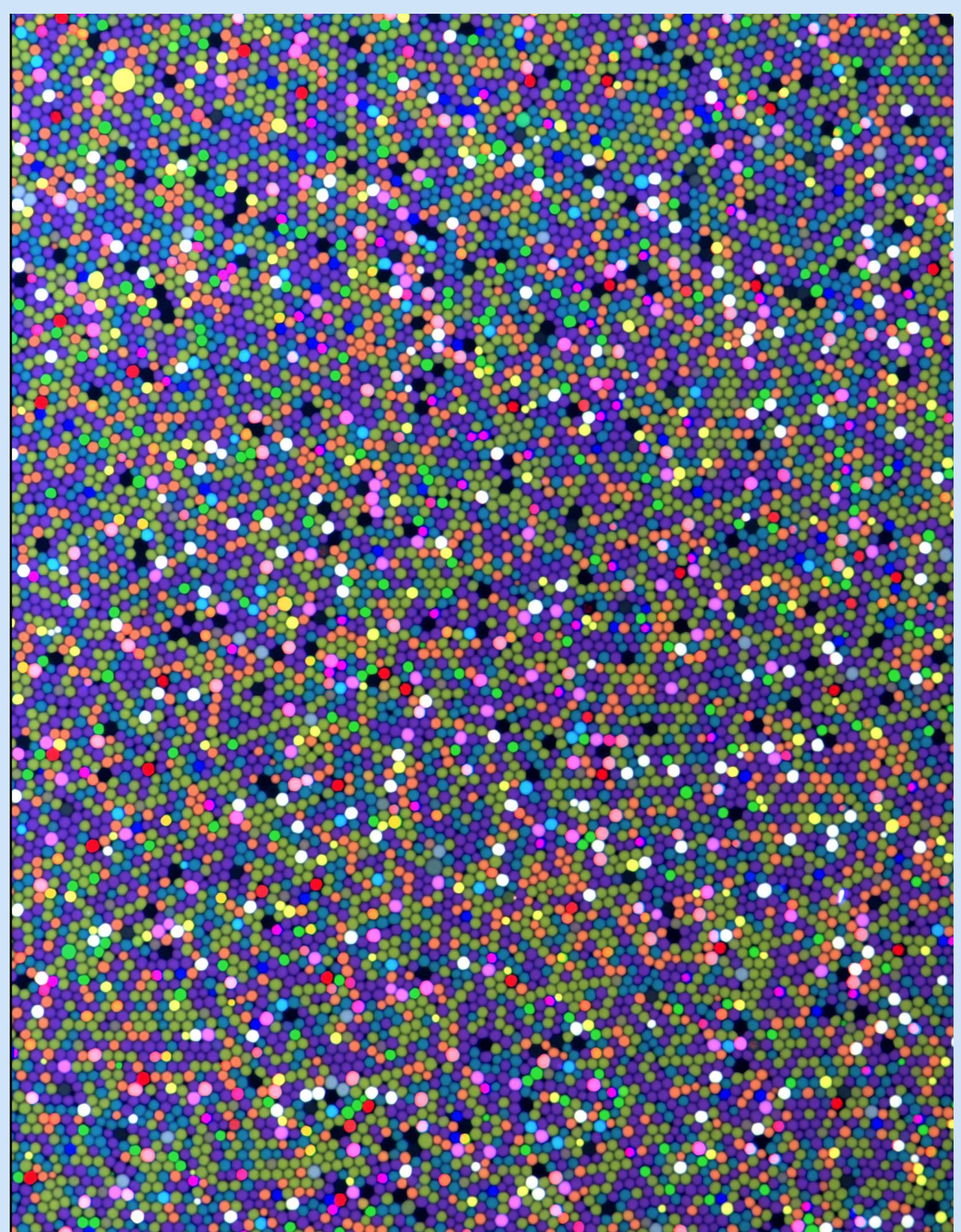


UMR 7083
Griver

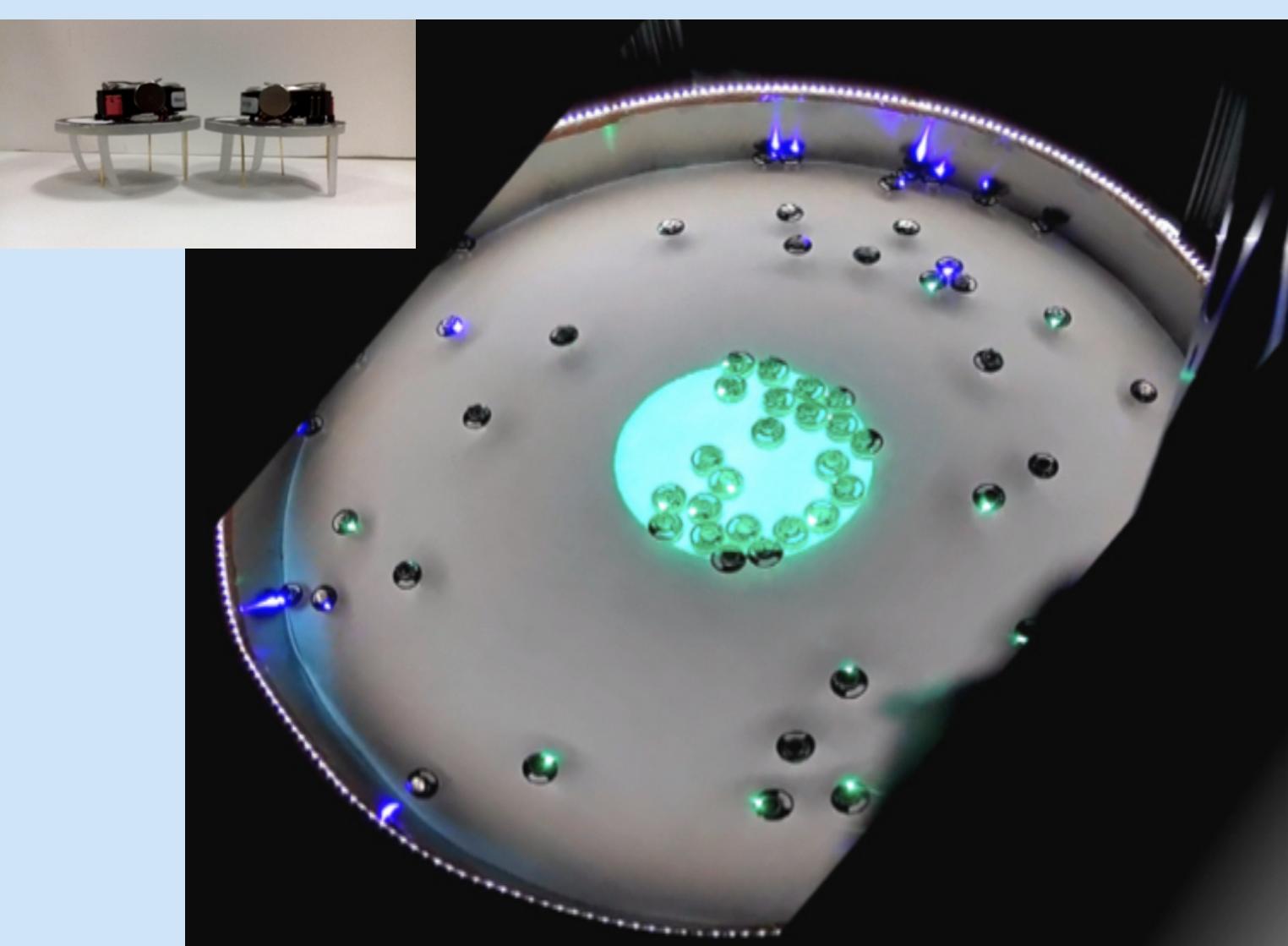
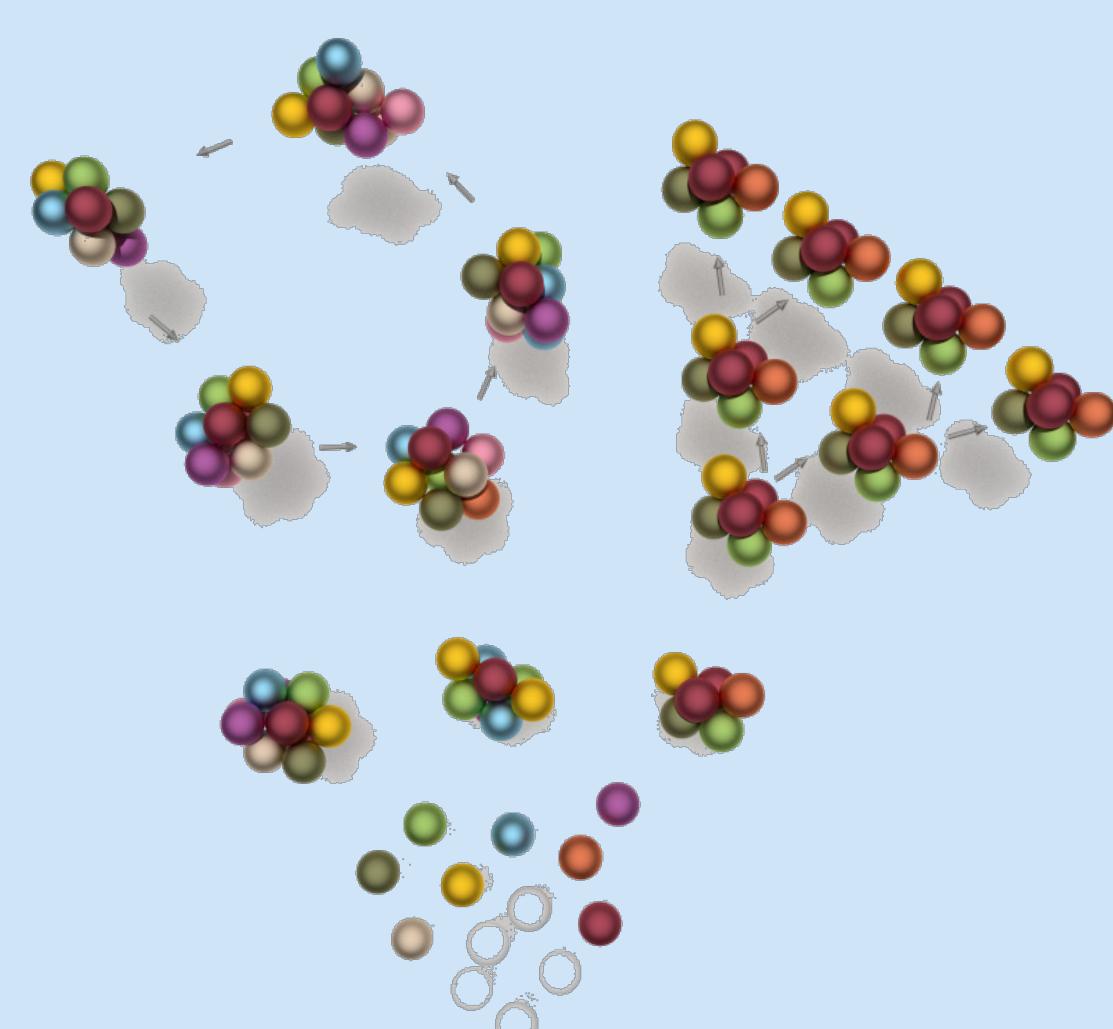
Experimental and Theoretical Travels in Soft Matter



Programmable matter



- Replicating systems
- Molecular circuits
- Directed evolution and diagnostics
- Principles of self-assembly and catalysis
- Adaptable and responsive polymer systems
- Self-healing and mechanical metamaterials
- Swarm robotics



Olivier Dauchot



Guillaume Ginès



David Lacoste



Ludwik Leibler



Teresa Lopez-Leon



Olivier Rivoire



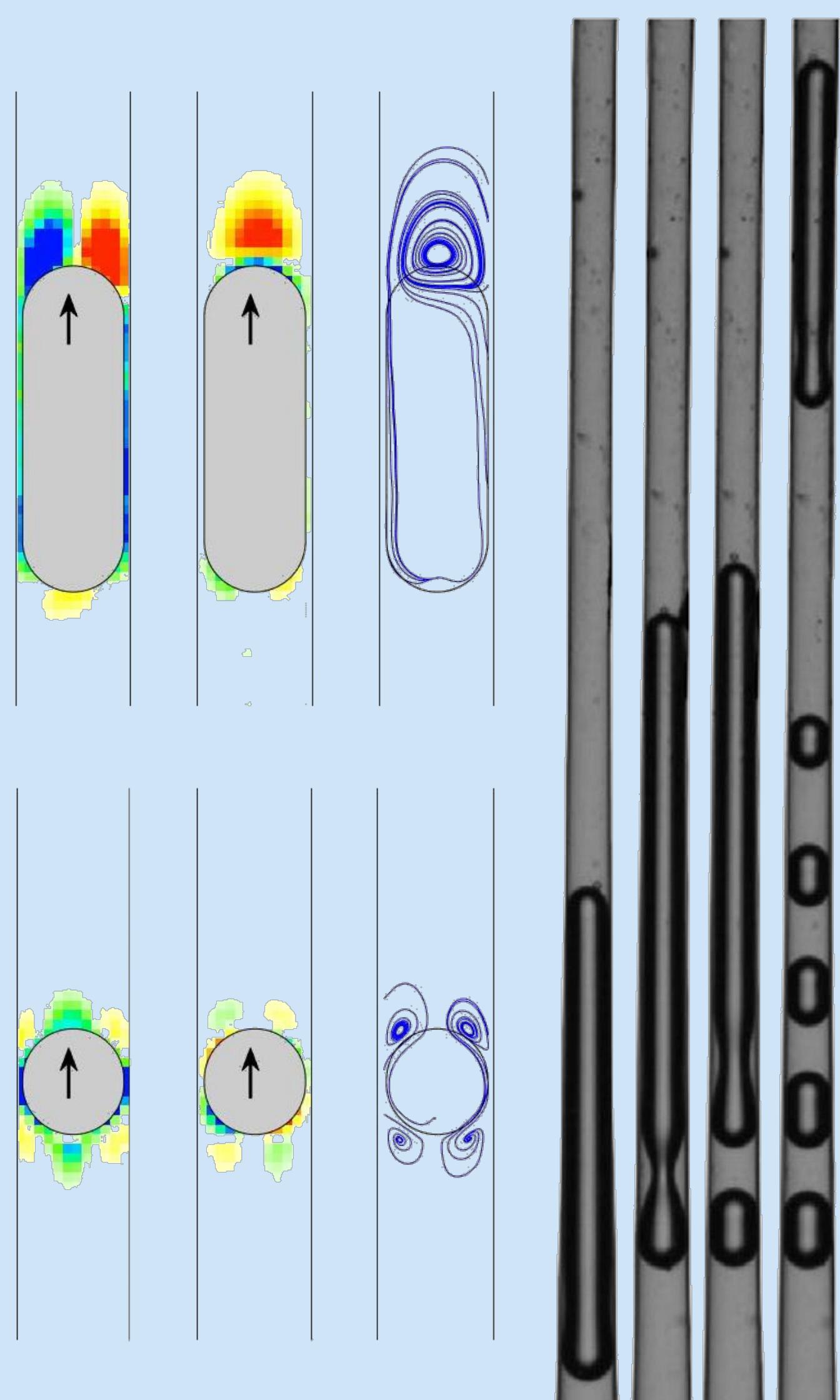
Yannick Rondelez



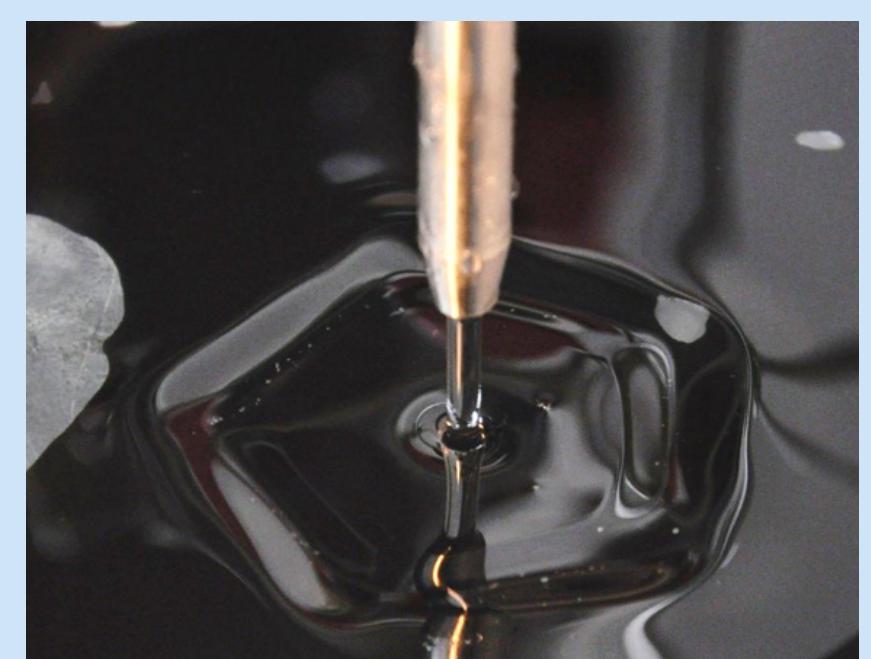
Zorana Zeravcic



Interfaces in soft matter



- Patterns at fluid interfaces
- Dynamics of soft interfaces
- Surface waves and bio-locomotion
- Interfacial phoretic and Marangoni flows
- Nanohydrodynamics and interfacial slip



Hélène Berthoumieux



Olivier Dauchot



Matthieu Labousse



Ludwik Leibler



Teresa Lopez-Leon



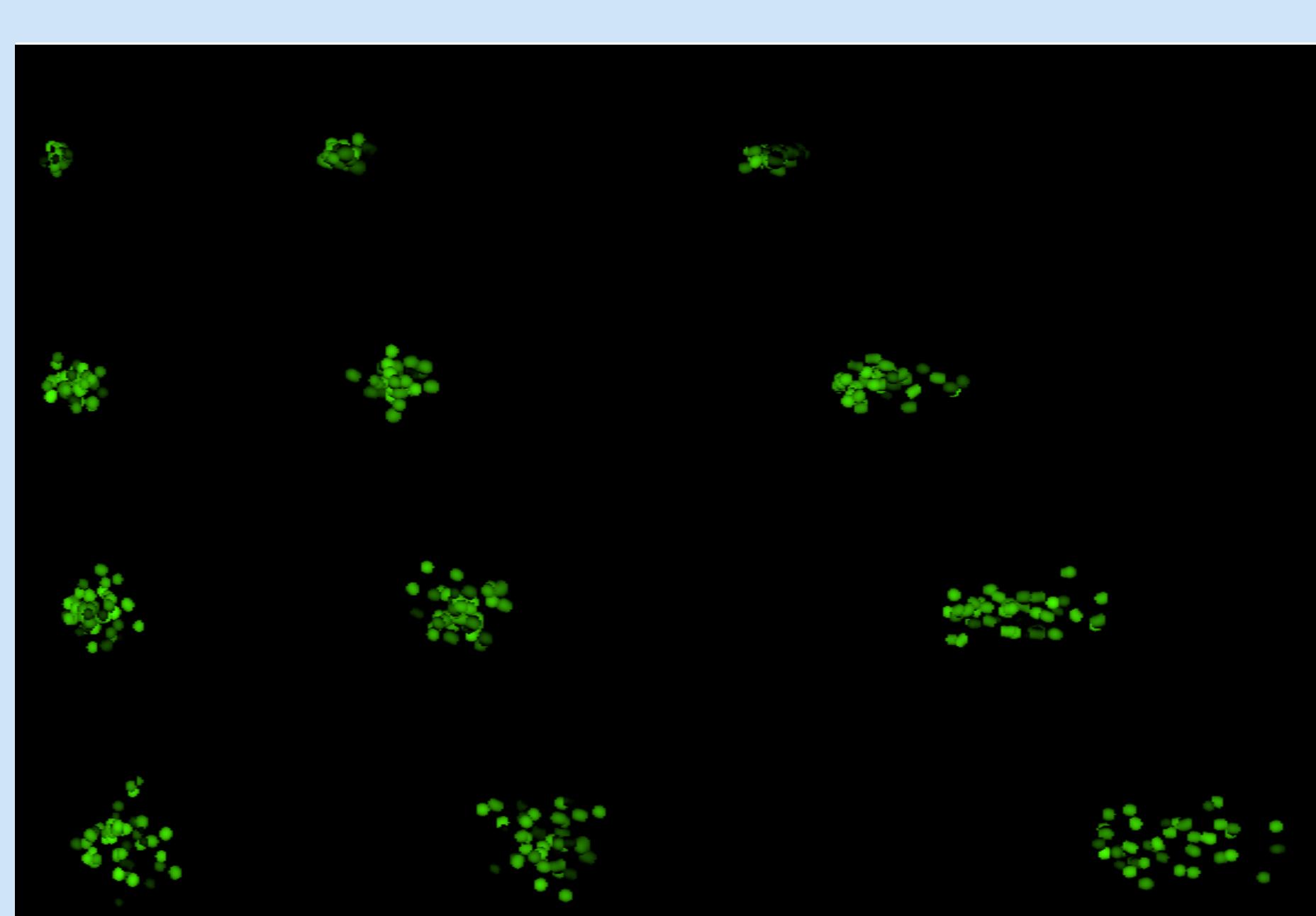
Joshua McGraw



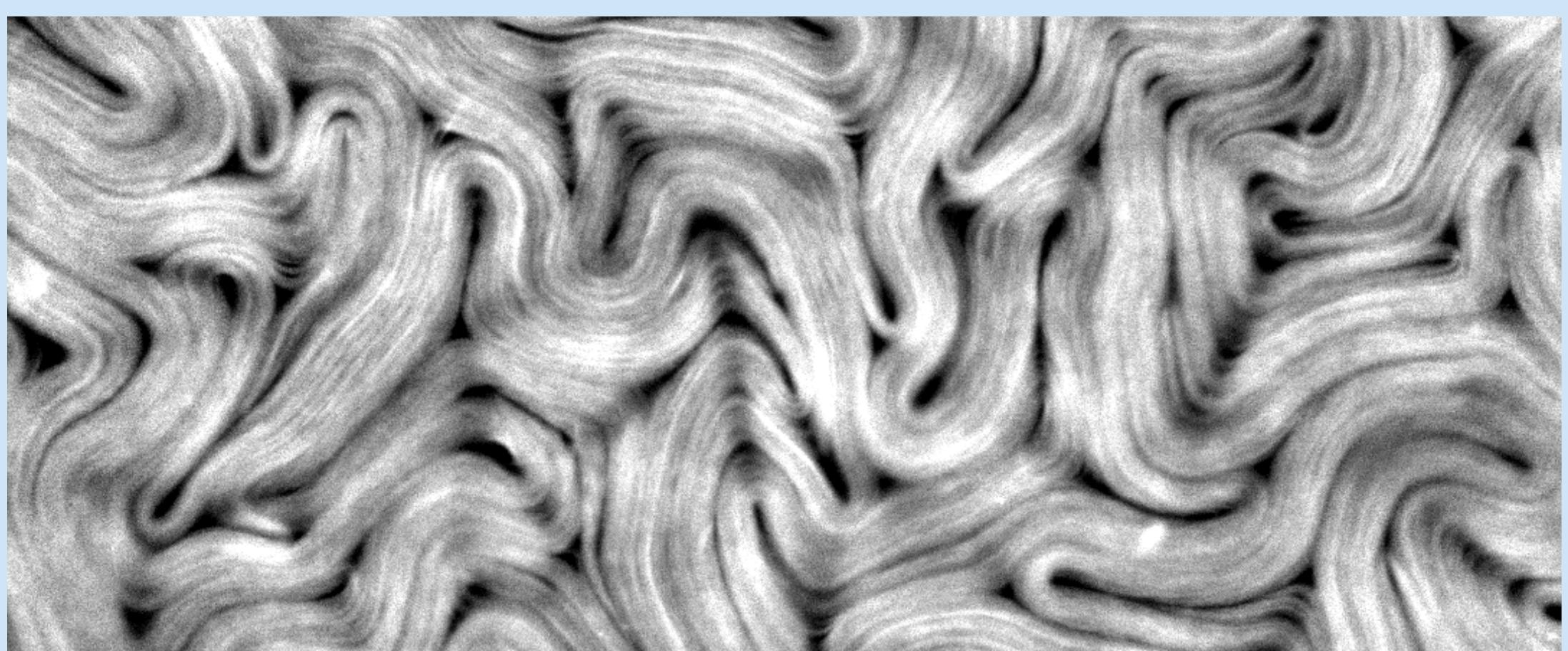
Élie Raphaël



Mathilde Reyssat

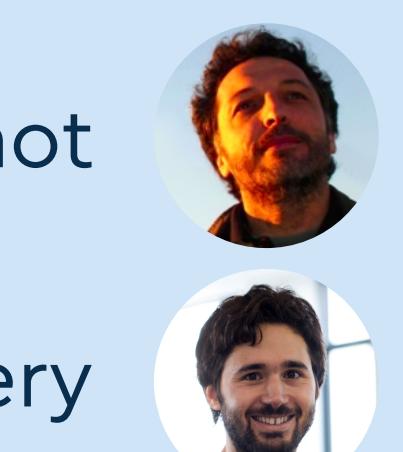


Active matter and collective effects



- Swimmers, walkers, surfers
- Collective dynamics and the glass transition
- Path memory dynamics of walking drops
- Coupling between active and passive materials
- Active solids

Olivier Dauchot



Vincent Démery



Michel Fruchart



Matthieu Labousse



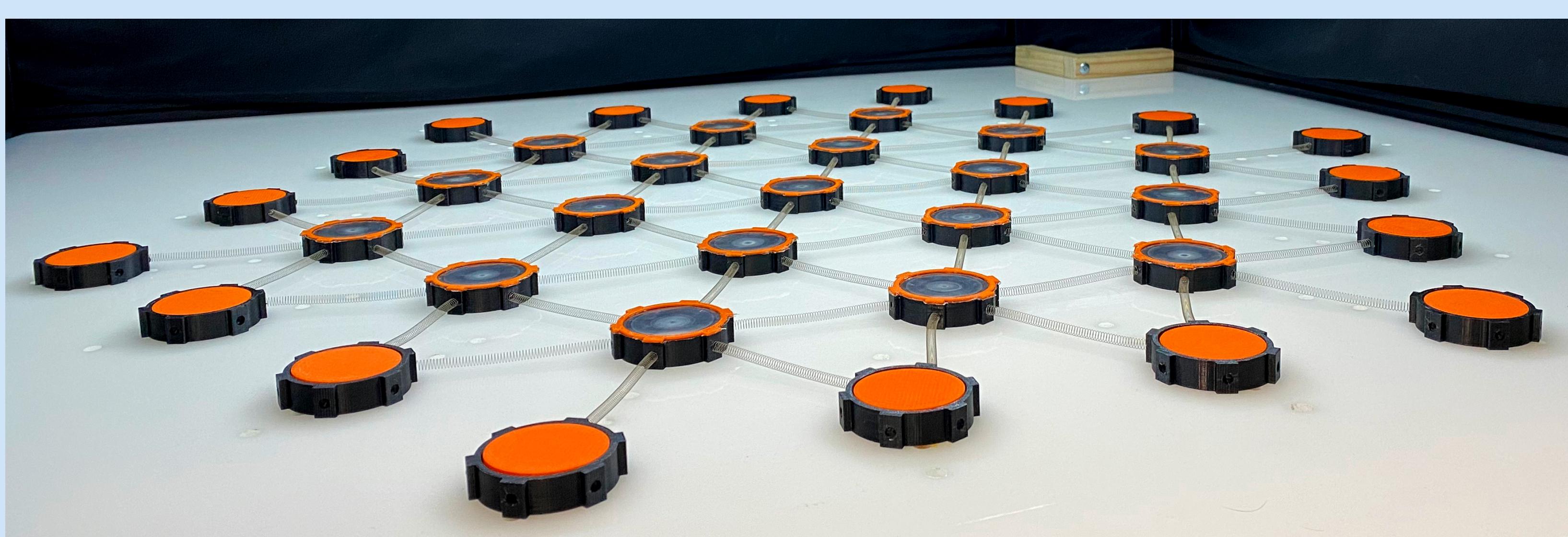
Teresa Lopez-Leon



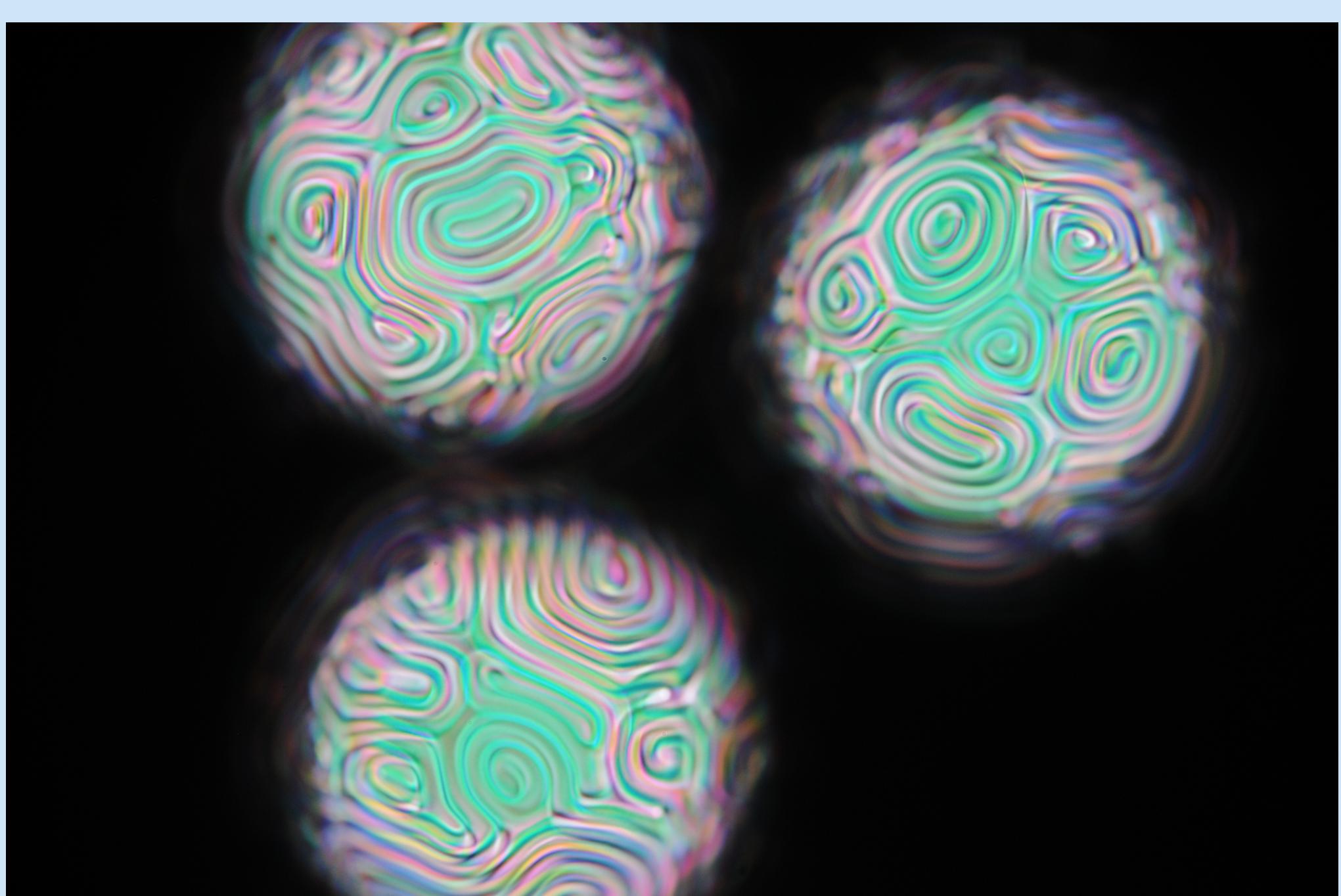
Mathilde Reyssat



Paddy Royall



Topological soft matter



- Liquid crystals and anisotropic media
- Topological defects and patterning
- Topological waves
- Thin sheets geometry and mechanics

Vincent Démery



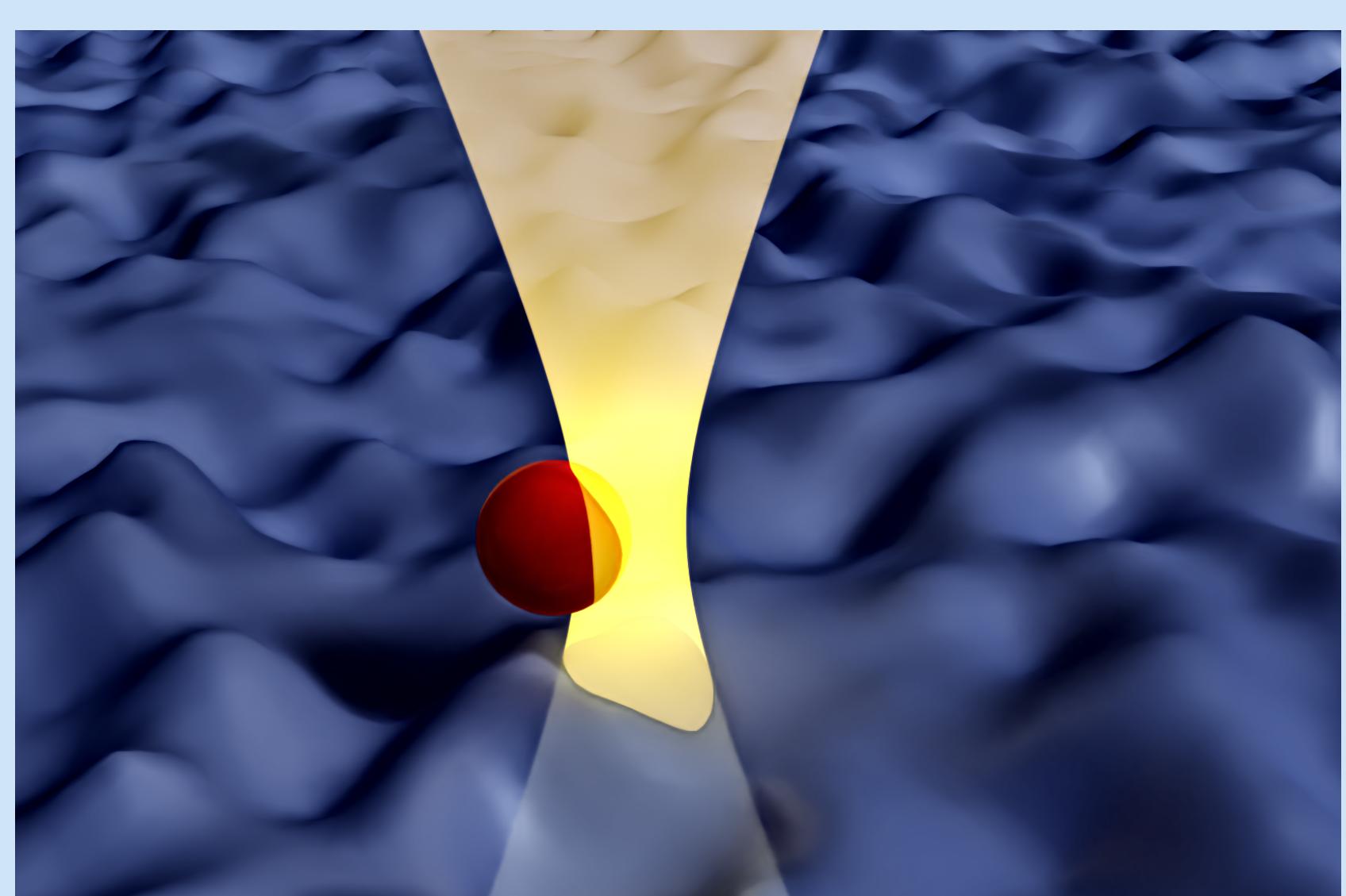
Michel Fruchart



Teresa Lopez-Leon



Information and stochastic dynamics



- Fluctuations and information in chemical networks
- Stochastic dynamics and fluctuating hydrodynamics
- Stochastic thermodynamics
- Evolutionary dynamics

Vincent Démery



Olivier Rivoire



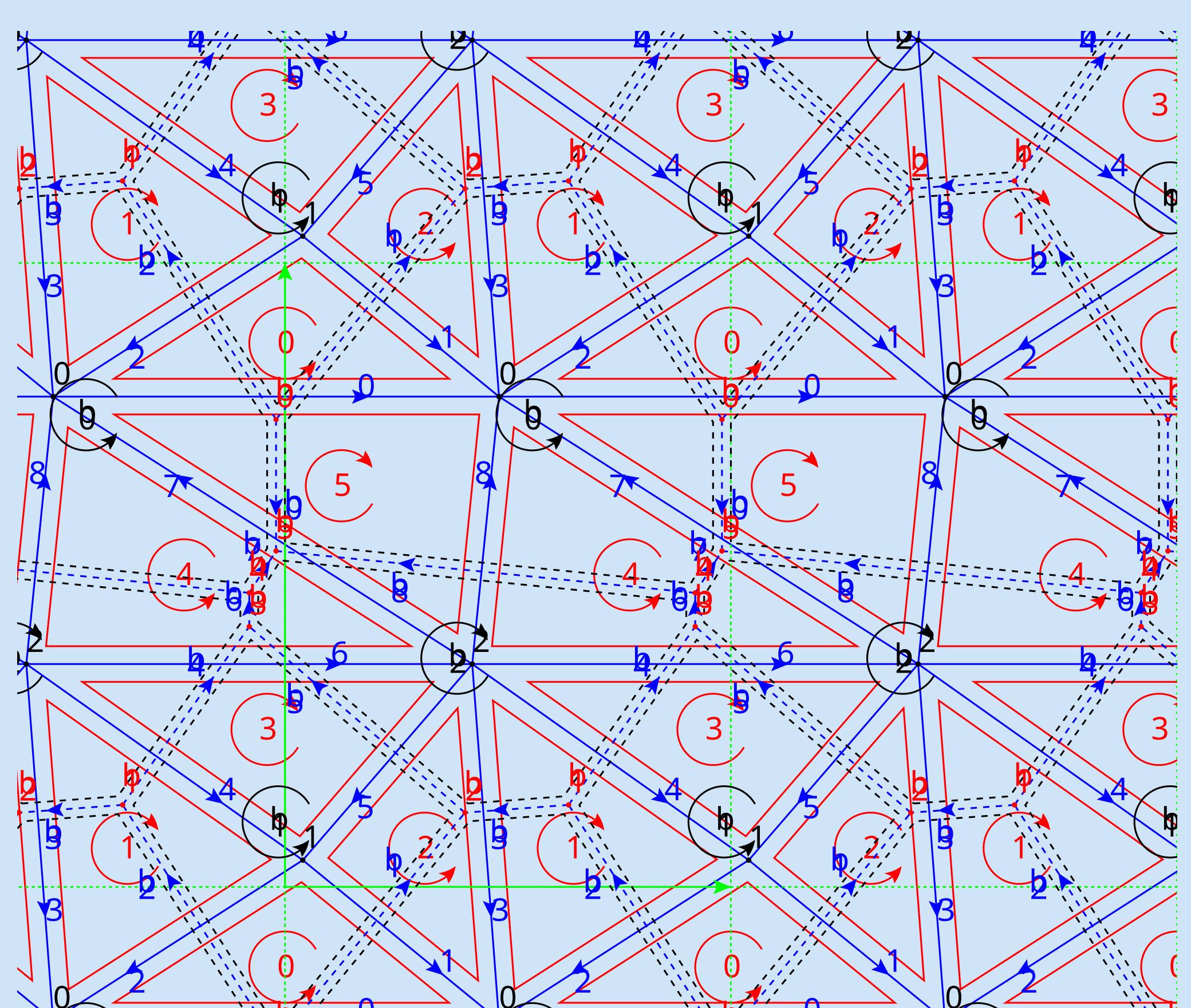
David Lacoste



Ken Sekimoto



Numerical and analytical methods



- Statistical physics
- Algorithms for physics
- Momentum flux viewpoint for many body systems
- Discrete differentials and integrals
- Statistical inference

Hélène Berthoumieux



Michel Fruchart



Anthony Maggs



Olivier Rivoire



Michael Schindler



Ken Sekimoto

