

Graduate School on
“Non-equilibrium Processes in Physics and Biology”

August 19 - 30, 2024

organized by

**Roberto Cerbino (U of Vienna), Emanuela Del Gado (Georgetown U),
Giuseppe Foffi (Paris-Saclay U)**

- **Monday, August 19th, 2024**

09:00 – 09:15 **Registration**

09:15 – 09:30 **Welcome**

09:30 – 11:00 **Simon Rogers (U of Illinois at Urbana-Champaign)**
Yielding from a rheological perspective

11:00 – 11:30 **COFFEE BREAK**

11:30 – 13:00 **Zorana Zeravcic (ESPCI, Paris)**
Pattern formation out of equilibrium

13:00 – 13:45 **FREE TIME FOR LUNCH**

13:45 – 16:45 **POSTER SESSION 1**

17:00 – 19:00 **WELCOME RECEPTION**

- **Tuesday, August 20th, 2024**

09:00 – 10:30 **Mehdi Bouzid (CNRS - U Grenoble Alpes)**
Computational rheology in soft matter

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Luca Cipelletti (U de Montpellier)**
*A microscopic, experiment-based view of the yielding transition - part I:
scattering methods under a mechanical drive*

12:30 – 13:45 **FREE TIME FOR LUNCH**

13:45 – 16:45 **COMPUTATIONAL (Bonfanti, Bouzid, Zeravcic)
OR EXPERIMENTAL (Rogers) TUTORIAL**

- **Wednesday, August 21st, 2024**

09:00 – 10:30 **Alessandra Bonfanti (Politecnico di Milano)**
Fractional viscoelastic models for power-law materials

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Laurence Ramos (CNRS, Montpellier)**
Drying colloidal systems

12:30 – 13:45 **FREE TIME FOR LUNCH**

13:45 – 16:45 **COMPUTATIONAL (Bonfanti, Bouzid, Zeravic))**
OR EXPERIMENTAL (Rogers) TUTORIAL

- **Thursday, August 22nd, 2024**

09:00 – 10:30 **Luca Cipelletti (U de Montpellier)**

*A microscopic, experiment-based view of the yielding transition - part II:
the yielding transition of soft colloids*

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Anael Lemaitre (U Gustave Eiffel, Paris)**

Stress correlations in glasses

12:30 – 13:45 **FREE TIME FOR LUNCH**

13:45 – 16:45 **JOURNAL CLUB**

- **Friday, August 23rd, 2024**

09:00 – 10:30 **Zorana Zeravic (ESPCI, Paris)**

Bio-inspired design in soft-matter systems

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Sebastian Fürthauer (TU Vienna)**

The physics of highly crosslinked cytoskeletal networks

12:30 – **FREE AFTERNOON**

- **Monday, August 26th, 2024**

09:00 – 10:30 **Rastko Sknepnek (U of Dundee)**

Vertex mode for tissue mechanics - part I

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Andreas Zöttl (U of Vienna)**

Theoretical modeling of passive and active particle dynamics in shear flow

12:30 – 13:45 **FREE TIME FOR LUNCH**

13:45 – 16:45 **COMPUTATIONAL (Hannezo, Sknepnek, Zöttl)**

OR EXPERIMENTAL (Secchi) TUTORIAL

- **Tuesday, August 27th, 2024**

09:00 – 10:30 **Eleonora Secchi (ETH Zurich)**

*Bacterial Biofilms: Linking Microscopic Processes to Their Material
properties and Ecological Function - part I*

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Anael Lemaitre (U Gustave Eiffel, Paris)**

The contact aging scenario in adhesive colloidal suspensions

12:30 – 13:45 **FREE TIME FOR LUNCH**

13:45 – 16:45 **POSTER SESSION 2**

19:00 – 22:00 **Social dinner at Heuriger Weingut Feuerwehr Wagner**

- **Wednesday, August 28th, 2024**

09:00 – 10:30 **Julia Yeomans (U of Oxford)**

Active Nematics and Mechanobiology

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Eleonora Secchi (ETH Zurich)**

Bacterial Biofilms: Linking Microscopic Processes to Their Material Properties and Ecological Function – part II

12:30 – 13:45 **FREE TIME FOR LUNCH**

13:45 – 16:45 **COMPUTATIONAL (Hannezo, Sknepnek, Zöttl)**

OR EXPERIMENTAL (Secchi) TUTORIAL

- **Thursday, August 29th, 2024**

09:00 – 10:30 **Edouard Hannezo (IST Austria)**

Active matter model of multicellular tissue dynamics

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Thomas Voigtmann (DLR, Köln)**

Nonequilibrium Response Theory for Soft and Active Matter

12:30 – 13:45 **FREE TIME FOR LUNCH**

13:45 – 16:45 **JOURNAL CLUB**

- **Friday, August 30th, 2024**

09:00 – 10:30 **Rastko Sknepnek (U of Dundee)**

Numerical approaches to modelling curved surfaces

10:30 – 11:00 **COFFEE BREAK**

11:00 – 12:30 **Diana Pinheiro (Vienna Biocenter)**

How developing embryos take shape

12:30 – 12:45 **Concluding remarks and goodbye**

12:30 – **FREE AFTERNOON**

All talks take place at ESI Boltzmann Lecture Hall!