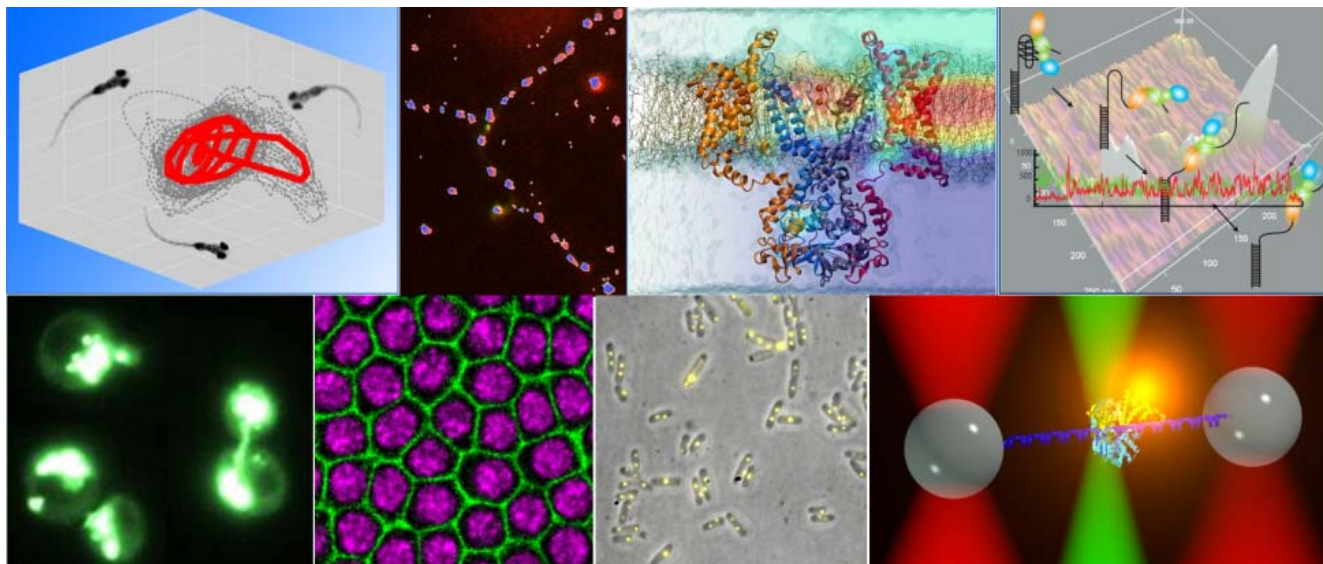


PHYSICS OF LIVING CELLS SUMMER SCHOOL

An NSF Physics Frontier Center at the
University of Illinois at Urbana-Champaign (UIUC)

July 15 – 20, 2013



The Center for the Physics of Living Cells (CPLC) laboratories at the University of Illinois are using the latest single-molecule, live-cell experimental and computational biophysical tools to investigate biological processes such as mechanisms of motor proteins, genome maintenance, and cell motility, as well as dynamics of protein folding and gene expression, and translation in living cells.

The 2013 CPLC Summer School will offer training in the following areas:

- ❖ *Computational Analysis of Cellular Structures and Processes*
- ❖ *Eigenfish: Neural Dynamics of Fish Locomotion*
- ❖ *Following the Fate of Individual Viral Genomes within the Infected Cell*
- ❖ *Intracellular Diffusion and Nucleoid Organization*
- ❖ *Membrane Dynamics in Living Fruit Fly Embryos*
- ❖ *Optical Trapping & Fluorescence Imaging of Individual Swimming Cells*
- ❖ *Optical Trapping – Single-Molecule Force Spectroscopy of Protein-DNA Interaction*
- ❖ *SiMPull: Single-Molecule Pull-Down*
- ❖ *Single-Molecule FIONA*
- ❖ *Single-Molecule FRET*
- ❖ *Super-Resolution Fluorescence Microscopy*
- ❖ *Tagging and Labeling Methods for Single-Molecule Studies in vivo and in vitro*

PARTICIPATING FACULTY

Alek Aksimentiev
Yann Chemla
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Tom Kuhlman
Zan Luthey-Schulten
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Klaus Schulten
Paul Selvin
Ido Golding
Anna Sokac
Aaron Hoskins

This summer school is designed for graduate students, postdoctoral fellows, and researchers in chemical & life sciences, biophysics, physics and engineering who seek to expand their research skills into these areas. The workshop will comprise an initial period of 'basic training' on technique/software fundamentals followed by a four-day 'advanced laboratory module' on a selected topic.

www.cplc.illinois.edu/summerschool2013

Registration Fee*: \$100 students; \$175 postdocs; \$250 all others;
Housing and all course materials will be provided.

Application Deadline: March 15, 2013

Selection and notification of participants to be completed by late April, 2013

*Registration fee is due from selected participants by early May, 2013