

From Liquid Crystals to the Physics of Cancer

*A panorama of soft matter
in honour of Jacques Prost*

JANUARY 20 & 21, 2014

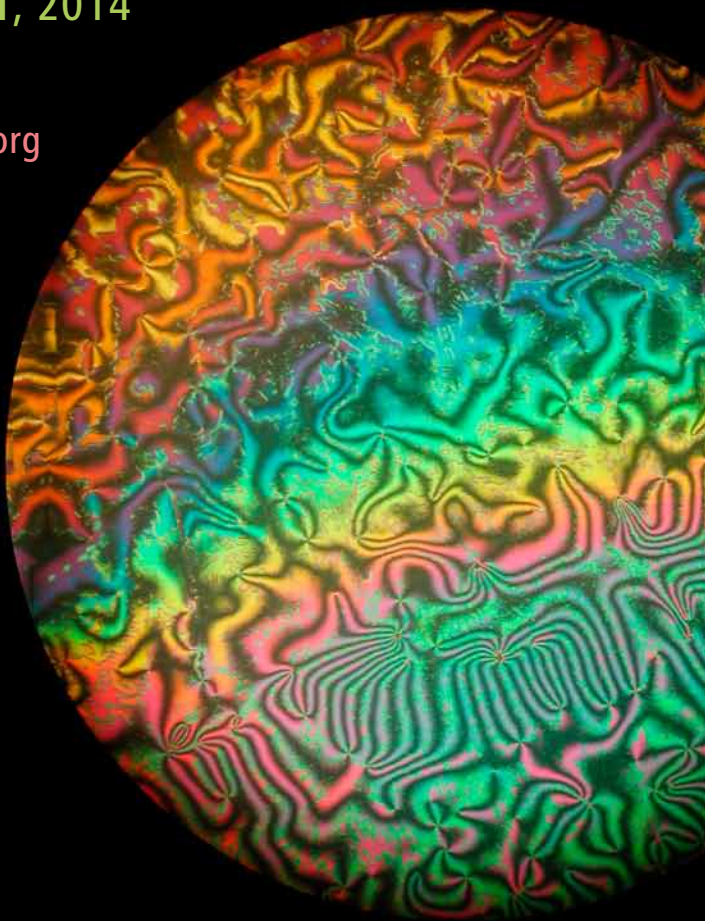
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ESPCI ParisTech
Langevin theater

10, rue Vauquelin

75005 Paris

www.espci.fr



Monday, January 20th

09.00 am **Registration**

10.00 am **Chairperson: Étienne Guyon**

10.10 am **Armand Ajdari**

Functional lamellar structures for energy savings: examples from the industrial world

10.40 am **Cyrus Safinya**

Tau protein directed microtubule assembly in neuronal systems

11.10 am **David Lacoste**

Equilibrium vs. non-equilibrium fluctuations and how to distinguish them

11.40 am **Sven Lagerwall**

The rise and failure of polar liquid crystals for device applications

12.15 pm *Lunch*

02.00 pm **Chairperson: Elisabeth Dubois-Violette**

02.10 pm **Didier Roux**

Les enjeux technologiques et économiques de l'énergie solaire

02.40 pm **Philippe Barois**

From Liquid Crystals to Metamaterials

03.10 pm **Laurence Navailles**

Thermodynamics and structure of complexes between nucleotide lipids and nucleic acids

03.40 pm **Frédéric Nallet**

Fluctuating stacks of amphiphilic bilayers

04.10 pm *Coffee break*

04.40 pm **Chairperson: Jean-Paul Marcerou**

04.50 pm **Jérôme Bibette**

Exploration of diversity within monoclonal micro-organisms population

05.20 pm **Gilles Sigaud**

The Lady Baltimore and Lord Baltimore issue

05.50 pm **Vladimir Lorman**

Liquid crystalline, crystalline and quasicrystalline order in bioassemblies

Tuesday, January 21st

- 09.00 am** **Chairperson: Maurice Bourel**
- 09.10 am** **Jean-François Joanny**
Physical description of growing tissues in cancer and development
- 09.40 am** **Cécile Sykes**
Actin, myosin, and shape changes of cell-sized liposome
- 10.10 am** *Coffee break*
- 10.40 am** **Chairperson: Francis Hardouin**
- 10.50 am** **Frank Jülicher**
Phase separation in the cell cytoplasm
- 11.20 am** **Françoise Brochard-Wyart**
Spreading and spontaneous motility of multicellular aggregates
- 11.50 am** **Patrick Keller**
Les élastomères cristaux liquides : le biomimétisme en action
- 12.20 pm** **Jacques Lewiner**
Aperitive talk
- 12.35 pm** *Lunch*
- 02.00 pm** **Chairperson: François Lequeux**
- 02.10 pm** **Raphaël Voituriez**
Active gels, cell motility and cell trajectories
- 02.40 pm** **Bruno Goud**
Mechanisms of intracellular transport: from biology to physics
- 03.10 pm** **Xavier Sastre & Thomas Risler**
Homeostatic pressure and tumor invasion
- 03.40 pm** **Patricia Bassereau**
It is a long way to... an artificial neuron
- 04.10 pm** **Jean-François Joanny**
Closing remarks

Organizing Committee

Patricia Bassereau

Institut Curie

François Lequeux

ESPCI ParisTech

Philippe Richetti

Centre de recherche Paul-Pascal (CRPP)



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