

# Scientific program

## Monday, June 19

<b>8:00-9:00</b>	<b>Registration</b>
<b>9:00-9:30</b>	<b>Opening ceremony</b>
<b>9:30-10:30</b>	<b>Marangoni flows (Chair: Alexander Oron)</b>
9:30-9:45	<b>Anaïs Gauthier</b> “Inverse Marangoni” instability of an ink droplet on a bath
9:45-10:00	<b>Paolo Luzzatto-Fegiz</b> A single parameter can predict surfactant impairment of superhydrophobic drag reduction
10:00-10:15	<b>Tanushree Roy</b> Collective behavior of dichloromethane drops deposited on a surfactant solution
10:15-10:30	<b>Ranabir Dey</b> How self-propelled droplets adapt to changes in the surroundings by altering their motility
<b>10:30-11:00</b>	<b>Coffee break</b>
<b>11:00-12:30</b>	<b>Wetting and contact lines (Chair: Isabelle Cantat)</b>
11:00-11:15	<b>Marc Médale</b> Partial wetting on a horizontal solid surface: Beyond Young's equation
11:15-11:30	<b>Luca Biancofiore</b> Particle dispersion and deposition in evaporating two-dimensional sessile droplets
11:30-11:45	<b>Harish Dixit</b> Anomalous flow fields near a moving contact line
11:45-12:00	<b>Thierry Ondařçuhu</b> Capillary desorption of molecules induced by a moving contact line
12:00-12:15	<b>Alexis Duchesne</b> Vertical impact of a liquid jet on an over-heated plate
<b>12:15-14:00</b>	<b>Lunch</b>

- 14:00-15:45**      **Solutocapillary flows** (Chair: Valentina Shevtsova)
- 14:00-14:15      **Sayali Jadhav**  
Effect of interfacial kinetics on the settling of a drop in a viscous medium
- 14:15-14:30      **François Detcheverry**  
Exact solutions for viscous Marangoni spreading
- 14:30-14:45      **Samuel Tomlinson**  
Modelling laminar drag reduction in surfactant-contaminated superhydrophobic channels
- 14:45-15:00      **Marie Marsiglia**  
Microfluidic tensiometer based on interface instabilities: Study of the kinetics of surfactants mass transfer
- 15:00-15:15      **Alexander Nepomnyashchy**  
Interaction between a particle and a liquid surface covered by a surfactant
- 15:15-15:30      **Camille Perret**  
Marangoni swimmer in a flow
- 15:30-15:45      **Peru Fernandez-Arroia**  
Numerical model of the transport phenomena in the absorption of LiBr-H<sub>2</sub>O + surfactant mixtures
- 15:45-16:15**      **Coffee break & posters**
- 16:15-17:45**      **Drops and spreading** (Chair: Michael Besthorn)
- 16:15-16:30      **Christopher Henkel**  
Gradient dynamics model for drops on elastic substrates
- 16:30-16:45      **Rodica Borcia**  
Drop control and propulsion with applications in microfluidics and microgravity
- 16:45-17:00      **Benjamin Sobac**  
Self-induced flows enhance the levitation of Leidenfrost drops on liquid baths
- 17:00-17:15      **Jan Diekmann**  
Asymmetric compound drops
- 17:15-17:30      **Atefeh Pour Karimi**  
Sliding and dripping of liquid drops on porous and non-porous fibers
- From 19:00**      **Welcome cocktail at Bordeaux City Hall**

## Tuesday, June 20

### **9:00-10:30**      **Thermocapillary flows** (Chair: Ichiro Ueno)

9:00-9:15      **Marie-Caroline Jullien**  
Phase separation patterns of a binary mixture using Marangoni stresses

9:15-9:30      **Malay Vyas**  
Thermocapillary effects on viscoelastic droplet suspended in another viscoelastic pressure driven axisymmetric flow.

9:30-9:45      **Shogo Sensui**  
Correlation between traveling wave of hydrothermal wave and azimuthal motion of particle forming coherent structure in liquid bridges

9:45-10:00      **Igin Ignatius**  
Suppressing Marangoni instability using parametric forcing

10:00-10:15      **Santiago Madruga**  
Marangoni effect in Phase Change Materials: Enhanced melting and micro-energy harvesting

10:15-10:30      **Valentina Shevtsova**  
Nonlinear dynamics of phase change material at the melting stage.

### **10:30-11:00**      **Coffee break & posters**

### **11:00-12:30**      **Instabilities** (Chair: Roger Khayat)

11:00-11:15      **Anubhab Roy**  
Instability of a thin film of chemotactic active suspension

11:15-11:30      **Kai-Xin Hu**  
Instability in the thermocapillary migration of a flat droplet

11:30-11:45      **Alexander Mikishev**  
Influence of Insoluble Surfactant on Modulational Instability of Marangoni Wave Patterns

11:45-12:00      **Nikolai Kozlov**  
Vibrational Dynamics of Liquids Interface in Rotating Cavities

12:00-12:15      **Philippe Beltrame**  
Chaotic flow in a microtube: Transition to plug flow

12:15-12:30      **Thomas Corbin**  
Effect of a deep corrugated wall on the natural frequencies and the Faraday instability of a fluid interface

### **12:30-14:00**      **Lunch**

### **From 14:00**      **Excursion to Saint-Emilion**

## Wednesday, June 21

- 9:00-10:30**      **Electric fields and EHD** (Chair: Santiago Madruga)
- 9:00-9:15      **Shreyanshu Agrawal**  
Interfacial instability due to electrodeposition
- 9:15-9:30      **Pinar Eribol**  
Dynamics of dendrites arising during electrodeposition
- 9:30-9:45      **Eda Soysal**  
Experimental study on micro droplet formation and electrohydrodynamic instability of three immiscible liquids flowing in a microchannel
- 9:45-10:00      **Pradipta Panigrahi**  
Interfacial hydrodynamics of coaxial electrospray
- 10:00-10:15      **Jason Livesay**  
Electrostatically forced faraday instability in microgravity
- 10:15-10:30      **Sajal Wankhede**  
Marangoni stress-driven morphological instability in porous anodic oxide
- 10:30-11:00**      **Coffee break & posters**
- 11:00-12:30**      **Waves** (Chair: Nikolai Kozlov)
- 11:00-11:15      **Ratul Dasgupta**  
Wave breaking: Spilling versus plunging
- 11:15-11:30      **Lohit Kayal**  
Wave focusing and jet formation in pure capillary and pure gravity waves
- 11:30-11:45      **Ursula Martinez**  
The ThermoSlosh experiment: Thermocapillary-based control of a free surface in microgravity
- 11:45-12:00      **Franz-Theo Schön**  
Resonant surface waves in an oscillating periodic tank with a submerged hill
- 12:00-12:15      **Ion Dan Borcia**  
Temporal and spatial ratchet for surface waves in a circular channel
- 12:15-12:30      **Michael Bestehorn**  
Mass transport in a horizontally vibrated thin fluid layer with a ratchet ground
- 12:30-14:00**      **Lunch**
- 14:00-15:45**      **Soap films** (Chair: Véronique Pimienta)
- 14:00-14:15      **Isabelle Cantat**  
Horizontal soap film thinning: Efficiency of Marangoni forces
- 14:15-14:30      **Alice Etienne-Simonetti**  
Study of a pinch in the vicinity of a meniscus in a thin liquid film
- 14:30-14:45      **Alexandre Guillemot**  
Soap film bursting: Is the flapping instability triggered by Marangoni flows?

- 14:45-15:00 **Léa Delance**  
Bursting of non-aqueous suspended liquid films induced by Marangoni-driven spreading of emulsified droplets
- 15:00-15:15 **Théo Lenavetier**  
Dissipative processes in an elementary foam
- 15:15-15:30 **Antoine Monier**  
Characterizing the gravity drainage of mobile soap films
- 15:30-15:45 **Axel Huerre**  
Freezing a foam
- 15:45-16:00 Presentation of IMA12 by Santiago Madruga**
- 16:00-16:30 Coffee break & posters**
- 16:30-18:00 Evaporation and condensation (Chair: Marc Médale)**
- 16:30-16:45 **Senthil Kumar Parimalanathan**  
Influence of g-jitters on the vapour of an evaporating sessile droplet: Masking of Marangoni effect
- 16:45-17:00 **Jean Colombani**  
Flows inside a drop evaporating on a soluble substrate: From Marangoni to coffee-stain
- 17:00-17:15 **Fei Duan**  
Flow and temperature visualization in a nonisothermal sessile droplet
- 17:15-17:30 **Omair Mohamed**  
Stability analysis of volatile liquid films in different evaporation regimes
- 17:30-17:45 **Robin Behle**  
Experimental study of thermocapillarity-induced deformation of evaporating films on structured copper surfaces
- 17:45-18:00 **Yuequn Tao**  
Experimental investigation on evaporation of pinned nanofluid sessile droplet on heating PTFE surface
- 18:00-18:15 **Senthil Kumar Parimalanathan**  
Tears of wine
- From 20:00 Conference dinner at “Café du Port”**

## Thursday, June 22

### 9:00-10:30 Thin films (Chair: Alexander Oron)

9:00-9:15

**Roger Khayat**

Modelling the continuous hydraulic jump and vortex structure

9:15-9:30

**Dilara Özev**

The effect of a non-uniform heating on the axisymmetric Rayleigh-Bénard instability

9:30-9:45

**Simeon Djambov**

Kapitza instability of Nusselt's condensation film

9:45-10:00

**Shreyank Goel**

A thin film model for surfactant-mediated electrowetting: Role of bulk and surface charges

10:00-10:15

**Mathieu Sellier**

Nonlinear dynamics and control of a thin liquid film on a spinning ellipsoid

10:15-10:30

**Nikolai Kozlov**

Steady flows generated by oscillations of centrifuged liquid-liquid interface in rotating cylinder

### 10:30-11:00 Coffee break

### 11:00-12:30 Acoustics and optofluidics (Chair: Jean Colombani)

11:00-11:15

**Adrien Bussonnière**

The sound of a bursting soap bubble

11:15-11:30

**Yifan Li**

Phase separation of oil-in-water emulsion with surface acoustic wave

11:30-11:45

**Vincent Gourmandie**

Drop impact on liquid pool: Acoustic and effect of surfactants

11:45-12:00

**Ilke Kaykanat**

The stability of a bubble in a power-law liquid subject to an acoustic field

12:00-12:15

**Ofer Manor**

Acoustic flow in porous media

12:15-12:30

**Jean-Pierre Delville**

Opto-capillary deformation of fluid interfaces

### 12:30-14:00 Lunch

### 14:00-16:00 Thermal effects (Chair: Thomas Bickel)

14:00-14:15

**Alexander Oron**

Mathematical model for a non-isothermal dense nanofluid

14:15-14:30

**Zhenqian Chen**

Study of vapor condensation heat transfer on nanostructured and hierarchical microporous-nanostructured superhydrophobic surfaces

14:30-14:45

**Chunmei Wu**

Pattern transitions and evolutions of Marangoni flow in a Czochralski configuration with deformed free surfaces

- 14:45-15:00 **Simon Brient**  
Effect of temperature on flowing water film
- 15:00-15:15 **Shin Nogushi**  
Experimental investigation on behavior of particles constituting coherent structure in a high-aspect-ratio liquid bridge
- 15:15-15:30 **Harunori Yoshikawa**  
Joule heating-induced thermal convection in a three-layer liquid system
- 15:30-15:45 **Nicolas Fares**  
Brownian motion as a probe of complex surfaces
- 15:45-16:00 **Closing remarks**
- From 16:00** **Farewell coffee**