Micro Flow and Interfacial Phenomena

μFIP 2025 Conference
June 16-18, 2025

Program Book

CBMS
Chemical and Biological Microsystems Society

UC SANTA BARBARA

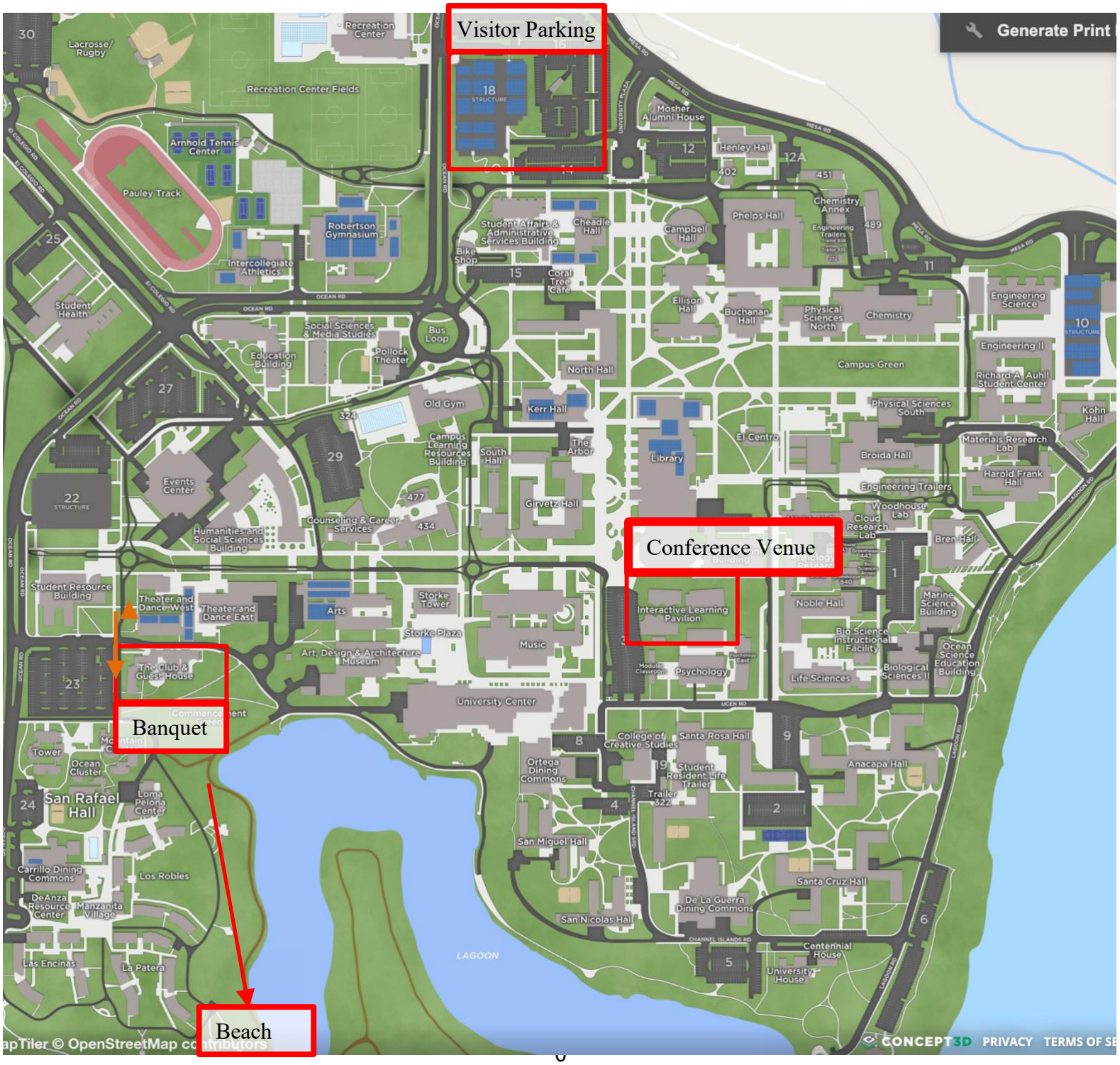
Conference Location: Interactive Learning Pavilion (ILP)

Oral Presentations: Second Floor, Room 2101
Monday, June 16 - Tuesday, June 17 – Wednesday June 18

Poster Presentations: Third Floor Patio
Monday, June 16 - Tuesday, June 17

Banquet: The Club & Guest House

Visitor Parking: Lot 18 Uber Drop-Off: Lot 3



Welcome

Dear μFIP Attendees,

Greetings and welcome to sunny California for μFIP 2025 – the 5th Annual Micro Flow & Interfacial Phenomena Conference! After last year's extravaganza in Hong Kong featuring six parallel sessions, this year's μFIP will return to the more intimate format of only one session at a time and the return of poster sessions. We expect that this centralized approach will be great for fostering conversations, building community, and stoking new collaborations. Our continued goal is to provide a friendly and open forum for the exchange of ideas to spur innovation in interdisciplinary topic areas related to micro/nano-scale surfaces, flow phenomena, and heat transfer.

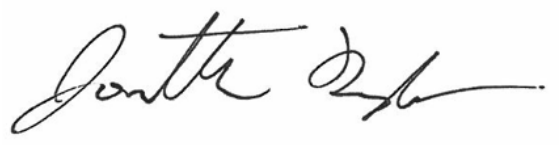
We are thrilled to host Eckart Meiburg (UCSB), David Quéré (ESPCI), and Ying Sun (Cincinnati) as this year's Plenary speakers. As detailed below, we also have a robust slate of Keynote and Invited speakers. Oral presentations will be divided into six track areas:

- Track 1 - Droplets, Bubbles, and Wetting;
- Track 2 - Micro/Nano-Fluidics, Biochemical/Biomedical;
- Track 3 - Nature-Inspired Surfaces and Materials;
- Track 4 - Heat Transfer;
- Track 5 - Energy or Water Harvesting;
- Track 6 - Simulations and Machine Learning.

Please join us on Tuesday evening (June 17th) for a banquet and award ceremony, where we announce this year's winners of the Outstanding Early Career, Leadership, and Prominent Research awards. We will also unveil the exciting international locale for μFIP 2026. Make sure to stick around for Wednesday (June 18th), as we will feature a government panel discussion and present the Best Poster awards during the closing remarks.

This conference would not have been possible without the generous support of our sponsor: the Chemical and Biological Microsystems Society (CBMS). We are also thankful to all the Conference Chairs, Track Chairs, Sara Stearns at PMMI, and all of the support from the hosting institution: the University of California, Santa Barbara (UCSB). A special thanks to Prof. Yangying Zhu, whose service as Program Co-Chair was crucial for hosting μFIP 2025 at UCSB. We hope that you enjoy the micro-flows presented at the conference proper while also making time to enjoy some macro-flows at the beach!

Sincerely,



Jonathan Boreyko
Program Chair

Objective

This conference is the successor of the "International Conference on Microchannels and Minichannels" (ICMM), held since 2003 and the "International Conference on Nanochannels, Microchannels and Minichannels" (ICNMM). The inaugural μFIP conference was held virtually in 2021 and in person at UC Irvine in 2022, and at Northwestern University in 2023. Given the importance of climate change and the water-energy nexus, the scientific objective of μFIP is to bring together the phase change and single-phase heat transfer, multi-phase flow, bio-chemical and bio-medical engineering, and micro flow process communities with an emphasis on energy applications having components exhibiting microchannel flow or microscale surface phenomena (e.g., droplets, thin films, bubbles, etc.).

Our program provides a unique opportunity for researchers in interdisciplinary topic areas to exchange ideas and discuss future directions. Both fundamental and applied sciences are disseminated. The μFIP conferences are intended to provide an active platform for the exchange of information and identification of research needs in this emerging area across multiple length and time scales.

Conference Chairs

Conference Chair:	Kyoo-Chul Kenneth Park, Northwestern University, USA
Conference Co-Chair:	Xianming (Simon) Dai, University of Texas, Dallas, USA
Conference Co-Chair:	Zuankai Wang, Hong Kong Polytechnic University, CHINA
Program Chair:	Jonathan Boreyko, Virginia Tech, USA
Program Co-Chair:	Yangying Zhu, *University of California, Santa Barbara*, USA

Session Tracks

Track Title
Track 1 - Droplets, Bubbles, and Wetting Track Chairs • Daniel Preston, Rice University (djp@rice.edu) • Shuhuai Yao, Hong Kong University of Science and Technology (meshyao@ust.hk)
Track 2 - Micro/Nano-Fluidics, Biochemical/Biomedical Track Chairs • Emilie Dressaire, University of California, Santa Barbara (dressaire@ucsb.edu) • Zhengmao Lu, École Polytechnique Fédérale de Lausanne (zhengmao.lu@epfl.ch)
Track 3 - Nature-Inspired Surfaces and Materials Track Chair • Chuanhua Duan, Boston University (duan@bu.edu)
Track 4 - Heat Transfer Track Chairs • Renkun Chen, University of California, San Diego(rkchen@ucsd.edu) • Tiwei Wei, Purdue University (wei427@purdue.edu)
Track 5 - Energy or Water Harvesting Track Chairs • Thomas Schutzius, University of California, Berkeley (tschutzius@berkeley.edu) • Steven Wang, City University of Hong Kong (steven.wang@cityu.edu.hk)
Track 6 - Simulations and Machine Learning Track Chairs • Satish Kumar, Georgia Tech (satish.kumar@me.gatech.edu) • Chen Li, University of South Carolina (li01@cec.sc.edu)

Preparing for Travel to Santa Barbara

- **Airport**

The closest airport to UCSB campus is the Santa Barbara Airport (SBA), which is just next to UCSB (5-minute drive).

Alternatively, travellers can fly to the International airport in Los Angeles (LAX) then take a shuttle to UCSB. The Santa Barbara Airbus offers scheduled trips to and from LAX. Visit their website for schedule and pricing.

- **Visa**

All foreign visitors desiring to enter the United States must have a valid passport. Depending on citizenship, the stability of that country and the duration and reasons for your stay, you may need to obtain a visa before coming to the United States. The visitor visa is a type of non-immigrant visa for persons desiring to enter the United States temporarily for business (B-1). For how-to-apply information, documentation requirements and more, please visit this page:
https://travel.state.gov/content/travel/en/us-visas.html

- **Visa Waiver Program**

All nationals and citizens of Visa Waiver Program (VWP) countries who plan to travel to the U.S. for temporary business or pleasure for 90 days or less will be required by law to obtain travel authorization prior to initiating travel to the United States. This authorization can be obtained online through the Electronic System for Travel Authorization (ESTA), a free Internet application administered by the U.S. Department of Homeland Security.

For additional information about the ESTA, please visit this link:

https://esta.cbp.dhs.gov/esta

Travelers from countries not in the VWP are still required to obtain a Visa upon entry into the United States.

- **Insurance**

The organiser does not accept responsibility for accidents that might occur. Participants are strongly encouraged to arrange travel insurance prior to their departure from their home countries. An insurance plan covering accidental loss of belongs, medical costs of injury and illness, and other possible risks related to international travel are recommended.

- **Time Zone**

Local Santa Barbara time is Pacific Time.

- **Lost Passport**

To make a “lost report”, please approach the nearest police station and/or call the UCSB Campus Police Department +1-805-893-3446 for further information, and contact your consulate to have your passport replaced.

- **Lost or Stolen Wallet**

If your wallet or valuables are lost during the Conference, please notify the Conference organizer immediately.

Conference Support

Conference Sponsor

Special acknowledgement to the Chemical and Biological Microsystems Society (CBMS) for their educational grant funding support of this Conference. www.cbmsociety.org

CBMS
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Conference Benefactor

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Instructions for Presenters

- **Plenary Lectures**

60 minutes in total (45 minutes for presentation, 14 minutes for questions, and 1 minute for introduction/transition).

- **Keynote Lectures**

30 minutes in total (25 minutes for presentation, 4 minutes for questions, and 1 minute for introduction/transition).

- **Invited Lectures**

25 minutes in total (20 minutes for presentation, 4 minutes for questions, and 1 minute for introduction/transition.

- **Oral Presentations**

15 minutes in total (12 minutes for presentation, 2 minutes for questions, and 1 minute for introduction/transition).

Speakers are required to enter the room 15 minutes before the session starts for a connection test!

Conference Services

- **Registration:** registration@microfip.org

- **Program:**

Jonathan Boreyko, Email: boreyko@vt.edu
Yangying Zhu, Email: yangying@ucsb.edu

- **Visa**

Sara Stearns, Email: sstearns@pmmiconferences.com

Plenary Speaker 1

EXPLORING COHESIVE FLOWS VIA PARTICLE-RESOLVING SIMULATIONS

Eckart Meiburg
Department of Mechanical Engineering, UC Santa Barbara

ABSTRACT

We discuss grain-resolving Navier-Stokes simulations for a variety of particle-laden flow processes. These simulations are based on an Immersed Boundary approach, which accurately captures the flow around each particle and in each pore space. We will present several different applications, among them particle sedimentation, particle-turbulence interaction and submerged granular collapse processes. One focus will be on the influence of cohesive forces in such flows, especially the formation and break-up of aggregates consisting of several individual particles.

BIOGRAPHY

Eckart Meiburg received his PhD from the University of Karlsruhe in Germany. He conducted postdoctoral research at Stanford, and after holding faculty positions at Brown University and the University of Southern California, he moved to UCSB in 2000. Eckart's research interests fall into the area of fluid dynamics and transport phenomena, with an emphasis on computational investigations of environmental and multiphase flows. He is a fellow of the APS and ASME, and he is a recipient of the Presidential Young Investigator and Humboldt Senior Research Awards. He was the Ronald Probstein Lecturer at MIT and the Endowed Distinguished Lecturer in Fluid Mechanics at the University of Florida, and he has held visiting positions in Switzerland, France, Germany, Australia, Israel and New Zealand.

Plenary Speaker 2

AMAZING PROPERTIES OF NON-WETTING DROPS

David Quéré
ESPCI Paris & École Polytechnique, France

ABSTRACT

Drops on solids that keep the shape of pearls are highly mobile, and this limit turns out to be even more spectacular when liquids are viscous (say, 1000 times more than water). This is primarily due to the conjunction of a small contact toward the substrate with the rotation of the liquid (Mahadevan-Pomeau regime). The speed of drops is of course an increasing function of the force that moves them, and we show that above some threshold in force, the speed somehow diverges (tenfold increase) - which makes the quite quick drops really quick. We discuss this fast regime. But we also show that these high speeds can themselves be multiplied by another factor 10 when their speed reaches another threshold - making these a priori sluggish drops as mobile as quicksilver!

Plenary Speaker 3

ACOUSTIC SENSING OF FLOW CONDENSATION

Ying Sun
Department of Mechanical and Materials Engineering,
University of Cincinnati, Cincinnati, OH 45219, USA

ABSTRACT

Flow boiling and condensation processes offer efficient heat transfer but may experience performance degradation due to various interfacial instabilities and flow regime transitions, which are challenging to characterize in real-world applications. In this talk, we introduce a non-destructive approach for identifying flow condensation regimes using acoustic emission (AE) and accelerometer sensing. The slug flow regime is detected by a bimodal distribution in the probability density function of acoustic absolute energy. Acoustic signatures are found to correlate strongly with local vapor quality, heat flux, and heat transfer coefficient. Additionally, we explore the applications of unsupervised machine learning frameworks for monitoring flow condensation dynamics. These approaches demonstrate the potential of combining acoustic emission sensing with machine learning for in-situ, non-destructive characterization of flow condensation. Compared to optical imaging, acoustic emission sensing allows higher sampling rates, capable of capturing high-frequency interface oscillations that are critical to the flow regime transitions and remains effective even for condensation in opaque tubes and channels where optical access is impossible.

BIOGRAPHY

Dr. Ying Sun is the Herman Schneider Professor in Mechanical Engineering and the Director of Research and Strategic Initiatives in the College of Engineering and Applied Science at the University of Cincinnati. Her research interests span multiphase flows and heat/mass transfer, complex fluids and interfacial phenomena, machine learning and data-driven methods, and multi-scale modeling. Dr. Sun is an elected Fellow of APS and ASME and a recipient of the NSF CAREER Award, AFOSR Summer Faculty Fellowship, CNRS Visiting Professorship, and Drexel College of Engineering Research Achievement Award. She serves as an Associate Editor for the *Journal of Heat and Mass Transfer* and Co-Chair of the 2025 Gordon Research Conference for Micro and Nanoscale Phase Change Phenomena.

Monday - June 16, 2025

07:45-08:15	**Registration - Interactive Learning Pavilion**	
Opening Ceremony (*Interactive Learning Pavilion, 2101*)		
08:15-08:30	**Prof. Umesh Mishra,** Dean of the College of Engineering, *University of California, Santa Barbara* **Prof. Yangying Zhu,** Program Co-Chair, *University of California, Santa Barbara* **Prof. Jonathan Boreyko,** Program Chair, *Virginia Tech*	
Plenary Presentation 1		**Session Chair: Xianming Dai**
08:30-09:30	Exploring Cohesive Flows via Particle-Resolving Simulations	**Eckart Meiburg** *University of California, Santa Barbara*
09:30-09:50	**Coffee Break and Conference Photo**	
Track 1 - Drops/Bubbles - Keynote		**Session Chair: Daniel Preston**
09:50-10:20	Solid-Liquid Hybrid Mass Exchangers for Atmospheric Water Harvesting and Dehumidification	**Jeremy Cho** *University of Nevada, Las Vegas*
Track 1 - Drops/Bubbles 1		**Session Chair: Shuhuai Yao**
10:20-10:35	Tuning the Departure Size of Coalescence-Induced Jumping Bubbles	**Jack Tapocik** *Virginia Tech*
10:35-10:50	Decompression of Gas-Saturated Solutions does not Reveal Bulk Nanobubbles	**Rameez Iqbal** *ETH Zurich; University of California, Berkeley*
10:50-11:15	**Invited:** Drops Dance and Explode on Lubricated Surfaces	**Dan Daniel** *King Abdullah University of Science and Technology*
11:15-11:30	Dynamics of Isolated Holes in Sheets of Oil-in-Water Emulsions	**Sara Gonzalez** *University of California, Santa Barbara*
11:30-11:45	Electrostatics-Driven Droplet Manipulation and Applications	**Zuankai Wang** *Hong Kong Polytechnic University*
11:45-13:00	**Lunch**	

Monday - June 16, 2025

Track 1 - Drops/Bubbles 2		Session Chair: Daniel Preston
13:00-13:15	Interference Fringe (IF) Technique for Droplet Contact Angle and Thickness Measurement: Ultra-Low Contact Angle and Nanoscale Thickness Measurement	**Iltai Isaac Kim** *Texas A&M University*
13:15-13:40	**Invited:** Generalizing Classical Theories of Wetting to Real Liquids	**Zhenying Wang** *Kyushu University*
13:40-13:55	An Experimental and Theoretical Study of Bubble Jumping Phenomena in Microgravity Flow Boiling	**Pengcheng Jiang** *University of South Carolina*
13:55-14:20	**Invited:** Mask-Enabled Wettability Patterning for Droplet-Based Thermal Systems	**Trevor Shimokusu** *University of Hawaii, Manoa*
Track 2 - Micro/Nano-Fluidics - Keynote		**Session Chair: Emilie Dressaire**
14:20-14:50	Electrostatic Zipper Actuators: Coupled Deformation Modes and Resulting Microfluidic Flows	**Sumita Penathur** *University of California, Santa Barbara*
14:50-15:10	**Coffee Break**	
Track 2 - Micro/Nano-Fluidics		**Session Chair: Zhengmao Lu**
15:10-15:25	Patterning Bacterial Cells on Quasi-Liquid Surfaces for Biofilm Morphological Control	**Fangying Chen** *University of Texas, Dallas*
15:25-15:40	Turning Failure into Function: New Applications of Nanoparticle-Blocked Nanopores	**Chuanhua Duan** *Boston University*
15:40-15:55	Assessing the Validity of the One-Dimensional Evaporation Model for Evaporation in Microchannels	**Takehiro Shiraishi** *EPFL*
15:55-16:10	3D-Printed Microreactors with Biocatalytic Coating for Heterogeneous Catalysis	**Alina J. Tauriainen** *TU Dortmund University*
16:25-16:40	Slippery Liquid-Like Surfaces as a Promising Solution for Sustainable Drag Reduction	**Bei Fan** *Michigan State University*
16:25-16:40	Additive Manufacturing of TPMS Microlattices for Enhanced Fluid Mixing and Catalyst Loading	**Bastian Oldach** *TU Dortmund University*
16:40-18:00	**Poster Session 1** **(see page 16 for listing)** *Venue: Interactive Pavilion, Third Floor*	

Tuesday - June 17, 2025

08:00-08:30	**Registration** - *Interactive Learning Pavilion*

Plenary Presentation 2		**Session Chair: Jonathan Boreyko**
08:30-09:30	Amazing Properties of Non-Wetting Drops	**David Quéré** *ESPCI & Ecole Polytechnique*
09:30-09:50	**Coffee Break**	
Track 3 - Nature-Inspired Surfaces - Keynote		**Session Chair: Chuanhua Duan**
09:50-10:20	Learning from Complexity: Machine Learning for Two-Phase Heat Transfer	**Yoonjin Won** *University of California, Irvine*
Track 3 - Nature-Inspired Surfaces		**Session Chair: Chuanhua Duan**
10:20-10:35	High-Performance Condensers Based on Triply Periodic Minimal Surface Structures	**Shuhuai Yao** *Sichuan University*
10:35-10:45	High-Efficiency Frost and Ice Control via Sensing-Assisted Nanovibrational Slippery Surface	**Yuchen Shen** *University of Texas, Dallas*
10:45-11:00	Ice Bridging Mode Transition Induced by Surface Wettability	**Siyan Yang** *University of Illinois, Urbana-Champaign*
11:00-11:15	Ziplining Droplets on Oil-Impregnated Fibers	**Abir Malakar** *Virginia Tech*
11:15-11:30	Physics-Informed Neural Network Framework for Inverse Modeling of Two-Phase Boiling	**Thanh Hoang Phan** *Case Western Reserve University*
11:30-13:00	**Lunch**	
Track 4 - Heat Transfer - Keynote		**Session Chair: Renkun Chen**
13:00-13:30	CO2 Condensation with Liquid Film Analysis in Printed Circuit Heat Exchanger	**Hangjin Jo** *Pohang University of Science and Technology*
Track 4 - Heat Transfer		**Session Chair: Tiwei Wei**
13:30-13:45	Spray and Liquid Jet for On-Chip Cooling: Insights into Flow Hydrodynamics and Thermal Management	**Gopinath Sahu** *Purdue University*

Tuesday - June 17, 2025

13:45-14:00	Numerical Study of Acoustic Streaming in Spherical Droplets Suspended in Unconfined Media	**Carl Meinhart** *University of California, Santa Barbara*
14:00-14:25	**Invited:** Droplets and Bubbles on Engineered Surfaces	**Solomon Adera** *University of Michigan*
14:25-14:40	Marangoni Convection during Dropwise Condensation in Two-Fluid Systems	***Patricia Weisensee*** *Washington University, St. Louis*
14:40-15:05	**Invited:** Micro- and Mesoscale Liquid Elements for Heat and Mass Transport Applications	**Y. Sungtaek Ju** *University of California, Los Angeles*
15:05-15:30	**Coffee Break**	
Track 5 - Water/Energy Harvesting - Keynote		**Session Chair:** **Jonathan Boreyko**
15:30-16:00	Heat-Driven Phase Transitions for Clean Water	**Akanksha Menon** *Georgia Tech*
16:00-17:30	**Poster Session 2 (see page 16 for listing)** *Venue: Interactive Pavilion, Third Floor*	
18:00-20:00	**Banquet and Award Ceremony** *Venue: The Club & Guest House*	

Wednesday - June, 18 2025

08:00-08:30	**Registration** - *Interactive Learning Pavilion*

Plenary Presentation 3		**Session Chair: Yangying Zhu**
08:30-09:30	Probing Flow Condensation with Acoustic Signatures	**Ying Sun** *University of Cincinnati*
09:30-09:50	**Coffee Break**	
Track 5 - Water/Energy Harvesting		**Session Chair: Thomas Schutzius**
09:50-10:15	**Invited:** Additive Manufacturing of Electronic Skins and Musculofacial Multifunctional Structures	**William Boley** *Boston University*
10:15-10:30	Capacitive Fog Harvesting: A Scalable and Ozone-Free Electrostatic Approach	**Jimmy Kaindu** *Virginia Tech*
10:30-10:45	Swelling-Induced Transport Modeling in Hydrogel-Salt Composites for Sorption-Based Thermal Energy Storage	**Bachir El Fil** *Georgia Tech*
10:45-11:00	Salt-Rejecting Continuous Thermal Multistage Desalination via Convective Flow and Thin-Film Phase Change	**Patrick Babb** *University of California, Santa Barbara*
Track 6 - Numerical - Keynote		**Session Chair: Satish Kumar**
11:00-11:30	Achieving Slip on Gas-Liquid Interfaces for Drag Reduction in Realistic Conditions	**Paolo Luzzatto-Fegiz** *University of California, Santa Barbara*
11:30-12:45	**Lunch**	
Track 6 - Numerical		**Session Chair: Chen Li**
12:45-13:00	3D Investigation of Microchannel Geometries for Droplet and Bubble Formation using Artificial Intelligence	**Bastian Oldach** *TU Dortmund University*
13:00-13:25	**Invited:** Conformational Behavior of von Willebrand Factor under High Shear and Extension in Microchannel Flows	**Cyrus Aidun** *Georgia Tech*
13:25-13:40	Physics-Informed Neural Network for Bubble Rise in Two-Phase Flows	**Aaditya Sakrikar** *Georgia Tech*
13:40-13:55	**Invited:** SeqReg: A Sequential Data Analysis Package for Boiling Monitoring and Diagnostics	**Han Hu** *University of Arkansas*

Wednesday - June, 18 2025

13:55-14:10	Micro Raman Thermometry for Spatially Resolved Characterization of Thin Film Evaporation	**Vijay Kumar** *University of California, Santa Barbara*
14:15-15:15	**Government Panel Discussion** Dr. Mark Spector *Office of Naval Research*	
15:15-15:30	**Closing Remarks**	

Poster Presentations

Poster Session 1 – Monday 16:40-18:00
Poster Session 2 – Tuesday 16:00-17:30

#	Title	Presenting Author	Affiliation
P1-01	Laplace-Pressure-Driven Single-Bubble Jumping	Danielle Miller	*Virginia Tech*
P1-02	Tracking the Dynamics of Charge Deposition of Evaporating Droplet	Nitish Singh	*King Abdullah University of Science and Technology*
P1-03	Thermal and Hydraulic Performance of Dielectric Fluid Flow Boiling in Nanowire Microchannels	Harsh Shah	*University of California, Santa Barbara*
P1-04	Accelerated Wetting Induced by Nano-Bumps	Mohammadreza Borzooei	*University of Houston*
P1-05	Effect of Silane Integration Conditions on Jumping Droplet Condensation Performance for Nanostructured Surfaces	Yanxiu Ge	*Texas A&M*
P1-06	Droplet Dynamics on an Oil-Impregnated Fiber	Venkata Yashasvi Lolla	*University of California, Berkeley*
P1-07	Effect of Coalescence-Driven Bubble Departure on Boiling Heat Transfer	Rameez Iqbal	*EPFL*
P1-08	Resolving Thermal Gradients and Solidification Velocities during Laser Melting of a Refractory Alloy	Hyunggon Park	*University of California, Santa Barbara*
P1-09	Thermal Performance Enhancement in Micropillar Array via Thin Film Evaporation	Natnael Haile	*University of California, Santa Barbara*
P1-10	How Condensation Frosting Depends on Surface Orientation and Wettability	Mohammad Swedat	*Virginia Tech*
P1-22	A Numerical Investigation of the Rheology of Partially Cohesive Granular Suspensions	Paul Tautenhahn	*University of California, Santa Barbara*
P1-23	Suspension Dynamics of Particles In Oscillatory Background Flows	Polina Zhilkina	*University of California, Santa Barbara*
P1-25	Patterned Hydrophobic Electro-Spun Membranes for Enhanced Evaporation Efficiency in Distillation Applications	Emily Spitaleri	*University of California, Santa Barbara*
P2-11	From Deep Pools to Thin Films: Identifying Boiling Crisis Mechanisms Through Liquid Height Control	Rodrigo Cavalcanti	*Massachusetts Institute of Technology*

P2-12	High-Flux and Stable Thin Film Evaporation from Fiber Membranes with Interconnected Pores	Yu Pei	*University of California, San Diego*
P2-13	Two-Phase Jet Impingement Cooling of Multi-Chip Packages	Akshat Patel	*Purdue University*
P2-14	High-Performance and High-Efficiency Electronics Cooling via Dynamic Dropwise Evaporation	Fangying Chen	*University of Texas, Dallas*
P2-15	Understanding Swelling-Induced Transport in Hygroscopic Hydrogel-Salt Composites for Enhanced Moisture Capture	Avery Skolnick	*Georgia Tech*
P2-16	Exploring the Dynamics of Ice Recalescence in Polyethylene Glycol Solutions	Shuai Li	*University of California, Berkeley*
P2-17	Self-Cleaning Electrostatic Precipitators via Liquid-Sheathed Wires	Livia Meeting	*Virginia Tech*
P2-19	Investigating Temperature Dependency of Apolar Component in Polar Liquids: Challenges in Interfacial Interaction Estimation Models	Jiahui Guo	*Texas A&M University*
P2-20	High-Fidelity Numerical Simulations of Nucleate Boiling	Giovanni Ghigliotti	*Université de Rennes*
P2-24	Aggregation and Breakup of Cohesive Particles In Turbulent Channel Flow	Alexandre Leonelli	*University of California, Santa Barbara*
P2-26	Imbibition in Gel-Coated Capillary Tubes	Trinh Huynh	*University of California, Santa Barbara*