 4

10:30 *Tooling up to build an artificial cell*

BEALES, Paul

10:50 *Phase transition behaviour in single solid-supported lipid bilayer*

GERELLI, Yuri

11:10 *Model of ciliated-cell collective behavior and mucus transport in bronchial epithelium*

GSELL, Simon

11:30 *Misalignment between magnetic dipole moment and cell axis in the magnetotactic bacterium *Magnetospirillum magneticum* AMB-1*

LE NAGARD, Lucas

11:50 *Fluid flow and motility control initial bacterial colonization on curved surfaces*

SECCHI, Eleonora

12:10 *Low Dose Antibiotics Can Cause Bacterial Aggregation*

TAVADDOD, Sharareh

Session A: *The Appleton Tower Lecture Theatre 5*

Thursday, June 6

10:30 **Keynote:** *Phase-separation in an elastic matrix: from living cells to synthetic materials*

DUFRESNE, Eric

11:10 *Unjamming overcomes kinetic arrest in terminally differentiated cells and promotes collective motility of carcinoma*

GIAVAZZI Fabio

11:30 *Toward the creation of 2D or 3D clusters of cells in acoustic levitation*

JEGER, Nathan

11:50 *Confinement-induced transition between wave-like collective cell migration modes*

LE GOFF, Magal

12:10 *Label-free, spatio-temporal monitoring of cytosolic mass, osmolarity and volume, in living cells*

MIDTVEDT, Daniel

Session B: *The Appleton Tower Lecture Theatre 5*

Thursday, June 6

13:30 **Keynote:** *Peeking and poking biological matter using optical tweezers in combination with single-molecule fluorescence microscopy*

PETERMAN, Erwin

14:10 *Bacterial chromosome organization: special crosslinks, confinement effects and molecular crowders play the pivotal roles*

CHATTERJI, Apratim

14:30 *Inter-protein forces as a cell-membrane organization principle*

DESTAINVILLE, Nicolas

14:50 *Adhesion remodelling upon cell shrinking*

STAYKOVA, Margarita

15:10 *Bacteria as living patchy colloids: Phenotypic heterogeneity in surface adhesion*

VISSERS, Teun

Session D (shared with Active Soft Matter): *The Appleton Tower Lecture Theatre 4*

Friday, June 7

See Active Soft Matter Session D for detail.

Making and Measuring Soft Matter

Session A: *The Appleton Tower Lecture Theatre 5*

Monday, June 3

15:30 **Keynote:** *Hierarchical biomechanics: from single folded proteins to cross-linked protein networks*

DOUGAN, Lorna

16:10 *Design and synthesis of catalytically active CoFe_2O_4 @Pt nanostructures*

MARTINEZ, Yeimy

16:30 *Functional Multicomponent Protein Networks with Tunable Domain Size*

RIOS DE ANDA, Ioatzin

16:50 *The structural colors of random assembled monodisperse colloids*

SCHERTEL, Lukas

17:10 *Biomimetic folding particle chains*

VAN OOSTRUM, Peter

Session B: *The Appleton Tower Lecture Theatre 1*

Wednesday, June 5

10:30 **Keynote:** *Measuring Flow in Yield Stress Fluids*

LYNCH, Matt

11:10 *Tracking-free one- and two-point microrheology of soft materials*

CERBINO, Roberto

11:30 *Colloidal SU-8 polymer rods for three-dimensional confocal imaging and optical tweezing*

FERNÁNDEZ-RICO, Carla

11:50 *Operation Windows for Interfacial Rheometry*

RENGGLI, Damian

12:10 *Learning force fields from stochastic trajectories*

RONCERAY, Pierre

Session C: *The Appleton Tower Lecture Theatre 1*

Thursday, June 6

13:30 *'Hot Spots' in pore scale flow through soft carbon fibre felt electrodes limit the efficiency of Redox Flow**Battery operation*

BOEK, Edo

13:50 *Polymer dynamics and the new high-resolution J-NSE at MLZ*

PASINI, Stefano

14:10 *Bottom-up Synthesis of Polymeric Micro- and Nanoparticles with Regular Anisotropic Shapes*

LESOV, Ivan

14:30 *Switchable 3d morphing configurations by stimuli responsive heterogeneous hydrogel*

LI, Yifan

14:50 *Polymeric nanoparticles aplenty*

NIKOUBASHMAN, Arash

15:10 *Preserving the cavity of hollow microgels by introducing charges into the polymeric network*

TURNHOFF, Sarah K.

Polymeric Soft Matter

Session A: *The Appleton Tower Lecture Theatre 5*

Tuesday, June 4

10:30 **Keynote:** *Flow-Induced Crystallization of Engineering Thermoplastics*

COLBY, Ralph

11:10 *Load distributions in multi-network elastomers*

BOSE, Anwesha

11:30 *Biompatible hydrogels: formation and structure*

RAFFAELLI, Chiara

11:50 *Domain formation in compaction of a semiflexible polymer*

CURK, Tine

12:10 *Random-packed structures of rings as a model system of Soft Matter problems*

GARCÍA, Nicolás A.

Session C: *The Appleton Tower Lecture Theatre 2*

Tuesday, June 4

13:30 *General methodology to identify the minimum alphabet size for heteropolymer design*

COLUZZA, Ivan

13:50 *A geometric model for the erosion and fragmentation of polymers in the ocean*

FABRE, Pascale

14:10 *Structure and Dynamics of Single-Chain Polymeric Nanoparticles under Shear Flow in Dilute and Concentrated Solution*

FORMANEK, Maud

14:30 *Topological Tuning of Polymer Dynamics*

MICHIELETTO, Davide

14:50 *Direct visualization of comb polymer dynamics in unentangled semi-dilute solutions using single molecule studies*

PATEL, Shivani Falgun

15:10 *Characterizing and controlling elastic turbulence in a viscoelastic fluid*

VAN BUEL, Reinier

Session B: *The Appleton Tower Lecture Theatre 2*

Wednesday, June 5

10:30 **Keynote:** *Why ‘bad’ is ‘good’: Polydispersity in polymeric nanostructures*

SCHMID, Friederike

11:10 *Nanocomposites Drying : Structural Evolution from Solution to Solid*

ERMAN, Azad

11:30 *The microscopic origin of the rheology in supramolecular entangled polymers*

GOLD, Barbara

11:50 *Unipletion in colloid-polymer mixtures*

GONZÁLEZ GARCÍA, Álvaro

12:10 *Structure and elasticity of the endothelial glycocalyx*

LOBASKIN, Vladimir

Session D (shared with Self-assembled Soft Matter): *The Appleton Tower Lecture Theatre 1*

Friday, June 7

10:30 *Smart Adsorption, playing with geometry to enhance selectivity*

CAPONE, Barbara

10:50 *Investigating DNA-based dendrimers: theory and experiment*

JOCHUM, Clemens

11:10 *Polymer foams by using microfluidics*

RUSSO, Maria

11:30 *Silk: A natural example of a sticky entangled polymer*

SCHAEFER, Charley

11:50 *Material properties of hybrid lipid-polymer vesicles: towards artificial systems for enhanced membrane protein function*

SENEVIRATNE, Rashmi

12:10 *Condensation and demixing in solutions of DNA nanostars and their mixtures*

LOCATELLI, Emanuele

Processing & Stressed Soft Matter

Session A: *The Appleton Tower Lecture Theatre 1*

Tuesday, June 4

10:30 **Keynote:** *Cavitation and Puncture: Crack Nucleation in Soft Solids*

CROSBY, Al

11:10 *Soft lubrication with polymer brushes*

BUREAU, Lionel

11:30 *Demonstrating stress transfer between networks in multiple network elastomers with mechanochemistry*

CHEN Yinjun

11:50 *High dynamic range, bio-inspired stress-sensing in polymers*

CLOUGH, Jessica

12:10 *Mechanical Properties and Failure of Physically Assembled Polystyrene-Polyisoprene-Polystyrene Gels in a Mid-block Selective Sol*

Kundu, Santanu

Session B: *The Appleton Tower Lecture Theatre 1*

Wednesday, June 5

13:30 **Keynote:** *From soft matter rheology to civil engineering*

OVARLEZ, Guillaume

14:10 *On flow, fracture and getting jammed – Failure modes in dense suspensions*

BISCHOFBERGER, Irmgrad

14:30 *Temperature Dependent Aging and Yield of Drilling Fluids*

CLARKE, Andrew

14:50 *A minimal-length approach unifies rigidity in under-constrained materials*

MERKEL, Matthias

15:10 *Repulsion, attraction and contact in dense suspensions*

ROYER, John

Session C: *The Appleton Tower Lecture Theatre 2*

Thursday, June 6

13:30 *Sorting cells in microfluidics based on their intrinsic properties*

FEDOSOV, Dmitry

13:50 *Influence of surfactant dynamics on the length scale of avalanches in foam coalescence*

MIKHAILOVSKAYA, Alesya

14:10 *Capillary Rheo-SANS: Measuring the rheology and nanostructure of soft matter at high shear rates*

MURPHY, Ryan P.

14:30 *Crack Propagation Behaviour of Polyurethane Thermoplastic Elastomers in Cyclic Fatigue*

SCETTA, Giorgia

14:50 *Small-scale fracture in soft solids*

STYLE, Robert

15:10 *Dynamics of Viscoelastic Filaments based on Onsager Principle*

ZHOU, Jiajia

Session D (shared with Colloidal Soft Matter): *The Appleton Tower Lecture Theatre 5*

Friday, June 7

See Colloidal Soft Matter Session D for detail.

Self-assembled Soft Matter

Session A: *The Appleton Tower Lecture Theatre 2*

Tuesday, June 4

10:30 **Keynote:** *Ionic Liquid Crystals: Controlling Self-Assembly and Function through Charge and Symmetry*

LASCHAT, Sabine

11:10 *Under the Smectic Blanket: Biaxial, Twist- and Splay-bend nematics revealed destabilizing the Smectic phase of Hard Boomerangs*

CHIAPPINI, Massimiliano

11:30 *Understanding the helix pitch of the equilibrium cholesteric CNC phases*

HONORATO-RIOS, Camila

11:50 *Controlling Gel Properties by Chirality*

DAVE, Adams

12:10 *Monitoring Self-Assembly of Nanocrystal Superlattices by Time- and Space-Resolved SAXS*

LOKTEVA, Irina

Session C: *The Appleton Tower Lecture Theatre 1*

Tuesday, June 4

13:30 *Tracking the Molecular Organisation of Water and Alcohol Mixtures at Hydrophobic Solid Interfaces*

FOSTER, Will

13:50 *Chirality-Controlled Self-Assembly via Topological Defects*

GRELET, Eric

14:10 *Pressure-stimulated supercrystal formation in nanoparticle suspensions*

LEHMKÜHLER, Felix

14:30 *An old tool for a new problem: tunable electrostatic adsorption via Pnipam microgels*

SENNATO, Simona

14:50 *Assembly of clathrates from tetrahedral patchy colloids with narrow patches*

NOYA, Eva G

15:10 *Unique mechanics of biopolymer microgels prepared inside artificial cells*

YANAGISAWA, Miho

Session B: *The Appleton Tower Lecture Theatre 5*

Wednesday, June 5

13:30 **Keynote:** *Squids as soft matter: evolved self-assembly of gradient-index lenses and light guides*

SWEENEY, Alison

14:10 *Colloids Get Creative: Key to Open Crystals*

CHAKRABARTI, Dwaipayan

14:30 *Mosaics of patchy rhombi: from close-packed arrangements to open lattices*

KARNER, Carina

14:50 *Self-assembly of type I collagen fibrils in solution*

NUDELMAN, Fabio

15:10 *Binary Hard Sphere Icosahedral Quasicrystals*

VAN BLAADEREN, Afons

Session D (shared with Polymeric Soft Matter): *The Appleton Tower Lecture Theatre 1*

Friday, June 7

See Polymeric Soft Matter Session D for detail.

Schedule of Posters

McEwan Hall Basement

Session A: Tuesday 4th June 17:00-19:00

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| Interfacial Soft Matter | IN1 | to | IN22 |
| Polymeric Soft Matter | PO1 | to | PO16 |
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| Interfacial Soft Matter | IN23 | to | IN45 |
| Living Soft Matter | LI1 | to | LI16 |
| Making & Measuring Soft Matter | MA1 | to | MA9 |
| Polymeric Soft Matter | PO17 | to | PO43 |
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The presenter of the most popular poster at each session will be awarded a pair of binoculars, kindly donated by Zeiss. The company is also sponsoring the refreshments for both sessions.

Please vote for your most popular poster at each session on the Conference app.

A poster index ordered alphabetically by presenter follows. Abstracts can be found on the app.

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| ALVAREZ, Laura | Reconfigurable thermo-responsive active colloids | AC 2 |
| AOKI, Hiroyuki | Dynamics of poly(methyl methacrylate) chain in thin films during solvent annealing studied by neutron reflectometry | PO 3 |
| AOYAMA, yurina | Fabrication of 2D Charged Colloidal Crystals by Electrostatic Particles Adsorption on Oppositely Charged Substrates | CO 52 |
| ARAKI, Takeaki | Illumination-induced motion of Janus particle in binary mixtures | AC 3 |
| BABU Sujin B | Dynamical arrest in binary colloidal system with static and dynamic cages. | AR 2 |
| BAEK, Yongjoo | A systematic Markovian approximation for active particles | AC 4 |
| BARTY-KING, Charles H | Demonstration of a touch-responsive photonic laminate from cellulosic material and roll-to-roll processing | MA 9 |
| BELL-DAVIES, Miranda | Correlated diffusion of colloidal particles in two-dimensional random confinement | CO 30 |
| BEN XU | New Energy Generator by Trampolining Elastic Gel (NEGTEG) | AC 5 |
| BINTEIN, Pierre | Kirigami fog nets | IN 1 |
| BISWAS, Subhadip | Equilibrium phases of soft macromolecular confinement | IN 2 |
| BLAAK, Ronald | Development of coarse-grained models for polymer materials | PO 5 |
| BOATTINI, Emanuele | Revealing hidden structures with unsupervised learning | CO 2 |
| BOCQUET, Marie-Laure | How Graphene and Hexagonal Boron Nitride get electrified in water? | IN 3 |
| BOEDDEKER, Thomas | The Polymer Network of the Cytoskeleton affects Intracellular Phase Separation in Eukaryotic Cells | LI 1 |
| BOEK, Edo | Enhancing lipid extraction from micro-algae suspensions using depletion flocculation and micro-fluidics | LI 2 |
| BOON, Willem | Surface charging kinetics reveals reaction mechanism | IN 44 |
| BOTIN, Denis | Complete density dependence of charged sphere colloid electrophoretic mobilities. | CO 3 |
| BRADLEY, Joe | Jamming and shear thickening in a centrifuge | CO 4 |
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| BROWN, Aidan | A phase diagram for an active nematic confined to a spherical shell | AC 6 |
| BUREAU, Lionel | Adhesive interactions under flow at blood cell/vascular wall mimetic interfaces | LI 3 |

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| CHAMBON, Lucille | Soft micron-sized hollow rods of high aspect ratio | PO 8 |
| CHANDRAGIRI, Santhan | Active nematics in channels | AC 7 |
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| CHEN, Jinju | How different chemical treatment affects mechanical fingerprint of P.fluorescens biofilms | LI 8 |
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