Week 1, July 1 – 5, 2024

Sunday, June 30th
18:30 – 20:30  Registration mixer with refreshments
location TBD

Monday, July 1st
8:30 – 9:00  Organizers
Welcome and School Introduction
9:00 – 10:30  W. Jacobs
Biomolecular Condensates
10:30 – 11:00  Coffee break – questions / interaction with speaker
11:00 – 12:30  M. Deserno
Membrane Elasticity and Thermodynamics
12:30 – 13:45  Lunch
14:00 – 15:30  P. Bassereau
Protein self-organization
15:30 – 17:00  Participant Introductions
18:30 – 18:55  Poster Blurbs I
Duane G130
19:00 – 22:00  Poster Session I
11th Floor Commons Room, Gamow Tower

Tuesday, July 2nd
9:00 – 10:30  W. Jacobs
Biomolecular Condensates
10:30 – 11:00  Coffee break
11:00 – 12:30  M. Deserno
Membrane Elasticity and Thermodynamics
12:30 – 13:45  Lunch
14:00 – 15:30  P. Bassereau
Protein self-organization
18:00 – 20:30  Dessert on Flagstaff Mountain
Busses leave south of C4C at 6pm
**Wednesday, July 3rd**

9:00 – 10:30  
W. Jacobs  
*Biomolecular Condensates*

10:30 – 11:00  
Coffee break

11:00 – 12:30  
M. Das  
*Mechanical transitions in cells and tissues*

12:30 – 13:45  
Lunch

14:00 – 15:30  
E. Matsumoto  
*Geometry of shape change*

15:30 – 15:45  
Break

15:45 – 17:15  
**Problem solving session** – A. Saric

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**Thursday, July 4th**

9:00 – 10:30  
M. Das  
*Mechanical transitions in cells and tissues*

10:30 – 11:00  
Coffee break

11:00 – 12:30  
M. Deserno  
*Membrane Elasticity and Thermodynamics*

12:30 – 13:45  
Lunch

14:00 – 15:30  
E. Matsumoto  
*Geometry of shape change*

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**Friday, July 5th**

9:00 – 10:30  
E. Matsumoto  
*Geometry of shape change*

10:30 – 11:00  
Coffee Break

11:00 – 12:30  
M. Das  
*Mechanical transitions in cells and tissues*

12:30 – 13:45  
Lunch

14:00 – 15:30  
**Problem solving / What have we learned this week?** – A. Saric

19:00 – 21:30  
**Catered dinner**  
*11th Floor Commons Room, Gamow Tower*
### Week 2, July 8 – 12, 2024

#### Monday, July 8<sup>th</sup>
- 9:00 – 10:30: M.C. Marchetti  
  *Dense active matter*
- 10:30 – 11:00: Coffee Break
- 11:00 – 12:30: N. Mitchell  
  *Mechanics of morphogenesis*
- 12:30 – 13:45: Lunch
- 14:00 – 15:30: D. Zwicker  
  *Chemically active droplets*
- 18:30 – 18:55: *Poster Blurb II*  
  *Duane G130*
- 19:00 – 22:00: *Poster Session II*  
  *11<sup>th</sup> Floor Commons Room, Gamow Tower*

#### Tuesday, July 9<sup>th</sup>
- 9:00 – 10:30: M.C. Marchetti  
  *Dense active matter*
- 10:30 – 11:00: Coffee Break
- 11:00 – 12:30: N. Mitchell  
  *Mechanics of morphogenesis*
- 12:30 – 13:45: Lunch
- 14:00 – 15:30: D. Zwicker  
  *Chemically active droplets*
- 18:30 – 18:55: *Poster Blurb III*  
  *Duane G130*
- 19:00 – 22:00: *Poster Session III*  
  *11<sup>th</sup> Floor Commons Room, Gamow Tower*

#### Wednesday, July 10<sup>th</sup>
Detailed Schedule
All lectures are in Duane Physics Room G130

9:00 – 10:30  
D. Zwicker  
*Chemically active droplets*

10:30 – 11:00  
Coffee break

11:00 – 12:30  
N. Mitchell  
*Mechanics of morphogenesis*

12:30 – 13:45  
Lunch

14:00 – 15:30  
K. Wan  
*Out-of-equilibrium dynamics and organization of active filaments*

15:30 – 15:45  
Break

15:45 – 17:15  
**Problem solving session** – M. Gardel

**Thursday, July 11th**

9:00 – 10:30  
M.C. Marchetti  
*Dense active matter*

10:30 – 11:00  
Coffee Break

11:00 – 12:30  
K. Wan  
*Out-of-equilibrium dynamics and organization of active filaments*

12:30 – 13:45  
Lunch

14:00 – 15:30  
M. Prakash  
*TBD*

**Friday, July 12th**

9:00 – 10:30  
K. Wan  
*Out-of-equilibrium dynamics and organization of active filaments*

10:30 – 11:00  
Coffee Break

11:00 – 12:30  
M. Prakash  
*TBD*

12:30 – 13:45  
Lunch

14:00 – 15:30  
**Problem solving / What have we learned this week?**  
– M. Gardel
Week 3, July 15 – 19, 2024

Monday, July 15th
9:00 – 10:30  U. Schwarz
   Active contractility of adherent cells
10:30 – 11:00  Coffee Break
11:00 – 12:30  M. Manning
   Emergent mechanical properties of biological tissues
12:30 – 13:45  Lunch
14:00 – 15:30  M. Murrell
   Energetic constraints on biological assembly and motion
19:00 – 20:00  Public Lecture: M. Prakash
   Duane Physics G1B20

Tuesday, July 16th
9:00 – 10:30  U. Schwarz
   Active contractility of adherent cells
10:30 – 11:00  Coffee Break
11:00 – 12:30  M. Manning
   Emergent mechanical properties of biological tissues
12:30 – 13:45  Lunch
14:00 – 15:30  M. Murrell
   Energetic constraints on biological assembly and motion

Wednesday, July 17th
9:00 – 10:30  J. Yeomans
   Active matter models of mechanobiology
10:30 – 11:00  Coffee Break
11:00 – 12:30  M. Manning
   Emergent mechanical properties of biological tissues
12:30 – 13:45  Lunch
14:00 – 15:30  M. Murrell
   Energetic constraints on biological assembly and motion
15:30 – 15:45  Break
15:45 – 17:15  Problem solving session – S. Banerjee
### Thursday, July 18th

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<thead>
<tr>
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<th>Speaker</th>
<th>Topic</th>
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<td>J. Yeomans</td>
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<td>14:00 – 15:30</td>
<td>E. Hannezo</td>
<td><em>Collective cell migration</em></td>
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### Friday, July 19th

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<td>12:30 – 13:45</td>
<td>Lunch</td>
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<td>14:00 – 15:30</td>
<td>Problem solving / What have we learned this week?</td>
<td>– S. Banerjee</td>
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<td>Week 4, July 22 - July 26, 2024</td>
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**Monday, July 22nd**
- 9:00 – 10:30  
  Y. Mao  
  *Tissue growth, repair and morphogenesis*
- 10:30 – 11:00  
  Coffee Break
- 11:00 – 12:30  
  I. Cohen  
  *Viscosity metamaterials, biological tissues and microscopic robots*
- 12:30 – 13:45  
  Lunch
- 14:00 – 15:30  
  A. Liu  
  *Learning metamaterials*

**Tuesday, July 23rd**
- 9:00 – 10:30  
  Y. Mao  
  *Tissue growth, repair and morphogenesis*
- 10:30 – 11:00  
  Coffee Break
- 11:00 – 12:30  
  I. Cohen  
  *Viscosity metamaterials, biological tissues and microscopic robots*
- 12:30 – 13:45  
  Lunch
- 14:00 – 15:30  
  A. Liu  
  *Learning metamaterials*

**Wednesday, July 24th**
- 9:00 – 10:30  
  D. Durian  
  *Autonomous learning metamaterials*
- 10:30 – 11:00  
  Coffee Break
- 11:00 – 12:30  
  V. Vitelli  
  *TBD*
- 12:30 – 13:45  
  Lunch
- 14:00 – 15:30  
  A. Liu  
  *Learning metamaterials*

15:30 – 15:45  
Break

15:45 – 17:15  
**Problem solving session** – E. Dufresne
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<td>9:00 – 10:30</td>
<td>D. Durian</td>
<td><em>Autonomous learning metamaterials</em></td>
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