

PSL Soft and Living Matter days

5th edition - 2025 Program

	Monday 7	Tuesday 8	Wednesday 9
9 - 9.30 am		Coffee reception	Coffee reception
9.30 - 10.15 am		Jérôme Crassous Wei Wang	Vincent Craig Ange Combrouze
10.15 - 11 am		Xiling Song Polina Pavlinova Pierre Jeudy	Aude Sagnimorte Emma Houlegatte Francoise Brochard-Wyart
11 - 11.30 am		Break	Break
11.30 - 12.30 pm		Yanan Liu Shantanu Raikwar Feng-Ching Tsai	Carine Robert Ziyi Zhang Fanny D'orlyé
12.30 - 2 pm	Coffee reception	Break	Break
2 - 2.45 pm	Introductory remarks, Metasoft presentation Anniina Salonen	Zorana Zeravcic Thomas Matreux	Philippe Bourrienne Héloïse Uhl
2.45 - 3.30 pm	Houyeme Mokline Menghua Zhao Ellyn Redheuil	Emmanuelle Marie Yakui Deng	Mathilde Lepoitevin Timothée Derkenne
3.30 - 4 pm	Break	Break	Break
4 - 4.45 pm	Sylvie Coscoy Estelle Lu	Stefano Aimé Guilhem Mariette	Rudy Valette Loren Jorgensen
4.45 - 5.30 pm	Aurélié Mossé Ryan Van Mastrigt	Poster / Flash talk	Anne Mongruel
5.30 - 6.30 pm		Poster session	
7 - 11 pm		Gala - cocktail on the Seine	

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Monday 7th July - From 1.30 pm to 5.30 pm - Amphi IPGG

- 1.30 pm** **Coffee reception**
- 2 pm** **Introductory remarks, Metasoft presentation**
Anniina Salonen - Damping bubble dynamics to modulate foam structure
- 2.45 pm** **Houyeme Mokline** - Ultrasonic Fluidization of Highly Concentrated Suspensions
Menghua Zhao, Kenji Watanabe, Takashi Taniguchi, Jean Comtet - Exponential process of single protons at the liquid-solid interface
Ellyn Redheuil, Margarida Gomes, Sebastian Hutchinson, Ghada Mansour, Adeline Pichard-Kostuch, Ahmed Rehan, Marco Ribezzi-Crivellari, Andrew D. Griffiths - Measuring VHH Kinetics and Specificity at the Single-Molecule Level
- 3.30 pm** **Break**
- 4 pm** **Sylvie Coscoy** - 3D controlled fiber arrays to monitor cell-matrix interactions
Estelle Lu, Bruno Bresson, Jacques Fattaccioli - Shaping of a bio-sourced AESO polymer for micro-encapsulation purposes
- 4.45 pm** **Aurélié Mossé** - ImpressioVivo : a design-led microbial approach to soft & living matter
Ryan Van Mastrigt, Zorana Zeravcic - Guiding Colloidal Refolding using Machine Learning

Tuesday 8th July - From 9 am to 5 pm - Amphi IPGG

- 9 am** **Coffee reception**
- 9.30 am** **Jérôme Crassous** - Textile mechanics : from cotton fiber to knitwear
Wei Wang, Artem Kovalenko, Etienne Barthel - Switchable cavitation in soft matter
- 10.15 am** **Xiling Song, Elif Uyar, Anne Jamet, Mathilde Lepoitevin, Christian Serre** - MOF-Based Microneedles for Synergistic NO/ $\cdot$ OH Antibacterial Therapy
Polina Pavlinova, Ajay Verma, Praneet Nandan, Philippe Nghe - Behaviour of random RNA mixture in the presence of catalytic RNA in complex environments
Pierre Jeudy, Cécile Monteux, Damien Cuvelier, Sylvain Deville - Understanding and mimicking cryopreservation of living cells : in situ observation of freezing of lipid vesicles
- 11 am** **Break**
- 11.30 am** **Yanan Liu** - Self-focusing of swimming bacteria in filament suspensions
Shantanu Raikwar, Nir Gov, Adriana Pesci, Raphaël Jeanneret, Raymond Goldstein - Phototactic decision making by micro-algae
- 12.15 pm** **Gwendal Guerin, Tapas Singha, Quentin Chaboche, John Manz, Sophie Brasselet, Julien Berro, Manos Mavrikakis, Carles Blanch-Mercader, Feng-Ching Tsai** - Topological defects of actin nematics modulated by actin-membrane linker myosin 1 motors
- 12.30 pm** **Break**
- 2 pm** **Zorana Zeravcic** - Artificial chemistries : From designing matter to mimicking life
Thomas Matreux - Thermo-microfluidics drive fractionation processes at the origins of life
- 2.45 pm** **Emmanuelle Marie** - PLL-g-PNIPAM : a powerful tool to tune surface and interface properties

Yakui Deng, Gaoyu Liu, Annie Brûlet, Daniel Dudzinski, Frédéric Vidal, Giao T. M. Nguyen, Cédric Vancaeyzeele, Cédric Plesse, Min-Hui Li - Electroactive Liquid Crystal Elastomers with Low Phase Transition Temperature

3.30 pm Break

4 pm Stefano Aimé - Microscopic origin of fatigue in colloidal gels

Guilhem Mariette, Jean Comtet - Hydrated nanoscale friction on HOPG and hBN: singular frictional properties revealed

4.45 pm Poster / Flash talk

5.30 pm Poster session - **Rooms A & B**

7 pm Cocktail on the Seine



Wednesday 9th July - From 9 am to 5 pm - Amphi IPGG

9 am Coffee reception

9.30 am Vincent Craig - Bubble Coalescence in pure salt solutions and other bubble explorations

Ange Combrouze, Nicolas Passade-Boupat, Alexandra Klimenko, Pascal Panizza, François Lequeux, Laurence Talini, Emilie Verneuil - Effect of bubble size on the stability of flowing liquid films in binary oil mixtures

10.15 am Aude Sagnimorte - Poroelastic particles

Emma Houllegatte, Sylvain Deville, Cécile Cottin-Bizonne, Cécile Monteux - Freezing biomimetic objects to better understand the cryopreservation of living cells

Françoise Brochard-Wyart - Aspiration of plain and hollow gel microparticles and gas vesicles: elasticity and porosity

11 am Break

11.30 am Carine Robert - Chimie des polymères

12.15 pm Ziyi Zhang - Novel NIR-Triggered Photocatalytic Hydrogel Platform for Hydrogen Therapy

Fanny D'orlyé, Alice Am, Camille Lescot, Laura Trapiella Alfonso, Bich-Thuy Doan, Anne Varenne - Nanotheranostic peptide-based agents: from design to formulation

12.30 pm Break

2 pm Philippe Bourrianne - Plant-fungal symbiosis : growth and flows

Héloïse Uhl, Chiara Pompili, Sophie Michelis, Blaise Dumat, Jean-Maurice Mallet, Florence Niedergang, Jacques Fattaccioli - Mechanobiology of phagocytosis: Force mapping by image analysis

2.45 pm Mathilde Lepoitevin - Tunable Nanoporous Membranes Functionalized with Zr-MOF Nanoparticles for Selective Ion Transport

Timothée Derkenne, Corentin Tregouet, Annie Colin - Loop currents in ion-exchange membranes induced by concentration polarization

3.30 pm Break

4 pm Rudy Valette - Stretching, contact line receding and breakup dynamics of capillary bridges between an hydrophobic surface and a bath

Loren Jorgensen - Impacts of drops at low Reynolds number

4.45 pm Anne Mongruel, Antonin Eddi, Philippe Claudin - Lab-grown mineral straws