AGENDA

Morning Presentations, *via Zoom*

Join Zoom meeting
https://harvard.zoom.us/j/94349045841?pwd=L1ZjWHhEN0FSUE9OYkFvS2c4b1VUZz09

Password: 85NECF

Join by telephone (use any number to dial in)
+1 301 715 8592
+1 312 626 6799

9:00–9:30 a.m. **Sound Bites Session I (***3 minutes each)*

Perry Ellis will **host** the soundbite sessions and call the name of the speaker and ask the next one to be ready.
Presenters: please share your screen to present your **3** minute soundbite. Stop sharing your screen when you are finished or time is called.

We will use the virtual screen timing system:
0:00 Green background
2:00 Yellow Background
2:30 Red Background
3:00 Time up
3:15 Host will must speaker and stop the screen share

Perry Ellis, Harvard University,
"*Better organoids through homogeneity*"
Hayriye Altural, Kastamonu University,
"*A simulation study on early diagnosis of diabetes mellitus using photoacoustic phenomenon for in vitro studies*"
Bobby Tyrell Haney, Harvard University,
"*Extrusion printing of biomimetic scaffolds for in vitro investigation of tissue regeneration in multicellular environments*"
Yen-Chen Chen, Worcester Polytechnic Institute,
"*Tunable spontaneous circulation of microtubule-based active fluid confined in a compressed water-in-oil droplet using milli-fluidic devices*"
Bertrand OttinoLoffler, Massachusetts Institute of Technology,
"*Population extinction on a random fitness seascape*"
Chaitanya Joshi, Brandeis University,
"*Data-driven discovery of active nematic dynamics*"

9:30–10:00 a.m. **Peter Schall,** University of Amsterdam
"Colloidal architectures: Advanced assembly and applications"

10:00–10:15 a.m. Discussion

10:15–10:45 a.m. **Laura Arriaga,** Autonomous University of Madrid
"Phase separations in emulsion-templated vesicles"

10:45–11:00 a.m. Discussion

11:00–12:00 p.m. **Sound Bites Session II (***3 minutes each)*

Perry Ellis will **host** the soundbite sessions and call the name of the next speaker and ask the next one to be ready.
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2:30 Red Background
3:00 Time up
3:15 Host will must speaker and stop the screen share

Feiyun Cui, Worcester Polytechnic Institute/Chongqing University,
"*A microfluidic electrochemical device for rapid evaluation of antibacterial carbohydrates*"
Shiyan Wang, Purdue University,
"*Dynamics of spheroids in an unbound quadratic flow of a general second-order fluid*"
Soroush Kargar, University of Massachusetts Boston,
"*Numerical simulation of selective particle capture using acoustic streaming in microfluidics*"
Ali Lashkaripour, Boston University,
"*Machine learning enables design automation of microfluidic droplet generators*"
Priyatanu Roy, University of Minnesota,
"*Approaches for high throughput ice nucleation detection in a microfluidic platform*"
Ganga Prasath Srinivasa Gopalakrishnan, Harvard University,
"*Magnetic sand castles*"
Mohammad Shoaib, University of Toronto,
"*Microstructure of Na-montmorillonite suspensions*"
Benjamin Yavitt, Stony Brook University/Brookhaven National Laboratory,
"*Unraveling 3D printing dynamics in UV curable resins*"

Georgios Katsikis, Massachusetts Instititute of Technology,
"*Measuring the dna cargo of viruses using nanofluidics*"
Zachary Cohen, University of Washington,
"*Flocculation of fatty acid membranes does not disrupt encapsulation: implications for the origin of cells in evaporative lake environments*"

12:00–1:00 p.m. Career Advice, Break out rooms (*via number*)

Each of the invited speakers and Dave Weitz will be available to provide career advice in six different breakout rooms during this session. The room assignments will be:

1 – **Arriaga**, Laura
2 – **Fraden**, Seth
3 – **Han**, Hee-Sun
4 – **Keller,** Sarah
5 – **Schall**, Peter
6 – **Weitz**, Dave

You will be able to enter the break out room of your choice or elect to visit more than one of the speaker's rooms during this session in zoom.
If you are not able to join one of the break out rooms, please go to the participants list in Zoom and "rename" yourself with the number of the room in front and we will move you into that room. For example, "Robert Graham," renamed to "4-Robert Graham" will allow us to send you to to Prof. Sarah Keller's break out room.

Afternoon Presentations

1:00–1:30 p.m. **Sarah L. Keller**, University of Washington
"Phase separation in living and model cell membranes"

1:30–1:45 p.m. Discussion

1:45–2:15 p.m. **Hee-Sun Han,** University of Illinois Urbana-Champaign
"Microfluidic strategies towards single virus sequencing"

2:15–2:30 p.m. Discussion

2:30–3:45 p.m. **Sound Bites Session III (***3 minutes each)*

Benjamin Thorne will **host** the soundbite sessions and call the name of the next speaker and ask the next one to be ready.
Presenters: please share your screen to present your **3** minute soundbite. Stop sharing your screen when you are finished or time is called.

Thomas Cochard, Harvard University,
"*Visualizing and listening to hydraulics fracture dynamics in high strength material*"
Shima Parsa, Rochester Institute of Technology,
"*Cooperative mobilization of emulsions in porous media*"

Kate Jensen, Williams College,
"*Adhesion of soft gel microspheres*"
Zsolt Terdik, Harvard University,
"*Traction rheoscopy of colloidal glass*"
Will Wang, Harvard University,
"*Accurate 3d particle tracking in a dense colloidal suspension*"
Seongsoo Kim, Harvard University,
"*Understanding dislocation dynamics by shearing colloidal crystals*"
Ilya Svetlizky, Harvard University,
"*Multi-scale visualization with machine learning of dislocation networks in colloidal single crystals*"
Weixia Zhang, Harvard University,
"*Asymmetric microcapsules for osmotic pressure triggered release of biomolecules*"
Tina Huang, Harvard University,
"*Microfluidic fabrication of asymmetric polymer lipid vesicle*"
Anqi Chen, Harvard University,
"*Interaction between multicomponent lipid vesicle membranes*"
Maria Eleni Moustaka, Brandeis University,
"*Dynamics of a three-ring BZ chemical reaction-diffusion oscillator network*"
Brock Jolicoeur, Worcester Polytechnic Institute,
"*Controlling flows of a intra-droplet active fluid across droplet interface*"

3:45–4:00 p.m. Break

4:00 p.m. Applied Physics Colloquium, *continuing on Zoom*

Seth Fraden, Brandeis University
"Testing equivariant dynamics in a network of reaction-diffusion oscillators"