

## Virtual CEMB Mechanobiology Boot Camp – July 06 – July 17, 2020

DRAFT Agenda - 6/10/2020

### Structure

- Week 1: morning lectures to provide fundamental knowledge in core topics related to plant and animal cell mechanobiology; afternoon labs to build skills in modeling, analysis, imaging, and bioinformatics.
- Week 2: group research projects and final presentation at the end of the week; professional development.

### Prior to July 06:

- Journal articles may be provided by lecturing PIs to orient participants to the topics.

Daily timeframe: Expect programming to run between 11am-6pm EST to accommodate participants in all time zones.

**A Boot Camp Zoom URL** for interactive meetings will be distributed before the launch of the July 1 Orientation.

| INTRO | Wed July 1  | 4:00 – 5:00 pm EDT<br>Boot Camp Orientation (Ram Dixit)                                   |  |   |
|-------|---|---|--|---|
| Week  | Day   | Morning   | Afternoon  |   |
| 1     | M<br>(July 6)   | <b>Boot Camp Lectures Begin:<br/>11:00 am EDT/10:00 CDT:/8:00 PDT<br/>End 1:00 pm EDT</b> | <b>Afternoon Labs Final Times TBA.<br/>Plan for Labs to run between<br/>3:00– 5:00 EDT / 2-4 CDT/ 12-2 PDT.</b><br><br>M: Mat Lab I                                |   |
|       |   | Brief Introduction (Ram Dixit);   |  |   |
|       |   | “Basic Biochemistry and Mechanics” (Paul Janmay)  |  |   |
|       |   | Measuring Forces” (Anders Carlsson)   |  |   |
|       | Tu  | Boot Camp Lectures:   | Tu: Mat Lab II   |   |
|       |   | “MS Channels;” (Haswell Lab)  |  |   |
|       |   | “Animal Cell Adhesion” (Amit Pathak)  |  |   |
| W     | Boot Camp Lectures:   | W: Image J  |  |   |
|       | “Intro to Plant and Animal Cytoskeleton;” (Ram Dixit)           |   |  |   |
| Th    | “Intro to Nuclear Mechanobiology” (Ben Prosser)                 | Th: Python  |  |   |
|       | Boot Camp Lectures:   |   |  |   |
| F     | “The Plant Cell Wall;” (Charlie Anderson and Siobhan Braybrook) | F: Bioinformatics   |  |   |
|       | “Animal ECM” (Guy Genin)  |   |  |   |
|       | Boot Camp Lectures:   |   |  |   |
| 2     | M<br>(July 13)  | “Artificial Matrices;” (Nate Huebsch)   | <b>Workshops Final Times TBA.<br/>Plan for Labs and Workshops to run<br/>between 2:00 – 4:00 EDT/ 1- 3 CDT/<br/>11- 1 PDT.</b><br>M: Career Development Workshop I |   |
|       |   | “Fluidics” (Dan Huh)  |  |   |
|       | Tu  | Group Research Projects   |  | Tu: Scientific Presentation Skills Workshop |
|       | W   | Work Day  |  | W: Career Development Workshop II           |
|       | Th  | Work Day  |  | Th: Workshop on the Profession TBN          |
|       | F   | Group Presentations   |  |   |