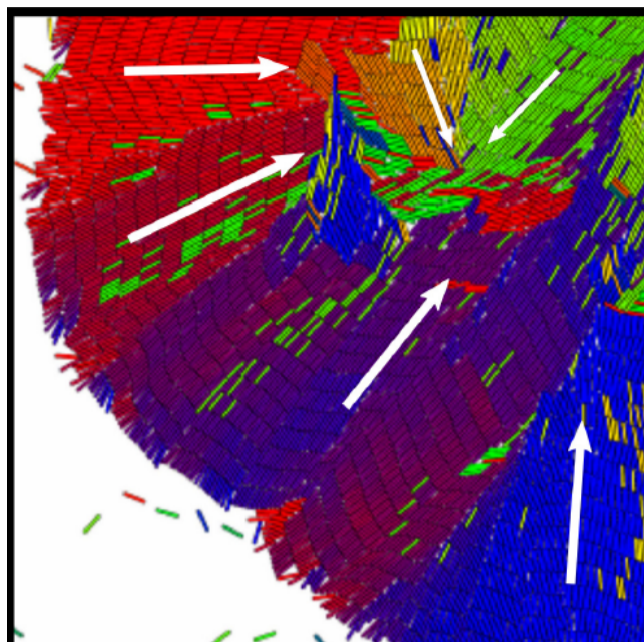


# Biomimetic and living materials: active matter at high densities

December 7, 2016 to December 9, 2016

Location : CECAM-HQ-EPFL, Lausanne, Switzerland



## Description

The goal of this workshop is to bring together researchers working on active matter at high density at the theoretical and experimental level. The focus will be put on:

- The connection between theoretical models and experimental results on tissue formation, biofilm formation, wound healing, tumor growth, and related problems of active matter at high density.
- The design and production of biomimetic, artificial mechanical active systems able to reproduce some of the features of the above-mentioned living matter systems.

The workshop will also include three tutorials/lectures aimed at providing a comprehensive state of the art of what is known of active matter at high densities, particularly at the level of the rheological properties of such systems. A review of the most common analytical and numerical tools used in the study of such systems will be provided. This will let workshop participants acquire the necessary (technical) glossary and concepts in order to set a common background/language required to allow a fruitful exchange of concepts, ideas, and results among researchers working on quite different problems and systems.

## Invited speakers

Aranson Igor, *Argonne National Lab, USA*  
Baer Markus, *PTB, Berlin, Germany*  
Bartolo Denis, *ENS Lyon, France*  
Berthier Ludovic, *University of Montpellier, France*  
Bertin Eric, *Joseph Fourier University, France*  
Clement Eric, *ESPCI, France*  
Czirok Andras, *University of Kansas, USA and ELTE, Budapest, Hungary*  
Dauchot Olivier, *ESPCI, France*  
Deutsch Andreas, *TU Dresden, Germany*  
Frey Erwin, *LMU, Germany*  
Giomi Luca, *Lorentz Institute, Netherlands*  
Goldstein Raymond, *University of Cambridge, UK*  
Golestanian Ramin, *University of Oxford, UK*  
Gompper Gerhard, *Juelich Forschungszentrum, Germany*  
Ihle Thomas, *Greifswald University, Germany*  
Joanny Jean-Francois, *Institut Curie, France*  
Liverpool Tannie, *University of Bristol, UK*  
Marchetti M. Cristina, *Syracuse University, USA*  
Tailleur Julien, *University Paris Diderot, France*  
Volpe Giovanni, *Bilkent University, Turkey*

## Organizers:

Fernando Peruani  
*Université de Nice*  
Oleksandr Chepizhko  
*Aalto University*  
Hugues Chate  
*CEA*