Droplet Physics Across Scales for Energy and Sustainability

OIST – UTokyo Joint Workshop | 20–21 August | Okinawa Institute of Science and Technology Graduate University

Thursday, 20 August

08:30–09:00 Light breakfast

Session 1 *Chair:* **Dan Daniel**

TIME	SPEAKER	INSTITUTION	TITLE
09:00–09:30	**Amy SHEN***	OIST	Overview of OIST and Shen Unit

09:30–10:00 *Coffee break*

Session 2 Soft Matter Electrified *Chair:* **Marcus Lin**

TIME	SPEAKER	INSTITUTION	TITLE
10:00–10:15	**Dan DANIEL**	OIST	Electrifying Farewell: The Bipolar Charging of an Evaporating Droplet
10:15–10:30	**Nitish SINGH**	OIST	Electrifying Farewell: The Last Dance of an Evaporating Droplet
10:30–10:45	**Felix PERTL**	ISTA	Spontaneous Formation of Charged Rings after Droplet Evaporation
10:45–11:00	**Mei LIU**	UTokyo	Surface charge in hBN nanochannels
11:00–11:15	**Eishin KASAMA**	UTokyo	Frequency-dependent pressure-driven ionic current in 2d-material nanochannel

11:15–11:30 *Bathroom break*

Session 3 Thin Film Flow *Chair:* **Timothée Mouterde**

TIME	SPEAKER	INSTITUTION	TITLE
11:30–11:45	**William WONG**	OIST	Surface-Induced Bubble Capture
11:45–12:00	**Misaka MASUMI**	Kyushu	Experimental Investigation of Hemi-wicking Dynamics on Surfaces with Nanoscale Roughness Using Coherence Scanning Interferometry
12:00–12:15	**Shivam GUPTA**	OIST	Thin lubricant film dynamics upon liquid contact
12:15–12:30	**Kento MATSUMOTO**	UTokyo	Developing a label-free nanoflow measurement technique

12:30–14:00 Lunch

14:00–16:00 Lab tours

18:00–20:00 Dinner

Friday, 21 August

08:30–09:00 **Light breakfast**

Session 4 Wetting

Chair: **Dan Daniel**

TIME	SPEAKER	INSTITUTION	TITLE
09:00–09:30	**Mizuki TENJIMBAYASHI***	NIMS	Trick of topology in wetting: Identical composition, opposite destinies
09:30–09:45	**Antonin NGUYEN**	UTokyo	Dynamics of jumping droplets on biphilic surfaces
09:45–10:00	**Hirokazu MARUOKA**	OIST	Self-similarity of the Marangoni implosion on the air–liquid interface in a glycerol/fatty acid system

10:00–10:30 *Coffee break*

Session 5 Heat Transfer

Chair: **William Wong**

TIME	SPEAKER	INSTITUTION	TITLE
10:30–11:00	**Meng SHI***	XJTU	Interfacial thermofluids of droplets on micro/nanostructures
11:00–11:15	**Hiroki YACHIDA**	UTokyo	Spatially controlled twinned jumping droplet condensation
11:15–11:30	**Kazuki NAGAMITSU**	UTokyo	Multiple bouncing regimes on hot liquid baths
11:30–11:45	**Stoffel JANSSENS**	OIST	Aqueous droplets in a Leidenfrost state on near-room-temperature sulphuric acid
11:45–12:00	**Yongchen JIANG**	UTokyo	Rapid thermalizing surfaces for robust hot water repellency

12:00–13:30 **Lunch**

Session 6 Liquid Marbles

Chair: **Mizuki Tenjimbayashi**

TIME	SPEAKER	INSTITUTION	TITLE
13:30–13:45	**Yui TAKAI**	UTokyo	Static friction of liquid marbles
13:45–14:00	**Sakura TORII**	UTokyo	Vibrating liquid marbles
14:00–14:15	**Kanata HASHIMOTO**	UTokyo	Mechanical properties of liquid marbles: effects of binary particle mixtures and surface packing densities

14:15–16:00 **Discussion**

* Invited speaker