WCM

2nd Edition

22 NOVEMBRE 2022

8 AM to 12PM (CET)

WORKSHOP ON CAPILLARY MICROMANIPULATION

WHAT ARE THE BEST STIMULI FOR MICRO SCALE CONTROL OF FLUID INTERFACES ?

This workshop goal is to compare the different way to actuate the fluid interface (efficiency, controlabillity, accuracy ...) toward their use for micromanipulation and microrobotics. The workshop will feature plenary talks, as well as short presentations followed by a voluntary discussion allowing networking opportunities between young researchers.

Plenary talks:

- **Philippe Marmottant,** Liphy, CNRS-UGA: *Acoustofluidics with bubbles*
- **Quan Zhou,** Aalto University: *Capillary micromanipulation and control of fluidic interface*
- **Larissa Florea**, Trinity college Dublin: *Smart droplets powered by chemical gradients: Chemotaxis, Phototaxis and Electrotaxis*
- **Aaron T.Ohta**, University of Hawai'i at Manoa *Harnessing the surface tension of liquid metals: electrical actuation, Laplace barriers, and more*

Virtual workshop

Open application for short presentations (Free of charge)

One-page abstract submission, deadline:

15 october 2022

Online registration:
events.femto-st.fr/wcm/en

Contact:

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ORGANISERS

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8:00 – 8:05	Welcome
Plenary talks	
8:05 – 8:35	Harnessing the surface tension of liquid metals: electrical actuation, Laplace barriers, and more. **Aaron T. Ohta** University of Hawai'i at Manoa
8:35 – 9:05	Smart droplets powered by chemical gradients: Chemotaxis, Phototaxis and Electrotaxis **Larissa Florea**, Trinity College Dublin, the University of Dublin
9:05 – 9:10	Pause
Short Presentations	
9:10 - 9:20	Acoustofluidic Embedded Microbubbles as Alternative to Common Microstructures **Nino F. Läubli**, University of Cambridge
9:20 – 9:30	3D micro fractal pipettes for capillary based robotic liquid handling **Gilgueng Hwang**, LIMMS-CNRS, Tokyo
9:30 - 9:40	How can beetles walk upside-down on smooth surfaces ? Elastocapillary adhesion control at the micrometer scale **Tristan Gilet**, University of Liege
9:40 – 9:50	Capillary-based Acoustofluidic End Effector for Robotics **Daniel Ahmed**, ETH Zurich
9:50 – 10:00	Manipulation of diamagnetic particles at the air-magnetic liquid interface **Zoran Cenev**, Aalto University
10:00 – 10:10	Toward a dynamic capillary solver for the robotic community **Antoine Barbot**, Femto-st

10:10 – 10:40	**Short Talks room discussions** :Each of the short presentations' speakers will hold a room to further present/discuss his work with interested participants. Attendants can join one or several of these rooms to participate in the discussions.
Plenary talks	
10:40-11 :10	Acoustofluidics with bubbles **Philippe Marmottant** : LIPhy, CNRS-Universite Grenoble Alpes, France
11:10-:11 :40	Capillary micromanipulation and control of fluidic interface **Quan Zhou**, Aalto University, Finland
11:40-11:45	Concluding remarks