Scientific program

Monday, June 19

8:00-9:00  Registration

9:00-9:30  Opening ceremony

9:30-10:30  Marangoni flows (Chair: Alexander Oron)

9:30-9:45  Anaïs Gauthier
  “Inverse Marangoni” instability of an ink droplet on a bath

9:45-10:00  Paolo Luzzatto-Fegiz
  A single parameter can predict surfactant impairment of superhydrophobic drag reduction

10:00-10:15  Tanushree Roy
  Collective behavior of dichloromethane drops deposited on a surfactant solution

10:15-10:30  Ranabir Dey
  How self-propelled droplets adapt to changes in the surroundings by altering their motility

10:30-11:00  Coffee break

11:00-12:30  Wetting and contact lines (Chair: Isabelle Cantat)

11:00-11:15  Marc Médale
  Partial wetting on a horizontal solid surface: Beyond Young's equation

11:15-11:30  Luca Biancofiore
  Particle dispersion and deposition in evaporating two-dimensional sessile droplets

11:30-11:45  Harish Dixit
  Anomalous flow fields near a moving contact line

11:45-12:00  Thierry Ondarçuhu
  Capillary desorption of molecules induced by a moving contact line

12:00-12:15  Alexis Duchesne
  Vertical impact of a liquid jet on an over-heated plate

12:15-14:00  Lunch
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-Arroiabe**
Numerical model of the transport phenomena in the absorption of LiBr-H2O + surfactant mixtures

15:45-16:15  **Coffee break & posters**

16:15-17:45  **Drops and spreading** (Chair: Michael Bestehorn)

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
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
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</table>
| 9:00-10:30 | **Thermocapillary flows** (Chair: Ichiro Ueno) | **Marie-Caroline Jullien**  
Phase separation patterns of a binary mixture using Marangoni stresses |
| 9:00-9:15  |                                               | **Malay Vyas**  
Thermocapillary effects on viscoelastic droplet suspended in another viscoelastic pressure driven axisymmetric flow. |
| 9:15-9:30  |                                               | **Shogo Sensui**  
Correlation between traveling wave of hydrothermal wave and azimuthal motion of particle forming coherent structure in liquid bridges |
| 9:30-9:45  |                                               | **Igin Ignatius**  
Suppressing Marangoni instability using parametric forcing |
| 9:45-10:00 |                                               | **Santiago Madruga**  
Marangoni effect in Phase Change Materials: Enhanced melting and micro-energy harvesting |
| 10:00-10:15|                                               | **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)      | **Anubhab Roy**  
Instability of a thin film of chemotactic active suspension |
| 11:00-11:15|                                               | **Kai-Xin Hu**  
Instability in the thermocapillary migration of a flat droplet |
| 11:15-11:30|                                               | **Alexander Mikishev**  
Influence of Insoluble Surfactant on Modulational Instability of Marangoni Wave Patterns |
| 11:30-11:45|                                               | **Nikolai Kozlov**  
Vibrational Dynamics of Liquids Interface in Rotating Cavities |
| 11:45-12:00|                                               | **Philippe Beltrame**  
Chaotic flow in a microtube: Transition to plug flow |
| 12:00-12:15|                                               | **Thomas Corbin**  
Effect of a deep corrugated wall on the natural frequencies and the Faraday instability of a fluid interface |
<p>| 12:30-14:00| <strong>Lunch</strong>                                    |                                                                    |
| 12:30-14:00| <strong>Excursion to Saint-Emilion</strong>               |                                                                    |</p>
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<tr>
<td>9:00-10:30</td>
<td>Electric fields and EHD (Chair: Santiago Madruga)</td>
<td>Shreyanshu Agrawal</td>
<td>Interfacial instability due to electrodeposition</td>
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<td>9:00-9:15</td>
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<td>Pinar Eribol</td>
<td>Dynamics of dendrites arising during electrodeposition</td>
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<td>9:15-9:30</td>
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<td>Eda Soysal</td>
<td>Experimental study on micro droplet formation and electrohydrodynamic instability of three immiscible liquids flowing in a microchannel</td>
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<td>9:30-9:45</td>
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<td>Pradipta Panigrahi</td>
<td>Interfacial hydrodynamics of coaxial electrospray</td>
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<td>9:45-10:00</td>
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<td>Jason Livesay</td>
<td>Electrostatically forced faraday instability in microgravity</td>
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<td>10:00-10:15</td>
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<td>Sajal Wankhede</td>
<td>Marangoni stress-driven morphological instability in porous anodic oxide</td>
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<td>10:30-11:00</td>
<td>Coffee break &amp; posters</td>
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<td>11:00-12:30</td>
<td>Waves (Chair: Nikolai Kozlov)</td>
<td>Ratul Dasgupta</td>
<td>Wave breaking: Spilling versus plunging</td>
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<td>11:00-11:15</td>
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<td>Lohit Kayal</td>
<td>Wave focusing and jet formation in pure capillary and pure gravity waves</td>
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<td>11:15-11:30</td>
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<td>Ursula Martinez</td>
<td>The ThermoSlosh experiment: Thermocapillary-based control of a free surface in microgravity</td>
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<td>11:30-11:45</td>
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<td>Franz-Theo Schön</td>
<td>Resonant surface waves in an oscillating periodic tank with a submerged hill</td>
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<td>11:45-12:00</td>
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<td>Ion Dan Borcia</td>
<td>Temporal and spatial ratchet for surface waves in a circular channel</td>
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<td>12:00-12:15</td>
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<td>Michael Bestehorn</td>
<td>Mass transport in a horizontally vibrated thin fluid layer with a ratchet ground</td>
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<td>12:30-14:00</td>
<td>Lunch</td>
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<td>14:00-15:45</td>
<td>Soap films (Chair: Véronique Pimienta)</td>
<td>Isabelle Cantat</td>
<td>Horizontal soap film thinning: Efficiency of Marangoni forces</td>
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<td>14:00-14:15</td>
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<td>Alice Etienne-Simonetti</td>
<td>Study of a pinch in the vicinity of a meniscus in a thin liquid film</td>
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<td>14:15-14:30</td>
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<td>Alexandre Guillemot</td>
<td>Soap film bursting: Is the flapping instability triggered by Marangoni flows?</td>
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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