

## PROGRAM 2017 CPLC SUMMER SCHOOL

### Saturday July 15 – ARRIVAL

### Sunday July 16 – Summer School Day 1

**8:00 – 8:40 am**      **Registration**      *(Hallway outside Loomis 144)*

**8:40– 11:00 am**      **Welcome & Lectures**      *(Loomis 144)*

- 8:40 – 9:00 am      **Jaya Yodh**, Director of Education and Outreach: Welcome
- 9:00 – 10:00 am      **Yann Chemla, CPLC co-director**: “Intro to the CPLC”;  
“Measurement of motility and chemotactic response in single cells”
- 10:00 – 11:00 am      **Zaida Luthey-Schulten, CPLC Co-director**: “Stochastic Simulations of Cellular Processes”

**11:00 – 11:30 am**      **Photo Shoot**      *(Outside Loomis Courtyard)*

**11:30 – 1:00 pm**      **Lunch (provided) + Poster Session**      *(Loomis East 1<sup>st</sup> floor Semi-circle Lobby)*

**1:00 – 6:00 pm**      **Assigned Scientific Themes**  
*(Refer to Theme/Modules Block Schedules & Handouts)*

### Scientific Themes - Theme/Module Locations

Scientific Theme	Module	Building & Room
Theme 1: Evolution of Chemotaxis	Kuehn Lab	Loomis 389
	Chemla lab	Loomis 128
	Kuhlman lab	Loomis 397
	Goldenfeld Lab	ESB 3110
Theme 2: Live Cell Imaging of Transcription	General Meeting Room	Loomis 322
	Golding lab	Loomis 397
	Sokac lab	IGB Core Microscopy Facility (Concourse Level near Array Café)

Scientific Theme	Module	Building & Room
Theme 3: Neurobiology	Intro safety training Sunday July 16 1:00 pm	Roger Adams 314A
	Zhang Lab	Roger Adams 317
	Selvin lab	Loomis 328
	Gruebele/Chemla labs	Loomis 118 (enter through 128)
Theme 4: Physics of DNA	Ha lab (smFRET & sequencing)	Loomis 108
	Song lab (loop-seq analysis)	IGB 607
	Aksimentiev (lab)	Loomis 261
Theme 5: Quantitative Imaging & Cell Simulation of sRNA	Fei lab	Loomis 106B (enter through 108)
	Luthey-Schulten Lab	Loomis 106F (mostly)
Theme 6: RNA Regulation in Eukaryotes	Hoskins	Loomis 108
	Luthey-Schulten Lab	Loomis 106F (enter through 108)
	Myong Lab	IGB Core Microscopy Facility (Concourse Level near Array Café)

**7:00 – 9:00 pm**      **Assigned Primer Courses (if applicable)**      *(Refer to Primer Course Assignments)*

Minicourse	Building & Room
VMD & QwikMD	Beckman 3rd Floor, TCBG Innovation Courtyard II

Or **Continuation of Scientific Themes** *as needed*

## Monday July 17– Summer School Day 2

**8:30 – 11:00 am**      **Lectures + Coffee Break**      *(Loomis 144)*

- 8:30 – 9:15 am      **Sepp Kuehn:** “Experimental Evolution of Bacterial Migration”
- 9:15 – 10:00 am      **Nigel Goldenfeld:** “Evolution and Collective Phenomena: From the Origin of Life to You”

**11:00 am – 6:00 pm**      **Assigned Scientific Themes**  
*(Refer to Theme/Modules Block Schedules & Handouts and above table on Theme locations)*

**7:00 – 9:00 pm** **Assigned Primer Courses (if applicable)**  
*(Refer to Primer Course Assignments)*

Minicourse	Building & Room
VMD & QwikMD	Beckman 3rd Floor, TCBG Innovation Courtyard II
MATLAB <i>(maybe)</i>	Loomis 257

Or **Continuation of Scientific Themes** *as needed*

## Tuesday July 18 – Summer School Day 3

**8:30 – 10:00 am**      **Lectures**      *(Loomis 144)*

- 8:30 – 9:15 am      **Ido Golding:** “Deciphering the stochastic kinetics of gene regulation”
- 9:15 – 10:00 am      **Anna Sokac:** “Actin cytoskeleton: From genes to embryonic tissue building”

**12:00 – 1:00 pm**      **Lunch (provided) + Poster Session**      *(Loomis East 1<sup>st</sup> floor Semi-circle Lobby)*

**1:00 – 6:00 pm**      **Assigned Scientific**  
*(Refer to Theme/Modules Block Schedules & Handouts and above table on Theme locations)*

**7:00 - 9:00 pm**      **Continuation of Scientific Themes** *as needed*

## Wednesday July 19 – Summer School Day 4

**8:30 – 11:00 am**      **Lectures + Coffee Break**      *(Loomis 144)*

- 8:30 – 9:15 am      **Taekjip Ha:** “DNA physics using single molecule technologies”
- 9:15 – 10:00 am      **Jun Song:** “Introduction to High-throughput Sequencing Analysis”
- 10:00 – 10:15 am      *COFFEE BREAK*
- 10:15 – 11:00 am      **Tom Kuhlman:** “Transposable elements, junk DNA, and the evolution of Eukaryotes”

**11:00 am – 6:00 pm**      **Assigned Scientific Themes**  
*(Refer to Theme/Modules Block Schedules & Handouts and above table on Theme locations)*

**7:00 – 9:00 pm** **Assigned Primer Courses (if applicable)**  
*(Refer to Primer Course Assignments)*

Minicourse	Building & Room
MATLAB	Loomis 257

Or **Continuation of Scientific Themes** *as needed*

## Thursday July 20 – Summer School Day 5

**8:30 – 10:00 am**      **Lectures**      *(Loomis 144)*

- 8:30 – 9:15 am      **Paul Selvin:** “Super-resolution microscopy applied to neuroscience & beyond”
- 9:15 – 10:00 am      **Jingyi Fei:** “Quantitative Imaging of Small Regulatory RNA”

**12:00 – 1:00 pm**      **Lunch (provided) + Poster Session**      *(Loomis East 1<sup>st</sup> floor Semi-circle Lobby)*

**1:00 – 6:00 pm**      **Assigned Scientific Themes**  
*(Refer to Theme/Modules Block Schedules & Handouts and above table on Theme locations)*

**7:00 - 9:00 pm**      **Continuation of Scientific Themes** *as needed*

## Friday July 21 – Summer School Day 6

**8:30 – 10:00 am**      **Lectures**      *(Loomis 144)*

- 8:30 – 9:15 am      **Kai Zhang:** “Developing an optogenetic toolbox for cell signaling control in mammalian cells and multicellular organisms”
- 9:15 – 10:00 am      **Martin Gruebele:** “Fishy math: from singular value decomposition to dimensionality reduction.”

**11:00 am – 6:00 pm**      **Assigned Scientific Themes**  
*(Refer to Theme/Modules Block Schedules & Handouts and above table on Theme locations)*

**7:00-9:00 pm**      **Continuation of Scientific Themes** *as needed*

## Saturday July 22– Summer School Day 7

**8:00 – 11:30 am**      **Preparation for Student Presentations**

**11:30 am – 12:30 pm**      **Lunch**      *(Loomis East 1<sup>st</sup> floor Semi-circle Lobby)*

**12:30 – 5:00 pm**      **Student Presentations** *(Schedule TBD) + Coffee Breaks*      *(Loomis 144)*

**5:00 – 6:30 pm**      Fill out Student evaluations *(Loomis 141)* and BREAK

**6:30 – 9:30 pm**      **Dinner party at The Bread Company**  
*706 South Goodwin Avenue, Urbana, IL 61801*

## Sunday July 23 – DEPARTURE