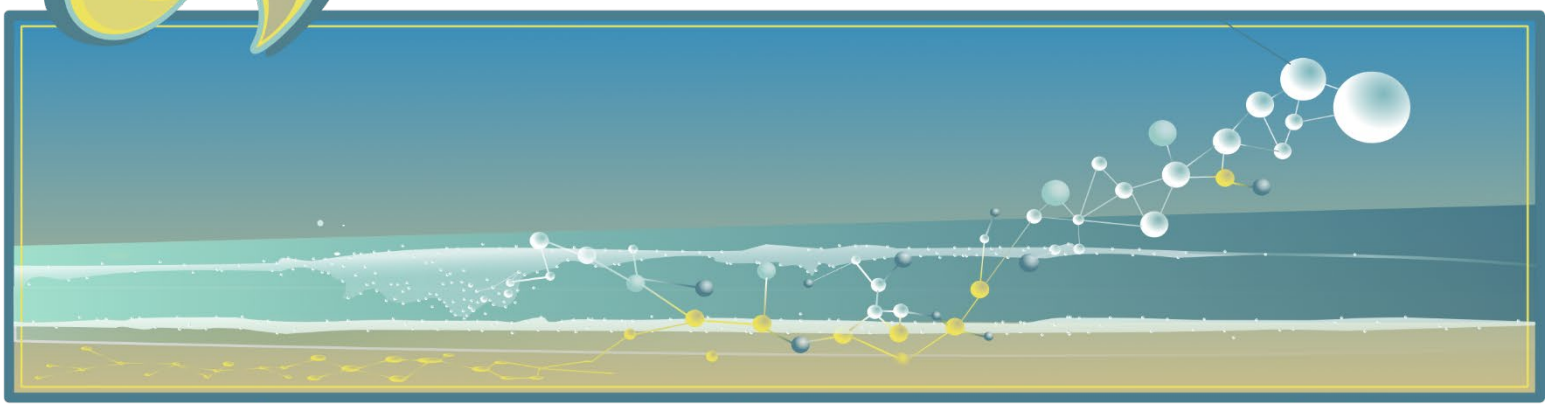
Soft Matter Around the World in Three Years

ISMC 2024

The 8th International Soft Matter Conference



Blurring Boundaries Between Fields

Connecting to reshape the future of soft matter

July 29 – August 2, 2024
Raleigh, North Carolina

Program Book

Soft Matter Association of the Americas

SMAA
Soft Matter Association of the Americas

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Welcome from Organizers

On behalf of the Local Organizing Committee, I welcome all participants to the 8th International Soft Matter Conference (ISMC2024).

This conference is organized jointly by the Soft Matter Association of the Americas (SMAA – see the history of ISMC and SMAA on pages 31-33) and by the Triangle Universities – Duke University (Duke), North Carolina State University (NCSU), and the University of North Carolina at Chapel Hill (UNC). It is supported by the International Union of Pure and Applied Physics (IUPAP), the National Science Foundation, and many other organizations (see the complete list of sponsors on page 34). This is the first ISMC on the American continent, and as such, it concludes the first cycle of the Soft Matter around the World in Three Years series of ISMCs (see details on page 31).

The conference aims to bring together researchers from physics, chemistry, biology, chemical engineering, and materials science interested in various soft matter systems. We hope the conference will promote and intensify interdisciplinary collaborations and advance connections between academia and industry around soft matter technologies.

The conference features seven plenary talks, fifty-four invited keynote lectures, eighty-four contributed oral presentations, and over two hundred and seventy posters. The rest of this booklet gives all the essential information needed to navigate your way through ISMC2024.

On behalf of all the organizers, I thank you for participating in ISMC2024 and wish you an enjoyable and fruitful conference.
Welcome to North Carolina!

Michael Rubinstein
Chair of the ISMC2024 Organizing Committee
Chair of the IUPAP Soft Matter WG-15
President of the Soft Matter Association of the Americas

On behalf of the ISMC2024 Local Organizing Committee:

Ronit Freeman, co-chair	Patrick Charbonneau	Lilian Hsiao
Jan Genzer, co-chair	Karen Daniels	Daphne Klotsa
Christoph Schmidt	Moumita Das	Stefan Zauscher

Committees

Local Organizing Committee

Michael Rubinstein (Duke), chair
Ronit Freeman (UNC), co-chair
Jan Genzer (NCSU), co-chair

Patrick Charbonneau (Duke)
Karen Daniels (NCSU)
Moumita Das (Rochester Institute of Technology)
Lilian Hsiao (NCSU)
Daphne Klotsa (UNC)
Christoph Schmidt (Duke)
Stefan Zauscher (Duke)

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Seth Fraden (Brandeis University)
Jian Ping Gong (Hokkaido University)
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Eugenia Kumacheva (University of Toronto)
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Emanuela Zaccarelli (Sapienza University of Rome)

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Matthew Tirrell (University of Chicago)
Vincenzo Vitelli (University of Chicago)
Dimitris Vlassopoulos (FORTH, Crete)
Arjun Yodh (University of Pennsylvania)
Julia Yeomans (University of Oxford)
Slobodan Zummer (University of Ljubljana)

General Information

Venue and Parking

The conference will be held at the Raleigh Convention Center (RCC), 500 South Salisbury Street, Raleigh, NC 27601 (see floor maps of the RCC on pages 9-10).

Transportation & Directions

- **By air:** If you are flying through Raleigh-Durham International Airport (RDU), taxis, ridesharing, and car rentals are available at both terminals. It is an 18-minute drive to and from the RCC.
  By bus, Google and gotriangle.org provide information on local routes and paying fares. The Go-Raleigh Station is a convenient 3 1/2 blocks walk from the RCC. The free downtown R-LINE bus circulates to major food and retail areas every 15 minutes during the evenings and stops at the main entrance of the RCC.
- **By train:** Two Amtrak trains serve downtown Raleigh daily at Raleigh Union Station (RGH): the Carolinian and the Piedmont. More information is available **here**.
- **By car:** The RCC is adjacent to the Red Hat Amphitheater.
  - **From the west:** I-40 east; take Exit 298B South Saunders Street.
  - **From the east:** 64/264 to I-440 East I-40 West; take Exit 298B South Saunders Street.
  - **From the south:** US-1 North to I-40 east; take Exit 298B South Saunders Street.

From the north: US-1 South into the city; left on Lenoir Street.

Parking

- **Map of parking decks in Downtown Raleigh**. The closest public parking decks to the RCC are at:
  - Lenoir Street between Salisbury Street and Fayetteville Street;
  - Lenoir Street between Salisbury Street and McDowell Street;
  - South Street between Salisbury Street and McDowell Street;
  - Davie Street between McDowell Street and Dawson Street;
  - Cabarrus Street between McDowell Street and Dawson Street;
  - Salisbury Street between Cabarrus Street and Davie Street
- **Accessible parking spaces** are available on the first level of each garage; visit the City of Raleigh **Accessibility** page for more information.

Please note that the RCC does not control the parking rates or maintenance of these garages. For concerns with a parking facility or more information, contact McLaurin Parking directly.

Registration desk

The registration desk is located in the main lobby of the RCC (see floor map on page 10). Its operating hours are

Monday, July 29	5:00 pm – 8:00 pm
Tuesday, July 30	8:00 am – 8:00 pm
Wednesday, July 31	8:30 am – 7:00 pm
Thursday, August 1	8:30 am – 8:00 pm
Friday, August 2	8:30 am – 1:00 pm

Internet

The RCC provides free Wi-Fi internet access to all conference delegates.
Public networks: **Legacy Devices** and **Raleigh Convention Center**. No password is needed.

Conference Attendee App

The **EVENT APP** can be downloaded and installed on mobile devices and contains most of the conference information. The program (Agenda) can be customized (My Agenda) with times, locations, titles, abstracts, and invited speakers' information. The app also provides a way to communicate with other attendees and organizers. To install the conference Attendee App follow the three steps below:

Step 1: Download the app.

Apple:

Google:

Others (HTML):

Step 2: Enter event code: **ismc24** and click **Submit** button.

Step 3: Sign in using your Events Air registration credentials.

Use of Mobile Devices During Lectures

During lectures, please turn your mobile phone ringers off. There are some power outlets throughout the RCC for charging your mobile devices and laptops.

No Smoking Policy

The RCC is a smoke free facility. Smoking is prohibited in all areas within the facility without exception.

Lost & Found

Personal belongings left in the conference rooms or other locations within the RCC will be collected by the ISMC2024 or the RCC staff. Contact an RCC security guard or call the security team at 919-302-8238 or 919-996-8911. The conference staff can also be reached at ISMC24@soft-matter.com .

ATM Locations

There is a PNC Bank ATM on the main level of the RCC and a CashPoints ATM on the Mezzanine level.

Safety & Security

As in any large city, we advise you to be vigilant when going out late at night. Please always pay attention to your surroundings and belongings. Should you have any questions, please do not hesitate to ask for information at the registration desks of hotels or of the conference.

Access to the conference center is restricted to people with a valid conference badge. Please wear your conference badge at all times on the RCC premises. When leaving the conference, please deposit your badge in the collection box near the registration desk. Please do not dispose of your badge in your hotel room or any public places.

COVID Safety Protocol

We kindly ask that all participants take a rapid antigen test before traveling and refrain from traveling if you test positive. If you start feeling ill during the conference, we will ask that you test yourself. **If you test positive at any point during the conference, we ask that you self-isolate to avoid spreading the virus to other participants**. N95 masks will be available at the conference information desk.

Medical Care & Emergencies

- **Emergency:** dial 911 free from any phone
- Please report any accidents to the RCC Security Team at 919-996-8911 or 919-302-8238
- **Urgent Care:** FastMed, 107 W Hargett Street (8-minute walk) 984-255-2107
- **Pharmacy:** Glenwood South Pharmacy & Market, 401 Glenwood Avenue (30 min walk)
- **On-site First Aid:** contact an RCC security guard

Child Care

(not endorsed by ISMC)

There are two childcare options in the downtown Raleigh area: Platinum Childcare and Care.com (vetted local sitters). Baby changing stations are available in every restroom of the RCC.

Mamava Lactation Pods

Two Mamava lactation pods are available on the Main and Mezzanine levels, accessed via the Mamava app.

Restaurants

(not endorsed by ISMC)

Food

Beasley's Chicken & Honey – Known for its southern cuisine and famous chicken and waffles
Gonza Tacos y Tequila – Some of the Triangle's best Mexican food
La Santa – Another good Mexican restaurant
Taverna Agora – Greek cuisine with an atmosphere to match
Poole's Diner – A modern take on the traditional American diner
Mulino Italian – Italian restaurant with a patio perfect for an after-conference dinner
The Station – Upper-quality bar food…plus they have a nice brunch
Sam Jones – Wood-fired, 100% authentic North Carolina BBQ
The Pit – BBQ and southern cuisine – you can even buy a bottle of their sauce to take home with you
Boulted Bread – Fresh baked croissants, pastries, and other breads. It was named the 'best bakery' by at least one committee chair!
Sitti – Authentic Lebanese cuisine with sidewalk dining

Drink

Jubala – Coffee shop with nice breakfast options like waffles and biscuits
Little Native Coffee Co. – Coffee shop with light breakfast and indoor/outdoor seating
Beer Garden – Over 350 beers on tap and also serves food
Willard – Rooftop lounge and bar
Dram & Draught – Neighborhood bar feel, whiskey savvy
Boxcar – Lively atmosphere with an adult arcade
Big Easy – New Orleans-style bar, serves Cajun food
Trolley Pub – Tour downtown Raleigh while you have drinks on this boozy wagon
Watts & Ward – Underground bar with a speakeasy vibe
Whiskey Kitchen – A converted garage that maintains that industrial atmosphere – over 300 whiskeys
The Green Light – Small, hidden speakeasy-style bar

Tourist Information

See more information at https://soft-matter.com/ismc2024/ismc-area/.
Visit Raleigh
North Carolina Museum of Natural Science
Marbles Kids' Museum
Haunted Raleigh Walking Tour
NC Museum of Art

August 2nd will be First Friday in Downtown Raleigh. You will find art walks and a lively atmosphere.

Code of Conduct

Registered attendees agree to abide by the IUPAP Code of Conduct.

Free Circulation of Scientists: The principle of the Universality of Science is fundamental to scientific progress. This principle embodies freedom of movement, association, expression, and communication for scientists, as well as equitable access to data, information, and research materials. In pursuing its objectives

with respect to the rights and responsibilities of scientists, we actively uphold this principle, and in doing so, we oppose any discrimination. Participation at this conference is open to all nationalities, religions, genders, political views, ages or any other factors. We explicitly encourage varied and diverse participation.

Harassment at Conferences: It is the policy of the IUPAP that all participants in Union activities will enjoy an environment that encourages the free expression and exchange of scientific ideas and is free from all forms of discrimination, harassment, and retaliation. The conference organizers have named advisors who will consult with those who have suffered from harassment and suggest ways of redressing their problems, as well as an advisor who will counsel those accused of harassment. The conference organizers may, after due consideration, take such action they deem appropriate.

Reporting: For incidents involving discrimination, harassment, sexual harassment or retaliation, please use the NCSU Online Reporting Form System: go.ncsu.edu/oiedreportform. Be sure to include **ISMC-24** somewhere within the narrative of your report to ensure that the designated advisors are notified. This reporting process can be either anonymous or non-anonymous. Anonymous reporting may limit the actions taken by the advisors. For all other incidents and reporting, please contact the named advisors (Local Organizing Committee members) Karen Daniels (kdaniel@ncsu.edu, 919-513-7921) and/or Patrick Charbonneau (patrick.charbonneau@duke.edu, 919-613-6261). Using this method is not necessarily anonymous.

Preconference Event: Young Investigator Workshop on July 27-28, 2024 on the NCSU campus (see https://smaa.eventsair.com/cmspreview/ismc-yiw-2024/#young-investigator-workshop)

Information for Session Chairs

Session chairs should arrive to the session room 15 minutes before the beginning of their session to meet speakers and ensure that they work with the A/V staff to connect their laptop or transfer their presentation to the provided laptop. Session chairs introduce the speakers. They will be provided with timers to monitor the presentation time, alerting speakers when 5 minutes of presentation time remains. Sessions chairs should stop the lecture when time is up and moderate the discussion after the presentation. At the end of discussion, Session chairs then assist the next presenter to get set up and introduce the next speaker.

Information for Presenters

Information for Plenary Speakers

All plenary talks will take place in Ballroom B (see RCC floor map on page 10). Presentations are **35 minutes** long, followed by 10 minutes of questions. The session Chair will notify the speaker when 5 minutes of presentation time remains.

Please meet the A/V staff in Ballroom B 25-30 minutes before your lecture to connect your laptop or to connect a memory stick with your talk to the laptop provided, check your presentation, and attach the wireless microphone.

Connection to the projection equipment is via an HDMI or USB-C port connector; we ask that presenters *bring their own adapters* if needed to make these connections.

Clickers/laser pens (if required) will be provided. These devices connect via a USB-A port connector; please bring suitable adaptors if needed.

Information for Keynote and Contributed Talks Speakers

All talks will take place on Main (300) Level (Rooms 301 – 306 – see RCC floor map on page 10).

Keynote talks are **25 minutes** long followed by 5 minutes for questions and changeover. **Contributed** talks are **12 minutes** long with 3 minutes for questions and changeover. The session chair will indicate when 5 minutes presentation time remains and stand up when 1 minute remains.

Speakers should go to the assigned lecture room during the catering break (coffee/tea or second half of lunch) before their session to check that their presentation displays correctly from their laptops or download their talk onto the laptop provided by A/V tech.

Connection to the projection equipment is via HDMI or USB-C connector; we ask that presenters *bring their own adapters* if needed to make these connections.

The laptop of a contributed talk speaker will be disconnected during questions to allow the next speaker to connect.

For presenters without their own laptops there will be laptops provided in each room onto which PDF and PowerPoint files can be loaded. In this case, presenters are asked to please bring a USB-A compatible pen- or hard-drive at the beginning of the catering break before their session to upload their presentation.

Clickers/laser pens (if required) will be provided. These devises will connect via a USB-A connector; please bring suitable adaptors if needed.

Information for Poster Presenters

There will be two poster sessions: Session 1 for odd numbered posters from 6:00-8:00 PM on Tuesday, July 30 and Session 2 for even numbered posters from 6:00-8:00 PM on Thursday, August 1. Numbered poster boards are in Exhibit Hall A (see map below). You can put your poster up as early as the afternoon of Monday, July 29, and take it down as late as the morning of Friday, August 2. Any posters not taken down by Friday afternoon will be removed and discarded.

Means to attach posters to the boards will be provided. Poster boards accommodate poster sizes up to 8' (horizontal) by 4' (vertical).

Exhibit Hall (100) Level floor plan. Poster sessions are in Exhibit Hall A.

Women

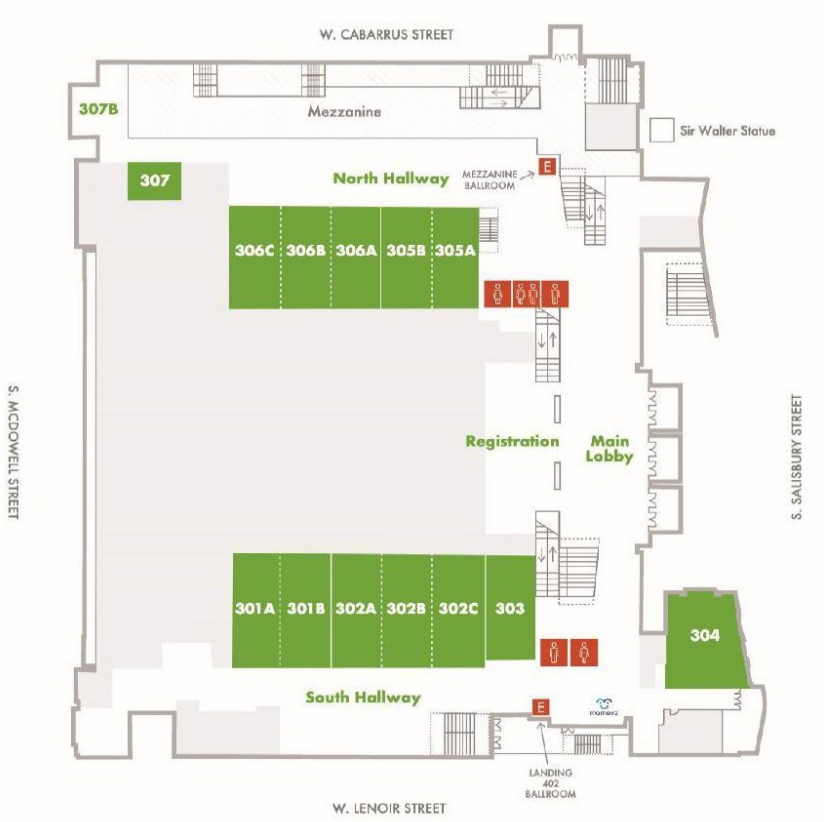
Men

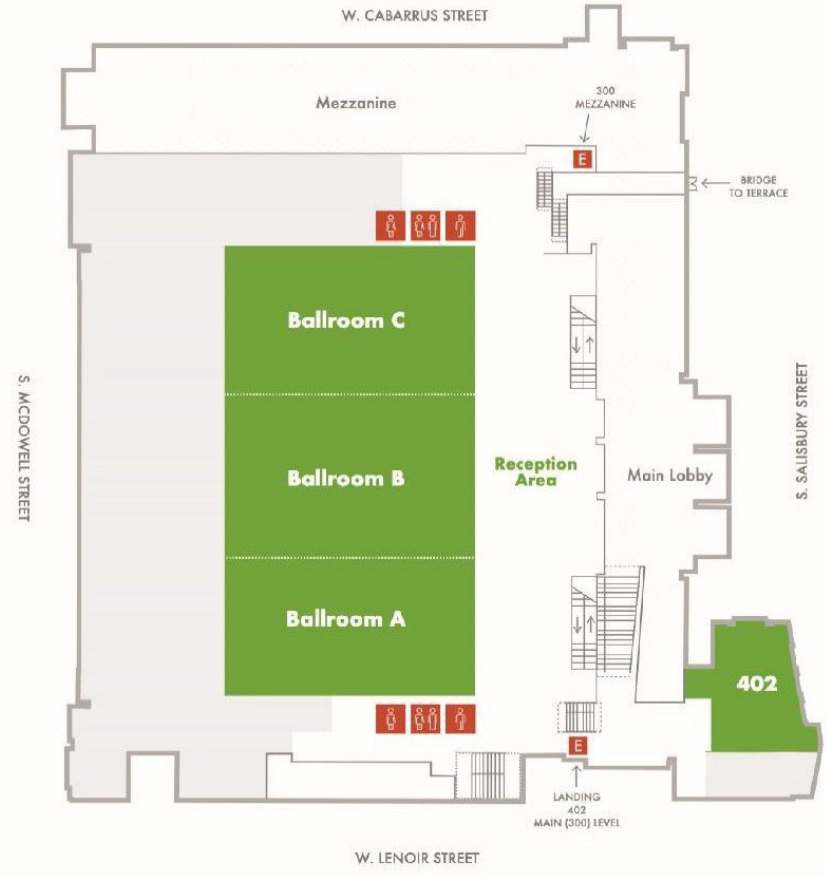
All-gender/Family

E Elevator

Open to Below

Back of House





Monday, July 29 Satellite Event – Duke Soft Matter Day – Gross Hall, Duke University

Reserve a free bus between ISMC hotels and Duke by registering for the Duke Soft Matter Day event

Time	Activity		
9:00 – 9:30 am	Breakfast		
9:30 – 9:45 am	Welcome Address		
9:45 – 10:25 am	Plenary Talk I (30 min +10 min discussion) **Fyl Pincus-** "***A Personal View of the Evolution of Soft Condensed Matter Physics***"		
10:25 – 11:05 am	Plenary Talk II (30 min + 10 min discussion) **Jian Ping Gong-** "***Mechanochemistry in Double Network Materials***"		
11:05 – 11:35 am	Poster Session & Coffee Break		
11:35 – 12:15 pm	Plenary Talk III (30 min + 10 min discussion) **Andrea J. Liu-** "***Many More is Different***"		
12:25 – 1:10 pm (45 minutes session)	Lunch & Roundtable Discussion with Duke Faculty (frontiers of soft matter research-theme 1)	Lunch & Poster Session (from Duke Soft Matter Groups)	Lab Tours (Duke Soft Matter Groups)
1:20 – 2:05 pm (45 minutes session)	Roundtable Discussion with Duke Faculty (frontiers of soft matter research-theme 2)	Poster Session (from Duke Soft Matter Groups)	Lab Tours (Duke Soft Matter Groups)
2:15 – 2:55 pm	Plenary Talk IV (30 min + 10 min discussion) **Dave Weitz - "*Soft Matter Physics for the Rheology of a Cell*"**		
2:55 – 3:25 pm	Poster Session & Coffee Break		
3:25 – 4:05 pm	Plenary Talk V (30 min + 10 min discussion) **Eugenia Kumacheva- *"Nanoparticle-derived cholesteric liquid crystals: assembly under confinement"***		

ISMC 2024 Program

The conference program uses sorting categories and is color-coded accordingly:

Conference Sorting Categories

A	Active
B	Biological
C	Colloidal
F	Fluid Dynamics & Rheology
G	Glasses, Granular & Jamming
I	Interfaces, Surfaces & Membranes
L	Liquid Crystals
M	Measurement & Characterization
N	Networks & Gels
P	Polymers
S	Self-Assembly

Monday, July 29, 2024

5:00 PM – 8:00 PM Registration (see Registration and area on the map on the previous page)

6:30 PM – 8:00 PM Welcome Reception (see Reception area on the map on the previous page)

Tuesday, July 30, 2024

8:45 AM – Conference Opening Ceremony, Ballroom B

Opening Remarks by:
Dr. Penny Gordon-Larsen, Vice Chancellor for Research, UNC at Chapel Hill
Dr. Chris Clemens, Provost and Chief Academic Officer, UNC at Chapel Hill
Dr. Jenifer Lodge, Vice President for Research and Innovation, Duke University
Dr. Peter Fedkiw, Interim Associate Dean for Research and Infrastructure, College of Engineering at NC State University
Dr. Genevieve Garland, Senior Associate Vice Chancellor of Research, Development and Operations, NC State University
Senator Paul Newton, North Carolina State Senate

Ribbon Cutting
Conference Background and Week Review:
Michael Rubenstein, Distinguished Professor, Duke University
Aleksandar S. Vesic, Distinguished Professor, Duke University

9:15 AM – 10:00 AM - Plenary Session F, Chair: Phillip Pincus, Ballroom B
Howard A. Stone "Physicochemical hydrodynamics and soft matter: From thin films to molecular biology to swimming cells."

10:00 AM – 10:30 AM – Coffee & Snack Break, North and South Hallways

Session	A1 (Room 306 BC)	B1 (Room 305 AB)	P1 (Room 302 BC)	G1 (Room 301 AB)
Chair	Fred Mackintosh	Paul Janmey	Timothy Fornes	Srikanth Sastry
10:30 AM	**A1.1: Steve Granick** A skeptic's guide to active matter	**B1.1: Dennis Discher** Rigidity percolation predicts tissue viscoelasticity scaling with fibrillar collagen based on collagenase kinetics imaged by SHG	**P1.1: Sanat Kumar** Mechanism of micro and nanoplastics	**G1.1: Zahra Fakhraai** Controlling Glass Equilibration Using Soft Substrates
10:45 AM		**B1.2: Kinjal Dasbiswas** Modeling active contractility in fibrous living matter		
11:00 AM	**A1.2: Carles Calero** Self-propulsion at the nanoscale	**B1.3: Gijsje Koenderink** Living soft matter: bridging cell-free and live-cell perspectives	**P1.2: Daniel Rau** Multi-material additive manufacturing of polymeric composites with seamless soft-hard interface integration from molecular bonding	**G1.2: Francesco Zamponi** Creating equilibrium glassy states via random particle bonding
11:15 AM	**A1.3: Suzanne Ahmed** Tunability and switchability of nanomotor modes of motion utilizing biocompatible actuation methods		**P1.3: Alina Kirillova** 3D Printing of polymeric and composite porous scaffolds for biomedical applications	

11:30 AM	**A1.4: Clemens Bechinger** Brownian particles in non-equilibrium baths	**B1.4: Sam Safran** Novel mesoscale properties of protein condensates: Non-equilibrium activity and conformational freedom	**P1.4: Mark Ediger** Surface-directed assembly of structured glasses	**G1.3: Cacey Bester** Force signatures of creep in a photoelastic granular medium
11:45 AM				**G1.4: Kai Huang** Role of gravity on granular drag: From impacting on to digging into sand
12:00 PM	Sessions end			

12:00 PM - Lunch

12:15 PM – 1:00 PM - Panel Discussion 1, Ballroom B (limited number of lunch boxes: first come – first served)

Soft Matter: The future of the science and its applications
Moderator: David Weitz
Panelists: Seth Fraden, Emanuela del Gado, Jean-François Joanny, Eugenia Kumacheva, Chinedum Osuji, Philip Pincus

Where is the field of soft matter going? What are the upcoming problems?
For any field to be self-sustaining, some commercial applications must also exist. What are the most important future applications of soft matter?
What will the role of machine learning or artificial intelligence be in soft matter research?

2:15 PM – 3:00 PM - Plenary Session B, Chair: Patricia Bassereau, Ballroom B
Kinneret Keren "Topological defects and their role in Hydra morphogenesis."

3:00 PM – 3:30 PM Coffee & Snack Break, North and South Hallways

Session	I1 (Room 306 BC)	B2 (Room 305 AB)	C1 (Room 302 BC)	N1 (Room 301 AB)
Chair	Beverly Asoo Stonas	José R Alvarado	Jacinta Conrad	Aniket Bhattacharya
3:30 PM	**I1.1: Eric Dufresne** Controlling interfacial tension without surfactants in biomolecular condensates	**B2.1: Brent Hoffman** Coupling during collective cell migration	**C1.1: Jasna Brujic** Colloidal protein analogs	**N1.1: Eric Weeks** Highly polydisperse colloidal gels
3:45 PM		**B2.2: Alexander Alexeev** Collective behavior of platelets in fibrin fiber clots		**N1.2: Liheng Cai** A universal strategy for decoupling stiffness and extensibility of polymer networks
4:00 PM	**I1.2: Yohko Yano** Investigating viscoelastic behavior of lipid monolayers in spontaneous oscillation of surface tension induced by the Marangoni effect	**B2.3: Lakshminarayanan Mahadevan** Endless forms most beautiful: geometry, physics and biology	**C1.2: Prerna Sharma** Folding of colloidal membranes into non-Euclidian geometries	**N1.3: Kohzo Ito** Slide-ring materials for circular economy
4:15 PM	**I1.3: William Ducker** Porous thin films facilitate rapid evaporation of water droplets			

4:30 PM	**I1.4: Jacob Klein** Lipid bilayers under transmembrane fields: cell-inspired, massive electromodulation of friction	**B2.4: Sharon Lubkin** Cell packing in the notochord	**C1.3: Amir Pahlavan** Diffusiophoretic transport of colloids in disordered media	**N1.4: Olga Kuksenok** Characterizing dynamic heterogeneities and properties of degrading polymer networks
4:45 PM		**B2.5: Julio Belmonte** Connectivity and Contraction in Cytoskeletal Networks	**C1.4: Jeffrey Richards** Engineering the electrical response of conductive suspensions	**N1.5: C. Nadir Kaplan** Rapid, non-linear diffusio-phoretic swelling of chemically responsive hydrogels
5:00 PM	**I1.5: Di Jin** Thin films under an electric field	**B2.6: Toshiyuki Nakagaki** Adaptable network of veins to environmental complexity in an huge amoeboid organism of Physarum plasmodium	**C1.5: Ning Wu** Assembly of particles under orthogonally applied electric and magnetic field	**N1.6: Costantino Creton** Ionically conducting elastomers: balancing strength, reversible elasticity and conductivity
5:15 PM	**I1.6: Jacopo Vialetto** Deposition of complex colloidal assemblies from drop evaporation		**C1.6: Gaurav Arya** Machine-assisted design of effective potentials for colloidal self-assembly	
5:30 PM	Sessions end			

6:00 PM – 8:00 PM - Poster Session 1 with reception (odd numbered posters), Exhibit Hall A

Wednesday, July 31, 2024

9:15 AM – 10:00 AM – Plenary Session N, Chair: Jean-François Joanny, Ballroom B
Ramin Golestanian "Non-reciprocal active matter across the scales"

10:00 AM – 10:30 AM - Coffee & Snack Break, North and South Hallways

Session	A2 (Room 306 BC)	L1 (Room 305 AB)	F1 (Room 302 BC)	S1 (Room 301 AB)
Chair	Orlin Velev	Timothy Bunning	Charles Schroeder	Dean DeLongchamp
10:30 AM	**A2.1: Ludovic Berthier** Collective motion in very dense active matter	**L1.1: Chinedum Osuji** Polymer self-assembly and liquid demixing in the presence of liquid crystals	**F1.1: Véronique Trappe** Memory of shear flow in soft jammed materials	**S1.1: Madhavi Krishnan** A charge dependent long-ranged force drives tailored assembly of matter in solution
10:45 AM			**F1.2: Vanessa Ward** Shear Banding as a cause of Non-Monotonic Stress Relaxation	
11:00 AM	**A2.2: Menachem Stern** Physical networks become what they learn	**L1.2: Slobodan Zumer** Topological soft matter: Some examples from photonics to active and biosystems	**F1.3: Itai Cohen** Viscosity Metamaterials	**S1.2: Erika Eiser** Using multivalency and superselectivity of DNA-coated colloids for whole genome detection
11:15 AM	**A2.3: Shengkai Li** Memory-induced spontaneous symmetry breaking			
11:30 AM	**A2.4: Julia Yeomans** Active nematics: A new approach to mechanobiology?	**L1.3: Xinyu Wang** Moiré effect enables versatile design of topological defects in nematic liquid crystals	**F1.4: Ralph Colby** Determination of molecular weights using a polydisperse Rouse model for semidilute unentangled	**S1.3: Thi Vo** Rational design of nanoparticle surface patterning for directed self-assembly

11:45 AM		**L1.4: Kushal Bagchi** Functional soft materials from the directed self-assembly of liquid crystals	polyelectrolyte and neutral polymer solutions	**S1.4: Andraž Gnidovec** Towards controlled self-assembly of curved surfaces
12:00 PM	Sessions end			

12:00 PM - Lunch

12:15 PM – 1:00 PM - Panel Discussion 2, Ballroom B (limited number of lunch boxes: first come – first served)

Pedagogical video series for soft matter
Moderator: Bavand Keshavarz
Panelists: Patricia Bassereau, Alexander Grosberg, Anette (Peko) Hosoi, Michael Rubinstein, Howard Stone, David Weitz

Can we draw inspiration from two classic series of educational movies and organize a similar effort to generate a number of pedagogical videos for different topics/areas in soft matter? What are the challenges of this effort, and how can it help establish a common language between different sub-areas of soft matter? Who are the target audience for these educational movies? Can this work establish a curriculum mapping that can be used for soft matter education at different levels?

2:15 PM – 3:00 PM – Plenary Session L, Chair: Seth Fraden, Ballroom B
Shu Yang "Responsive liquid crystalline elastomeric droplets and particles"

3:00 PM – 3:30 PM Coffee & Snack Break, North and South Hallways

Session	I2 (Room 306 BC)	B3 (Room 305 AB)	P2 (Room 302 BC)	S2 (Room 301 AB)
Chair	Ryan Fuierer	James Harden	Matthew Becker	Ramón Castañeda-Priego
3:30 PM	**I2.1: Vivek Narsimhan** Pearling, buckling, and wrinkling instabilities of multicomponent vesicle threads	**B3.1: Oded Farago** Multiscale lattice modeling and simulations of heterogeneous membranes	**P2.1: Matthew Tirrell** Molecular arrangement in polyelectrolyte complex coarcervates	**S2.1: Greg Grason** Misfits unite: Understanding & engineering self-limitation in geometrically frustrated assembly
3:45 PM	**I2.2: Dean DeLongchamp** Polarized resonant soft X-ray scattering measurements in polymer-grafted nanoparticles	**B3.2: Valeria Milam** Competition-based selection of universal DNA ligands for antibody fragments		
4:00 PM	**I2.3: Yendry Corrales Ureña** AFM force clamping and extension spectroscopy studies of velvet worm slime proteins at different pH and buffer conditions	**B3.3: Ankur Jain** Sequence programmable nucleic acid condensates	**P2.2: Jacinta Conrad** Phage probes couple to DNA relaxation dynamics across scales and regimes	**S2.2: Dwaipayan Chakrabarti** Programming self-assembly of colloidal gyroids for advanced materials
4:15 PM	**I2.4: Penger Tong** Avalanches and extreme value statistics of a moving contact line	**B3.4: Atanu Chatterjee** Adapt to bend: An cooperative transport of soft rods	**P2.3: Thomas Schroeder** Triggering inorganic crystal deposition from polymer-induced liquid precursors	**S2.3: Edward Van Keuren** Multicomponent liquid-core nanocapsules synthesized with flash nanoprecipitation

4:30 PM	**I2.5: Abdelhamid Maali** Direct measurement of the hydro-capillary lift force acting on sphere moving along liquid interfaces	**B3.5: Cesar Rodriguez Emmenegger** Phagocytic synthetic cells: non-living predators to fight bacteria	**P2.4: Zhen-Gang Wang** Origin of the entropic driving force in polyelectrolyte complex coacervation	**S2.4: Xiaoming Mao** Frustrated assemblies as incompatible graphs
4:45 PM	**I2.6: David Cheung** Effect of surface chemistry on conformation and aggregation of amyloid peptides	**B3.6: Jay Tang** Gastric mucin Promotes the spread of growing bacterial swarm on agar surface		
5:00 PM	**I2.7: Ko Okumura** A hydrodynamic analog of critical phenomena: an uncountably infinite number of universality classes	**B3.7: Andela Šarić** Shape-shifting soft matter across evolution "2023 Soft Matter Lectureship Award"	**P2.5: Panayotis Benetatos** Stretching bistable linear polymers and loops	**S2.5: Yulia Shmidov** Self-Assembly of Recombinant Elastin-like Polypeptide
5:15 PM			**P2.6: Geoffrey Geise** Microwave dielectric relaxation spectroscopy: A technique to inform ion transport in hydrated polymer membranes	**S2.6: Maggie Daly** Design of Peptide-DNA Architectures to Build Functional Artificial Cells

5:30 PM	Sessions end

7:00 PM – 7:30 PM Reception (see Reception area on the map on page 10)

7:30 PM - Conference Banquet, Ballroom A

Thursday, August 1, 2024

9:15 AM – 10:00 AM – Plenary Session N, Chair: Jian Ping Gong, Ballroom B
Zhigang Suo "Mechanical behavior of a tanglemer – a polymer network in which entanglements greatly outnumber crosslinks"

10:00 AM – 10:30 AM Coffee & Snack Break, North and South Hallways

Session	A3 (Room 306 BC)	L2 (Room 305 AB)	P3 (Room 302 BC)	S3 (Room 301 AB)
Chair	Daphne Klotsa	Edward Samulski	Thomas Halsey	Lea Johnson
10:30 AM	**A3.1: Cécile Cottin-Bizonne** Active colloids climbing up a wall	**L2.1: Christopher Quinones** Interparticle friction in sheared, dense suspensions of rod-like particles: Simulations	**P3.1: Gary Grest** Dynamics of ring polymers	**S3.1: Oleg Gang** Programming self-assembly and transformations of nanoscale systems
10:45 AM		**L2.2: Thomas Parton** Chiral doping of a colloidal liquid crystal phase in cellulose nanocrystal suspensions		
11:00 AM	**A3.2: Hartmut Löwen** Active matter: self-propelled colloids and beyond	**L2.3: Ivan Smalyukh** Knotted chiral meta matter	**P3.2: Ting Ge** Elastomer mechanics of cross-linked ring-linear polymer blends	**S3.2: Timothy Lodge** Equilibration of block copolymer micelles: How difficult can it be?

11:15 AM			**P3.3: Myoeum Kim** Dynamics of polymers with controlled distribution and density of associative groups	
11:30 AM	**A3.3: Orlin Velev** New mechanisms of active particle propulsion powered by temporally asymmetric AC fields	**L2.4: Timothy Atherton** Catching the wave: particle transport by a moving phase boundary	**P3.4: Kurt Kremer** Playing with entanglements	**S3.3: Kateri DuBay** Dissipative self-assembly within an oscillating energy landscape
11:45 AM	**A3.4: Nitesh Arora** Light-driven transformations in entangled active matter			**S3.4: Rae Robertson-Anderson** Timed material self-assembly controlled by circadian clock proteins

12:00 PM - Lunch

12:15 PM – 1:00 PM - Panel Discussion 3, Ballroom B (limited number of lunch boxes: first come – first served)

Soft Matter: Make It or Break It With DNA

Moderators: Ronit Freeman & Maggie Daly

Panelists: Alexander Grosberg, Rae Robertson-Anderson, Oleg Gang, Matthew Tirrell, Seth Fraden, Erika Eiser

Why DNA? What new material properties or functions are enabled by DNA? What are the current challenges or limitations, and where is the field going? What future applications and technologies will be enabled by DNA soft materials?

2:15 PM – 3:00 PM - Plenary Session C, Chair: Hajime Tanaka, Ballroom B

Emanuela Del Gado "Soft particulate networks and their hidden hierarchical nature."

3:00 PM – 3:30 PM Coffee & Snack Break, North and South Hallways

Session	A4 (Room 306 BC)	B4 (Room 305 AB)	F2 (Room 302 BC)	G2 (Room 301 AB)
Chair	James Harden	Rae Anderson	Bavand Keshavarz	Daniel Blair
3:30 PM	**A4.1: Alexander Grosberg** Active hydrodynamics in the nucleus of a living cell	**B4.1: Megan Valentine** New approaches to designing and deploying hydrogels for force sensing and control	**F2.1: Yoav Tsori** Electrolubrication in flowing liquid mixtures	**G2.1: Connie Roth** Impact of chain connectivity and covalent bonding on the local glass transition temperature of polymers
3:45 PM			**F2.2: Saad Khan** Nanodiamond-stabilized Pickering emulsions: Microstructure and rheology	**G2.2: Gregory McKenna** Anomalous behavior of ultrastable glasses and the implications for the glass "transition"
4:00 PM	**A4.2: Rony Granek** Active fractal networks with stochastic force monopoles and force dipoles unravel subdiffusion of chromosomal loci	**B4.2: Peter Olmstead** Diffusion in a multiscale model for the Stratum Corneum	**F2.3: Dimitris Vlassopoulos** Rheological challenges with polymeric gels	**G2.3: Annie Colin** Flow of non Brownian suspensions

4:15 PM	**A4.3: Ram Adar** Environment-stored memory in active matter: a framework for extra-cellular matrix remodeling	**B4.3: Xianting Lei** De-novo ATP independent contractile protein network		
4:30 PM	**A4.4: Rodrigo Soto** Kinetic theory for active Brownian particles	**B4.4: Ioana Ilie** Computational engineering of responsive meta-particles	**F2.4: Victor Steinberg** Amplification of vorticity fluctuations and stochastic resonance in inertia-less viscoelastic channel flow	**G2.4: Sarika Maitra Bhattacharyya** Exploring the structural contribution to dynamics in supercooled liquids
4:45 PM		**B4.5: William Polacheck** Cell-derived matrix hydrogels with tunable mechanics for donor-derived microphysiological systems	**F2.5: Sara Hashmi** Complex fluids in confined flows	
5:00 PM	**A4.5: Stewart Mallory** Phase behavior and transport of active colloids under extreme confinement	**B4.6: Jérémie Palacci** Bacteria as blacksmiths	**F2.6: Anette Hosoi** Bio-inspired filtration: Fluid mechanics of the Manta Ray	**G2.5: Shima Parsa** Emergence of preferential flow paths in transport of emulsions in porous media
5:15 PM	**A4.6: Paarth Gulati** Asymmetry in active-passive phase separation			**G2.6: Vinutha H. A.** Stress relaxation in soft jammed materials
5:30 PM	Sessions end			

6:00 PM – 8:00 PM - Poster Session 2 with reception (even numbered posters), Exhibit Hall A

Friday, August 2, 2024

9:15 AM – 10:00 AM - Plenary Session M, Chair: Eugenia Kumacheva, Ballroom B
Roberto Cerbino "Multiscale dynamics in inert and living soft matter"

10:00 AM – 10:30 AM - Coffee & Snack Break, North and South Hallways

Session	A5 (Room 306 BC)	B5 (Room 305 AB)	C2 (Room 302 BC)	N2 (Room 301 AB)
Chair	Andrea Liu	Liheng Cai	Preeta Datta	Stephen L. Craig
10:30 AM	**A5.1: Sriram Ramaswamy** Bulk condensation by an active interface	**B5.1: David Hill** Neutrophil Extracellular Traps (NETs) in Muco-Obstructive Pulmonary Disease	**C2.1: Paul Chaikin** Random to ordered packings: From candies to monster crystals from space	**N2.1: Barbara Ruzicka** Dynamical and structural behaviour of PNIPAM based microgels
10:45 AM		**B5.2**		**N2.2: Krassimir Velikov** Cellulose microfibrils: Properties and application in complex fluids and soft materials
11:00 AM	**A5.2: Luca Giomi** Phase transitions in confluent epithelia	**B5.3: Meera Ramaswamy** Morphodynamics of bacterial communities	**C2.2: Nicolas Fares** Confined Brownian motion of soft colloid	**N2.3: Monica Olvera de la Cruz** Controlling the structure and function of confined electrolytes

		proliferating in three dimensions		
11:15 AM		**B5.4: Danielle German** Bacterial dynamics at the swarm front	**C2.3: Steven van Kesteren** Light-controlled colloidal crystallization	
11:30 AM	**A5.3: Gwynn Elfring** The hydrodynamics of active matter in inhomogeneous environments	**B5.5: Rebecca Schulman** Programmed spatiotemporal dynamics and pattern recognition in soft materials with synthetic biochemical signaling networks	**C2.4: Delia Milliron** Interactions and assemblies of colloidal nanocrystals	**N2.4: Michael Dickey** Ultra tough ionogels
11:45 AM	**A5.4: Mickaël Bourgoin** Magnetic Janssen effect			**N2.5: Avisek Das** Correlated orientational disorder in crystalline assemblies of hard convex polyhedral
12:00 PM	Sessions end			

12:15 PM – 1:00 PM – Business Meeting of Soft Matter Association of the Americas and ISMC 2024 Closing Ceremony, Ballroom B

List of Posters

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A**)**	
Poster Board #	**Presenter & Poster Title**
Active Matter	
1	**Amir Abbasi** Non-equilibrium Thermodynamics of Phase Separations in Scalar Active Matter
3	**Sujin Bemplasseri Babu** Rutherford like scattering of squirmer from a semi-circular wall configuration.
5	**John Berezney** Active soft composites
7	**Bhuvnesh Bharti** Field-driven Assembly of Active Colloids
9	**Bipul Biswas** Electrohydrodynamic flows make semiflexible colloidal filaments active
11	**Sizhe Cheng** Trypanosoma swims with a unidirectionally rotating body and a bidirectionally rotating flagellum
13	**Luke Davis** Smooth control of active matter
15	**Matthew Deutsch** Agent-based simulations of confined active nematic filaments
17	**Riley Dickson** Elasticity of healthy airway mucus promotes directional transport of Pseudomonas aeruginosa
19	**Kazuaki Furukawa** 2x2 Rotation bit system composed of active matter: pattern and synchronization of self-propelled rotation
21	**Ravi Gautam** Activity-enhanced colloidal self-assembly: insights from simulations

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A**)**	
Poster Board #	**Presenter & Poster Title**
Active Matter	
2	**Amir Abbasi** Non-Markovian Modeling of Nonequilibrium Fluctuations and Dissipation in Active Viscoelastic Biomatter
4	**Guilherme Giardini** The Fluctuating Nature of Mesenchymal Cell Movement: Beyond Velocity Definitions
6	**Kameryn Hinton** Designing Cell-Inspired Microswimmers
8	**Arnold Mathijssen** Transport and delivery by active materials in complex flow
10	**Michael Norton** Modeling Exogenously and Endogenously Controlled Bioinspired Materials
12	**Jayson Paulose** Activity beyond self-propulsion: parametric melting of a Lennard-Jones crystal via a dynamic pair potential
14	**Soni Prajapati** Effect of background flow on motility-induced phase separation
16	**Praneet Prakash** Spatio-temporal dynamics of nutrient exchanges in microbial active matter
18	**K. R. Prathyusha** Tangling induced phase separation in active polymers
20	**Harishwar Raman** Pair Interactions of active SiO2-Pt Janus Colloids
22	**Sattvic Ray** Fiber networks assembled and driven by an active fluid

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
23	**Adil Ghaznavi** Yielding in active granular matter is different than in sheared granular matter
25	**Guilherme Giardini** Emergence of Collective Behavior: An Evolutionary Approach to Vicsek-like Particles with Neural Networks
27	**Zhe Gou** A numerical framework for phoretic particles
29	**Itay Griniasty** Bifurcation instructed design of multistate machines
31	**Yuke Han** Shape-shifting gel-based micro-ribbons patterned by e-beam lithography
33	**Haruki Hayano** Distinct rheological behaviors between pusher and puller suspensions
35	**Zhi-Feng Huang** Emergence of active patterns from single-species nonreciprocity
37	**Tali Khain** The wake of a sphere in a chiral fluid
39	**Ella King** Emergent Activity in Wave-Mediated Interactions
41	**Itamar Kolvin** Bending and stretching of active fibrous membranes
43	**Min Kyung Lee** Active-assisted Assembly of Colloidal Crystal
45	**Wan Jung Lin** Collective interactions of soft vesicles containing self-propelling granular rods
47	**Rupesh Mahore** Topological non orientability in non reciprocal soft-robotic metamaterial.

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
24	**Shang-Yik Reigh** Diffusiophoretically induced interactions between chemically active and inert particles
26	**Rae Robertson-Anderson** Emergent micro-mechanics of active cytoskeleton composites
28	**Bappaditya Roy** Learning hydrodynamic equations from the collective behavior of active Brownian particles
30	**Isabel Ruffin** Dynamics of Active and Passive Microtubules in Entangled Actin Networks
32	**Amir Shee** Emergent Mesoscale Correlations in Active Solids with Noisy Chiral Dynamics
34	**Ahis Shrestha** Self-propulsion of active particles through surface charge asymmetry
36	**Artur Soriani** Universal heat profiles and thermodynamic control of active field theories
38	**Tzer Han Tan** Odd dynamics in living chiral crystal
40	**Albane Thery** Enhanced bacterial contamination in complex fluids
42	**Nayana Venkatareddy** Phase separation kinetics in Two Temperature Induced Phase Separation(2-TIPS)
44	**Wei Wang** Electronically actuated artificial cilia for microfluidic manipulations
46	**Zhiyuan Zhao** Odd Viscosity-Induced Phase Separation of Counter-Driven Rotors
48	**Shuang Zhou** Softening and Enhanced Transport of Colloidal Chains in a Bacterial Bath

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
49	**Amir Pahlavan** Chemotactic response of bacteria to ephemeral nutrient plumes
Biological Matter	
51	**Ram M. Adar** Theory of cellular volume regulation in response to shocks and deformations
53	**Sadjad Arzash** Mechanics of confluent biological tissues as a learning problem
55	**Subhadip Biswas** Illuminating the dynamics of biomolecular condensates with alphabet-free exploration of stickers-spacers energy landscapes
57	**Orelle Bulgin** The Effects of Nano-plastics on Developmental Stages in Zebrafish & Nano-plastics as MRI Contrast Agents
59	**Aniket Bhattacharya** Fine structures and missense mutations in intrinsically disordered proteins using Coarse-grained models and machi ne learning
61	**Priya Chiriyankandath** Exploring ALPHA-FOLD Predicted Structures of Nudix Proteins to Investigate Binding Site Dynamics Through Implicit Solvent
63	**Maria Ciko** Simulation Studies to Predict Protein-Peptide Binding Affinities via MELD accelerated Molecular Dynamics
65	**Zixuan Deng** Light-fueled self-sustained cilia
67	**Nuzhat Faiza** Substrate stiffness regulates collective colony expansion of the social bacterium Myxococcus xanthus
69	**Jim Fan** Frustrated Phagocytosis of Beads by Macrophages on Traction Force Q-gels
71	**Marco Aurelio Galvani Cunha** Remodeling and rigidity in the actin cortex

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
50	**Tingtao Zhou** Active doping controls the mode of failure in dense colloidal gels
Biological Matter	
52	**Brian Chan** Activity-driven chromatin organization during interphase: compaction, segregation, and entanglement suppression
54	**Subhadip Biswas** Molecular Drivers of Aging in Biomolecular Condensates: Desolvation, Rigidification, and Sticker Lifetimes
56	**Owen Blanchard** Active wetting and dewetting dynamics of zebrafish embryonic explants
58	**Micaila Curtis** Enhancing bone tissue regeneration through mechanical, chemical, and biological regulation of bone extracellular matrix using cal-
60	**Rajsekhar Das** Control of morphologies and dynamics of three-dimensional non-confluent tissues
62	**Dennis E Discher** Fat physics: fat is more rigid and disruptive to cells than you think
64	**Carolyn Feigeles** Condensate Induced Bundling of Biopolymer Networks
66	**Sarthak Gupta** Emergent Dynamics in Biopolymer Networks: Investigating the Interplay of Elasticity, Connectivity, and Activity
68	**David Hathcock** Signatures of energy dissipation in bacterial chemotaxis signaling pathways
70	**David Hill** Neutrophil Extracellular Traps (NETs) in Muco-Obstructive Pulmonary Disease.
72	**Sayantani Kayal** Mechanical imbalance as a cue for cell competition driving epithelial defense against cancerpo

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A**)**	
Poster Board #	**Presenter & Poster Title**
73	**Sounok Ghosh** The effects of substrates on biofilm growth
75	**Sebastian Gonzalez La Corte** Bacterial growth in complex fluids
77	**Amit Kumar** Size and shape fluctuations of mesoscale domains in non-equilibrium liquid-liquid phase separation
79	**Dongheon Lee** Unraveling Quantitative Relationships Between Intracellular Phase Separation and Gene Expression Through Single-cell Analysis
81	**Zhiyue Lu** Designing Life-Like Responses to Temporal Patterns in Artificial Materials: A Theoretical Framework
83	**Katarina Matic** Cells Embedded in Cytoskeleton Composites for Living Materials
85	**Piyali Mukherjee** Coarse-Grained Molecular Dynamics Simulations of Elastin-Like Polypeptides
87	**Turash Haque Pial** Investigating the Self-assembly and Growth of Multicomponent Soft Nanoparticles Using Kinetic Monte Carlo
89	**Kyle Riker** Dynamic Display of ECM Ligands Controls Machinery of the Cytoskeleton from the Outside-In
91	**Haicen Yue** Revisiting Interface Behaviors of Voronoi and Vertex Models
93	**Pu Zhang** Spatial Distribution and Density of Fibroblasts Determine Angiogenic Response of Endothelial Cells
95	**Hongbo Zhao** Dissecting the Complexities of Phase Separation in Living and Synthetic Systems
97	**Shufeng Zhao** Bacterial surface motility modulated by picky eating habits

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A**)**	
Poster Board #	**Presenter & Poster Title**
74	**Taylor Kranbuhl** MELD Accelerated MD: A tool to study DNA-Protein Interactions
76	**Sunny Kumar** Kinks Enable Ultrafast Aerial Jumping in Nematodes and Soft Robots
78	**Soumik Mitra** A computational study of the shear response and fracture resistance of the cytoskeleton of the single-celled organism Stentor
80	**Farshid Mohammad-Rafiee** Exploring Ribosomal Dynamics: A Theoretical Model for Translation and Frame-Shifting Phenomena
82	**Nandish Mudegowdru Nagappa** Sustainable Nanoformulations of Anthracyclines
84	**Meera Ramaswamy** Morphodynamics of bacterial communities proliferating in three dimensions
86	**Sangjin Ryu** A microfluidic study on the perfusion of a new substance and the removal of an old substance in a dragonfly forewing
88	**Renita Saldanha** Probing effects of vimentin on cell cytoskeleton dynamics through Differential Dynamic Microscopy (DDM)
90	**Corey Stevens** Dual-Functional Nanoparticles Show Potential for Enhanced Drug Delivery Through Simultaneous Mucus Transport and Cell Targeting
92	**Sijie Sun** Vimentin Intermediate Filaments as Worm-Like Micelles
94	**Babak Vajdi Hokmabad** Entrainment by biogenic bubbles enables long-range microbial dispersal in yield-stress environments
96	**Kaarthik Varma** Near-critical Protein mixtures
98	**Sam Wilken** Synthetic chromatin: transcriptional regulation of a model phase-separating liquid

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
99	**Jinchang Zhu** Digital Assembly of Spherical Viscoelastic Bio-ink Particles (DASP): a conceptually new bioprinting technology
Colloidal Systems	
101	**Christian Balderas** Mie scattering theory applied to light scattering of large nonhomogeneous colloidal spheres
103	**Florian Benedetti** Data Driven Inference of Colloidal Interactions
105	**Lihy Buchbinder** Experimental Study of 2D Colloidal Glass
107	**Devika Gireesan Sudha** Motion of chemically powered Janus colloids in an anisotropic fluid.
109	**Mohit Gupta** Hydrophobic Forces in Foam and Emulsion Films
111	**Sofia Morozova** The effect of the glass transition temperature on the phase state of a colloidal system of oppositely charged latex particles
113	**Zizhao (Will) Wang** Precision measurement of homogeneous crystal nucleation of hard-sphere colloids
115	**Daniel Weidig** Dynamical long-time coupling in binary suspensions of highly charged colloidal particles
Fluid Dynamics & Rheology	
119	**Anna Barth** Universal scaling of shear thickening suspensions under acoustic perturbation

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
100	**Hongbo Zhao** Condensate-mediated chromatin organization through elastocapillary interactions
Colloidal Systems	
102	**Ramón Castañeda-Priego** Effective interactions between colloids: an approach based on the contraction of the bare forces.
104	**Nicholas Cuccia** Colloids with a Twist: Controlling Filament Helicity and Length to Tune Macroscopic Rheology
106	**Darshana Malusare** Aerosol-assisted particle deposition for solvent-free fabrication of MOF-polymer composites
108	**Sylvio May** Collision-mediated Transfer Kinetics of Cargo Items Among Mobile Nanocarriers
110	**Antonio Ortiz Ambriz** Bidirectional currents in confined driven colloids
112	**Isaac Spivack** Theory of Entropy Driven Self-Assembly of Hard Particles
114	**Joe Tracy** Reversible Assembly of Iron Oxide Nanoparticles on Gold Nanorods for Magnetic Alignment and Plasmonic Control
116	Dr. Steven Van Kesteren Light-controlled colloidal crystallization
118	**Matthew Walker** Mpemba effect in terms of mean first passage times
Fluid Dynamics & Rheology	
120	**Abhirup Basu** Dissipative Active Motion of Colloidal Particles Rotating in Non-Newtonian Fluids

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
121	**Laura Adams** New Insights into Generating Monodispersed Drops with Glass Capillary Microfluidic Devices
123	**Rafał Błaszkiewicz** Microscale hydrodynamic flows created by beating cilia
125	**Chinmay Katke** Variational formulation of physics-informed neural networks (vfPINN)
127	**Viviana Londono-Calderon** Microactuators for Efficient Fluid Manipulation in Low Reynolds Environments
129	**Shravan Pradeep** Unifying yielding mechanics in multiphase soft particulate matter systems
131	**Rae Robertson-Anderson** Topological DNA blends exhibit resonant deformation fields and strain propagation dynamics tuned by steric constraints
133	**Yihong Shi** Mutual information as a measure of mixing efficiency in viscous fluids
135	**Christina Tang** Low-cost optical plate for imaging shear sensitive liquid crystals
137	**Günther Turk** Fluctuating hydrodynamics of an autophoretic particle near a permeable interface
139	**Greg Voth** Quantifying chiral geometry with sedimenting helical ribbons
Glasses, Granular & Jamming	
141	**Aditya Advani** Can you hear a landslide coming (before it begins)?
143	**Haoyu Li** Metallic Glass Have More Rugged Potential Energy Landscape

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
122	**Albert Countryman** Using Vector Charge Electromagnetism to Examine Emergence of Gel Rigidity
124	**Lucas Hildebrand Pires da Cunha** The role of Hydrodynamic Interactions on the rheology of colloidal rods
126	**Samay Hulikal** Angular Thresholds in Breaking Capillary Bridges
128	**Mohamed Khattab** Chemical species transport near sharp corners
130	**Xiaoxiao Ma** Understanding fluid dynamics for all-aqueous printing of a viscoelastic droplet in yield-stress fluids
132	**Shravan Pradeep** Baseball gripping mechanics as a multiscale soft matter problem
134	**Yug Chandra Saraswat** Brittle-to-ductile rheology in composite hydrogels with a microfibrous network
136	**Navneet Singh** Dynamic thickening and dethickening of 3D dense suspensions of Quincke rotors
138	**Austin Walker** Rheology and 3D rotational dynamics of sheared dense colloidal suspensions
140	**Chenxian Xu** Growth and Coalescence of Nanoscopic Mesas in Stratifying Micellar Foam Films
Glasses, Granular & Jamming	
142	**Helen Ansell** Stokes-Einstein violations in models of dense cellular materials
144	**Carmen Lee** Relating the microscale to the macroscale in granular materials

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
145	**Jeffrey Olafsen** Coefficient of restitution of two colliding particles in experiment and simulation
147	**Owen Tower** Studies into the structural order of random pinning systems and their driven dynamics
149	**Dhanush Udayashankara Jamadgni** Solid Lubricants for Bio particles with Complex Shapes
151	**Hongyi Xiao** Locomotion of a scallop-like swimmer in granular media
153	**Chetan Yadav** Granular active matter on approaching glassiness
Interfaces, Surfaces & Membranes	
157	**Teagan Bate** Client competition regulates bulk and interface partitioning in biomolecular condensates
159	**Tak Shing Chan** Plateau-Rayleigh instability of a soft layer coated on a rigid cylinder
161	**Costantino Creton** Interfacial and Bulk Damage quantification of thin films on soft substrate
163	**Michael Dickey** Shaping a Soft Future with Liquid Metals
165	**Sebastian Hendrickx-Rodriguez** The Biomechanical Influence of Polysaccharides Found in Anti-Wrinkle Formulations on Human Skin
167	**Juha Koivisto** Strong and Functional Hierarchical Biofoam Structures

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
146	**Maniya Maleki** Non-affine motion in a quasi-2-dimensional granular matter under simple shear
148	**Jeffrey Olafsen** The physics of sandcastles: Jammed granular columns with and without fluid.
150	**Baoshuang Shang** The transition from anelasticity to plasticity in amorphous solid: a molecular dynamics study
152	**Bret Tantorno** Glass Transition Behavior and Crystallization Kinetics of Celecoxib Carvedilol Co-Amorphous Formulations
154	**Michio Tateno** Compression-induced structural and mechanical transitions in disordered sticky-sphere systems
156	**Stephen Thornton** Universal Scaling Solution for a Rigidity Transition: Renormalization Group Flows Near the Upper Critical Dimension
Interfaces, Surfaces & Membranes	
160	**Daniel Daniel** Exploding drops on lubricated surfaces
162	**Michał Góra** Nano-porous Surfaces and Associated Interfacial Forces
164	**Mohit Gupta** Hydrophobic Interactions in Unstable Wetting Films
166	**Robin McDonald** Enhancing Solar Panel Efficiency through Nanostructured Coatings
168	**Fan Meng** Exploring Nanostructured Biomimetic Surfaces: Measuring Hydrophobic Properties via Free Energy Barrier using Coarse-Grained Mo-
170	**Alana Pauls** Stereo-Structural Fine Tuning of Chromaticity

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
169	**Andrew Martin** Predicting Emergence of Nanoscale Order in Surfaces Oxides through Preferential Interactivity Parameter
171	**Jordan Shivers** Thermodynamics of morphological transitions in growing membranes
173	**Thomas Petersen** Modeling Electrolytes at Charged Mineral Interfaces Using Classical Density Functional Theory
175	**Zeb Rocklin** Fundamental principles of flexible solids
177	**Sangjin Ryu** Air bubbles entrapped during the coalescence of drops in a Hele-Shaw cell
179	**Hooman Tafreshi** Multiphysics interactions between electret fibers and airborne particles and droplets
Liquid Crystals	
183	**Timothy Atherton** Catching the wave: particle transport by a moving phase boundary
185	**Asaf Dana** Collective action and entanglement of magnetically active liquid crystal elastomer ribbons
187	**Delace Jia** Flow-Induced Structures in Lyotropic Chromonic Liquid Crystals
Measurement & Characterization	
189	**(Amir)Hossein Salahshoor** Data-Driven Rheology: A Direct Link Between Complex Moduli and Predictions

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
172	**Brahim El-khalil Remini** Study of the interface between liquid polymers and viscoelastic polymers in dynamic and static states.
174	**Ozgur Sahin** Hydration Forces, Hydration Solids, and The Hygroelastic Theory
176	**Gentian Muhaxheri** Bifurcations of inflating balloons and interacting hysterons
178	**Hooman Tafreshi** Physics of Multiphase Droplet Adhesion to a Fiber
180	**Yoav Tsori** Phase lines in mean-field models with nonuniform external forces
182	**Xu Wang** Experimental and Computational Investigation of nanoparticle ligand shell morphology
Liquid Crystals	
184	**Timothy Atherton** Morpho---A programmable environment for shape optimization and shapeshifting problems
186	**Alexia Chatzitheodorou** Shape Morphing of Twisted Nematic Elastomer Shells
Measurement & Characterization	
190	**Leroy Jia** Serial flow cytometry as a method to measure membrane elasticity
192	**Richard Sheridan** BOTTS: 500% Faster Viscoelastic Master Curves via Broadband Chirps

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
Networks & Gels	
193	**Oreoluwa Alade** Modeling Phase Stability of Concentrated Suspensions of Compressible Microgels
195	**Tuhin Chakrabortty** Dynamics of Active Relaxing Networks
197	**George Degen** Mucin-derived adhesive hydrogels
199	**Nitsan Eliraz** Activating physical crosslinking in synthetic extracellular matrices by switch peptides
201	**Sidharth Gat** Measurement of vibrational modes in disordered metamaterials fabricated by laser powder bed fusion.
203	**Yunhua Guo** Controlling the complexation between polyanionic microgels and cationic peptides to create self-defensive antimicrobial surfaces
205	**Saad Khan** From gels to 3-D networks: Creating multifunctional hybrid polymer-metal oxide nanofiber based aerogels
207	**Alexander Marshall** Size dependent, stress driven transport in poroelastic media at the microscale
209	**Jonathan Michel** Developing Simulations to Guide Design of Biotic-Abiotic Machines
211	**Katherine Moody** Manufacturing Techniques of Disordered Metamaterials Using Laser and Electron Beam
213	**Mauro Mugnai** Network-Network Interactions in Multi-Component Gels
215	**Fu-Sheng Wang** Supramolecular Templation of Entanglements and Their Spectroscopic Detection in Polymer Elastomers and Gels

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
Networks & Gels	
194	**Mahesh Aryal** Modeling the Response of Compressible Microgels to Crowding by Nanoparticles
196	**Nate Brown** Organic Phosphate Degradation via Functionalized PA-6 Fabrics
198	**Yanxia Feng** Freezing hydrogels reveals a simple, power-law behavior of their osmotic pressure
200	**Yunxiang Gao** Pristine Carbon Nanotubes as Supramolecular Linkers to Crosslink Microgels into Macroscopic Hydrogel Composites for Versatile Ad-
202	**Tyler Hain** Programming rigidity transitions and multifunctionality in disordered underconstrained spring networks
204	**Harsha Koganti** Elastic microphase separation: the role of network parameters beyond elastic modulus
206	**Ricky Frank López-Santiago** Linear and nonlinear viscoelasticity in physical gels made with polycations, polyanions, and their mixtures; rheology and microrheol-
208	**Joan Montes De Oca** Water two liquids, anyway?
210	**Kengo Nishi** Peptide self-assembly orchestrates structure transition of in-vitro actin bundle networks
212	**Thomas Parton** Revealing the mechanism of kinetic arrest in suspensions of rod-like cellulose nanocrystals using angle-resolved optical spectros-
214	**Shu Wang** Nonlocal Intrinsic fracture energy of polymer networks
216	**Takaichi Watanabe** Toughening of poly(ionic liquid) gels with nanomaterials having different shapes

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
217	**Xinyu Wang** Fracturing and Controlled Cracking Path in Topological Maxwell Lattice
219	**Fei Wang** Novel Volumetric mapping of 3D Nanome-chanical Heterogeneities in Gelatin, Collagen, and Polypeptide Hydrogels and Films
Polymers	
221	**Sonam Zangpo Bhutia** Bound Layer in Hydrophilic Polymer Thin Films: Effect of Annealing
223	**Kateri DuBay** Modeling the emergence of collective nascent chain behavior and its implications for the se-quences and aggregates of step-grown copol-
225	**Hongshuang Guo** Halogen-bonded shape memory liquid crystal polymer
227	**Atte Kadoma** Hydrolytic Crack Growth and Embrittlement in Poly(ethylene terephthalate)
229	**Pooja Nanavare** Osmolyte-induced Conformational Stabiliza-tion of a Hydrophobic Polymer
231	**Emmanuel Oduro** Additive manufacturing of high-resolution ar-chitected copper by controlled shrinkage of highly swollen, infused bottlebrush hydrogel
233	**Jacob Peloquin** Overcoming premature fracture: Reduction of stress concentration effects in additively manufactured lattices using three-dimen-
235	**Sebastian Pineda Pineda** Charge Regulation Triggers Condensation of Short Oligopeptides to Polyelectrolytes.
237	**Sergei Rigin** Design of Composite Polymer Brushes for Ad-sorption of Contaminants from Water
239	**Martin Seifrid** The Data-Driven Organic Materials Lab

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
218	**Masahiro Yoshida** TEM study on hydrogel network formation via free-radical polymerization
220	**Boxue Zheng** Capillary-Induced Deformation and Solvent Transport in Hydrogels
Polymers	
222	**Mesbah Ahmad** Formation of ultrasoft, stretchable, and bio-degradable films from plasticized agarose for sustainable electronics
224	**Tim Bernhard** Reproducing Viscoelastic Behaviours of End-linked Polymer Networks using Simulations
226	**Pablo Cordero Alvarado** Combination therapy of microporous hydro-gel scaffolds displaying supramolecular pep-tide assemblies to enhance wound healing
228	**Yixin Hu** Mechanochemically self-amplified HF release and polymer deconstruction
230	**Baiqiang Huang** Bottlebrush polyethylene glycol nanocarriers translocate across human airway epithelium via molecular architecture enhanced endocy-
232	**Tahmida Iqbal** Liquid-Liquid Phase Separation In Multicom-ponent Polymer System
234	**Silpa Mariya** The subdiffusive motion of sticky dendrimers in an associative polymer network
236	**Anicah Smith O'Brien** Understanding Polymer Biodegradation Under Different Environmental Conditions
238	**Logan Williams** The Crystallization and Rigid Fraction of PLLA
240	**Xiangyu Zhang** The Particle Geometry Effect on Polymer Chain Scaling Behaviors

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A**)**	
Poster Board #	**Presenter & Poster Title**
241	**Neha Tyagi** Quasi-active transport of tracer particles in flowing semidilute polymer solutions
Self-Assembly	
243	**Gaurav Arya** DNA assemblies with emergent functions
245	**Zoe Benton** Failure in the working curve: Determining interlayer adhesion in stereolithography printing via photorheology
247	**Safak Callioglu** Efficient Monte Carlo Framework for Simulating Self-Assembly of Faceted Nanoparticles
249	**Daniel Duke** Dr. Gaurav Arya Illuminating the mechanism of DNA origami folding with a new mesoscopic model
251	**Yuan Gao** Reconfigurable self-assembly of peptide-peptoid hybrids
253	**Remya Ann Mathews Kalapurakal** Theory and Simulations of Light-Induced Self-Assembly in Colloids with Quantum Chemistry Derived
255	**Zexi Liang** Overcoming Kinetic Traps in Self-Assembly using Magnetic Decoupling
257	**Melody Lim** Magnetoelastic microscopic multistate machines
259	**Po-An Lin** Deep Inverse Design of Patchy Polygons for Mesoscale Assembly of 2D Superlattices
261	**Sanjib Majumder** Colloidal deposits with unique reflection symmetry to fractal patterns: effect of confinement
263	**Tero Mäkinen** Inducing hydrophobicity in biobased foams by the addition of lignin

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A**)**	
Poster Board #	**Presenter & Poster Title**
Self-Assembly	
244	**Kireeti Akkunuri** Unraveling the conformational dynamics of 'clasping' polymer-grafted nanoparticles and their networks
246	**Nan Cheng** Geometrically frustrated self-assembly of hyperbolic crystals from icosahedral nanoparticles
248	**Naresh Dhanasekar** Enzyme-triggered peptide fibrillation in a synthetic droplet
250	**Helena Freire Haddad** Enabling Asymmetrical Assembly of Supramolecular Peptide Nanofibers
252	**Taranpreet Kaur** Material properties of Condensates control Gene Expression
254	**Stephen Klawa** Uncovering Supramolecular Chirality Codes for the Design of Tunable Biomaterials
256	**Kat Lazar** Materials characterization of a self-assembling elastin-like polypeptide fusion protein as a platform for immunotherapies
258	**Jeremy Money** Harnessing Liquid Crystal Disclinations for Next-Generation Architected Materials
260	**Maks Pecnik Bambic** Optimal face-to-face coupling for fast self-folding kirigami
262	**Deleah Pettie** Peptide Nanomaterial Active Immunotherapy to counteract IL-22 Binding Protein for Intestinal Regeneration in Inflammatory Bowel Dis-
264	**Sourav Roy** Exploring Geometric Frustration in Self Assembly of Mechanical Metamaterial Using a Generalized Elasticity Theory

Poster Session 1 **(Tue. July 30,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
265	**Rupam Saha** Synthetic modular building blocks for self-limited assembly
267	**Rony Waheibi** Self-assembly of bidisperse colloidal gels
269	**Ye Xu** Tunable alignment of highly-oriented silver nanowires through polymer-assisted evaporation processing for anisotropic electrical and
271	**Shihao Zang** Direct observation of non-classical crystallization pathways in binary colloidal systems
273	**Zhencheng Max Jiang N** Nonaffinity in colloidal gels
275	**Abishec Sundar Senthilvel** Modeling of Additive Compounds in Tire Materials

Poster Session 2 **(Thur. August 1,** 6:00-8:00 PM, Exhibit Hall A)	
Poster Board #	**Presenter & Poster Title**
266	**Monirosadat (Sanaz) Sadati** Programming Bio-inspired Nanoscale Chiral Self-Assembly in 3D Printed Composites
268	**Nader Taheri-Qazvini** Multifunctional MXene-PAA microgel hybrids for high-performance conductive 3D printing inks and aerogels
270	**Michael Wang** Geometric frustration meets mechanical metamaterials
272	**Pinchu Xavier** Biophysical characterization of hard/soft nanoparticles for surface activity of pulmonary surfactants in the treatment of infant respira-
274	**Mengjie Zu** Designing athermal disordered solids with automatic differentiation
276	**April Espinoza** Chiral-based Hydrogel Scaffolds Bias Immune Mismatched Skin Transplantation Toward Engraftment Through Humoral Attenua-
278	**Ashif Akram** Competing addition processes give distinct growth regimes in the assembly of 1D filaments

History and Future of the ISMC

See details at https://soft-matter.com/ismc2024/ismc-about/

International Soft Matter Conferences (ISMC) started in Europe where the first six conferences were held every three years in a different European country:

- 1st ISMC, October 1-4, 2007, Aachen, Germany
- 2nd ISMC July 5-8, 2010, Granada, Spain
- 3rd ISMC, September 15-19, 2013, Rome, Italy
- 4th ISMC, September 12-16, 2016, Grenoble, France
- 5th ISMC, June 3-7, 2019, Edinburgh, United Kingdom
- 6th ISMC, September 19-23, 2022, Poznan, Poland was the first event of the International Soft Matter Conference Series: Around the World in Three Years, coordinated by the IUPAP Working Group 15.
- 7th ISMC, September 4-8, 2023, Osaka, Japan was the second conference in this series and the first one outside Europe.
- 8th ISMC, July 29-August 2, 2024, Raleigh, North Carolina, USA, completes the first cycle of this series with a first ISMC in the Americas.
- 9th ISMC is planned to be held September 29-October 3, 2025, at Minoa Palace Resort, Chania, Crete, Greece
- 10th ISMC is planned to be held May 25-29, 2026, at Burla Institute of Technology, Goa, India.

International Union of Pure & Applied Physics Working Group 15: Soft Matter

In October 2017, the 29th IUPAP General Assembly resolved to establish Working Group 15: Soft Matter with the following mission/mandate:

1. To organize/assist in organization of an International Conference "Soft Matter Around the World" which rotates every three years to each geographic region (Europe-Africa, the Americas, and Asia-Pacific).
2. To coordinate soft matter-related regional, national & local conferences, meetings & workshops.
3. To coordinate soft matter education, such as summer/winter schools and short courses and help organize them if a need appears.
4. To promote soft matter research through information exchange, publicity, prizes, publications, etc.
5. To strengthen the connection between academic and industrial soft matter research and development through outreach events, short courses, etc.

IUPAP WG-15 Members:

Michael Rubinstein (Chair); Seth Fraden (US); Daan Frenkel (United Kingdom); Gerhard Gompper (Germany)**;** Peter Harrowell (Australia)**;** Wonho Jhe (Korea)**;** Jean-François Joanny (France)**;** Eugenia Kumacheva (Canada)**;** Guruswamy Kumaraswamy (India); Andrea Liu (US); Hajime Tanaka (Japan); David Weitz (US); Ouyang Zhongcan (China)**;** Emanuela Zaccarelli (Italy)

Soft Matter Association of the Americas

The Soft Matter Association of the Americas (SMAA) was formed in 2023 with the support of the IUPAP Working Group 15: Soft Matter. Its objectives and tasks (to be discussed at the Business Meeting on August 2, 2024 at 12:15 PM) are (see www.soft-matter.com for more information):

- Exchange information between different soft matter professional organizations (events/activities/ideas);
- Facilitate the organization of regional soft matter workshops;
- Develop the soft matter workforce in the Americas, advertise job postings and other opportunities on the SMAA website;
- Facilitate collaborations between soft matter scientists and engineers in academia and industry.

The SMAA Board of Directors consists of Michael Rubinstein (President, Duke), Christoph Schmidt (Treasurer, Duke), Ronit Freeman (Secretary, UNC), and Jan Genzer (Vice President, NCSU).
The Advisory Board of SMAA consists of four Councils: (i) Professional Organizations Council; (ii) Regional Organization Council; (iii) Industrial Council; and (iv) Americas Council.

The roles of the **Professional Organizations Council** are

- Coordinate soft matter activities between different professional organizations and organize joint events
- Advertise events of a particular professional organization to members of other organizations
- Collect input from members of a particular professional organization on sessions/topics for the International Soft Matter Conference 2024 (ISMC2024)
- Advertise job postings and open positions for students, faculty and postdocs on the SMAA website (that is now being built – www.soft-matter.com)
- Solicit ideas from members of the professional organizations for other events at ISMC such as young investigator satellite meeting, and/or short courses, and free-standing events

  The members of the advisory board of the Professional Organizations Council are

  1. Aniket Bhattacharya (University of Central Florida) – APS - DCOMP
  2. Timothy Bunning (Wright-Patterson Air Force Base) – ACS – PMSE
  3. Pietro Cicuta (University of Cambridge) IUPAP C6
  4. Jacinta Conrad (University of Houston) – SOR
  5. Moumita Das (Rochester Institute of Technology) – APS – DBIO
  6. Mia Huang (Scripps Research) – ACS - CARB
  7. Daphne Klotsa (UNC) – APS - GSNP
  8. Mahesh Mahanthappa (University of Minnesota) – APS - DPOLY
  9. Charles Schroeder (University of Illinois Urbana-Champaign) – APS - DSOFT
  10. Lorena Tribe (The Pennsylvania State University) – ACS - COMP

The roles of the **Regional Organizations Council** are:

- Review proposal to organize and host ISMC2027
- Exchange information between different organizations about their events and activities (help coordinate individual or hold joint events)
- Help set up soft matter workshops in different regions and exchange best practice experiences
- Advertise job postings and open positions for students, faculty, and postdocs on the SMAA website
- Provide input to sessions/topics/round table discussions at ISMC and other events
- Facilitate collaborations between soft matter scientists and engineers in academia and industry
- Develop ideas for other events at ISMC or free-standing

The members of the advisory board of the Regional Organizations Council are:

1. José R Alvarado (University of Texas at Austin) Texas Soft Matter

2. Rae Anderson (University of San Diego) Frontiers in Soft Matter & Macromolecular Networks
3. Daniel Blair (Georgetown University) Mid-Atlantic Soft Matter Workshops
4. Seth Fraden (Brandeis University) New England Complex Fluids
5. Stefan Zauscher (Duke) Triangle Soft Matter

The roles and benefits of the **Industrial Council** are:

- Access to soft matter societies, laboratories, groups, and other companies for updates on cutting-edge research and potential collaborative projects
- Participate in developing the soft matter workforce in the Americas and access to this workforce
- Provide input to the educational program – short courses oriented to particular industrial interest
- Provide input on sessions/topics/round table discussions at the International Soft Matter Conferences and other events
- Advertise job postings and open positions for students, faculty, and postdocs on the SMAA website
- Advertise the company and its products and discounts for booth/expo at the meeting
- Facilitate collaborations between soft matter scientists and engineers in academia and industry

The advisory board of the Industrial Council consists of:

1. Preeta Datta (Evonik)
2. Michael Dimitriou (Exponent)
3. Timothy Fornes (ParkerLord)
4. Ryan Fuierer (Asylum)
5. Leah Johnson (RIT))
6. Dean DeLongchamp (NIST)
7. Suman Sinha Ray (NASA
8. Kurt Selle (BTEC) P)
9. Beverly Asoo Stonas (H
10. Davoud Zare (Fonterra)

The roles of the **Americas Council** are:

- Connect and network between groups in their country and other countries in the Americas or globally
- Advertise events in their members' country to soft matter scientists in other countries
- Advertise job postings and open positions for students, faculty, and postdocs on the SMAA website
- Provide input from members of their organization on sessions/topics for the ISMC
- Solicit proposals to organize and host the next ISMC (ISMC2027)
- Develop ideas for other events at ISMC or free-standing
- Organize young investigator satellite meetings and/or short courses
- Facilitate collaborations between soft matter scientists and engineers in academia and industry

The advisory board of the Americas Council Consists of:

1. Ramón Castañeda-Priego (Universidad de Guanajuato) Red Mexicana de Materia Condensada Blanda
2. James Harden (University of Ottawa) Soft Matter Canada
3. Israel Omar Pérez López (Universidad Autónoma de Ciudad Juárez) MCNANO SMF
4. Verónica Marconi (Universidad Nacional de Córdoba) Asociación Física Argentina (AFA) División Materia Blanda

The SMAA may need to form the following Subcommittees:

- Structure and Rules Subcommittee (Bylaws: Executive Committee, rotation, elections, etc.)
- ISMC2027 proposal solicitation: development of proposal review protocol; next event site selection
- Idea solicitation for activities, e.g., short course or a series of short courses for industry or academia (educational material for SMAA website)
- SMAA website administrative support: content updates on Zoom weekly seminars, other events and activities, job listings etc.
- Local soft matter associations: coordinate activities and help start new local organizations.
- How to improve connectivity and exchange of ideas/people between different countries of the Americas
- How to best coordinate SMAA activities with professional societies

Thank you to our sponsors for making this event possible!