Welcome to the

PHYSICS OF LIVING CELLS
SUMMER SCHOOL

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

July 19 – 24, 2010

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 protein motor translocation, mechanics of genome maintenance and translation machinery, and dynamics of protein folding and gene expression in living cells.

The 2010 CPLC Summer School will offer training in the following areas:

- Single-molecule Fluorescence: TIR-FRET & FIONA
- Single-molecule Force: Optical Traps
- Fast Relaxation Imaging (FReI): protein folding dynamics in living cells
- Single-event detection in living cells
- Super-resolution fluorescence microscopy (PALM/STORM)
- Tracking cell surface growth in living fruit fly embryos
- Molecular dynamics simulations of single molecule sensors
- Observing biomolecular interactions with atomic resolution
- Dynamical networks in protein:RNA assemblies

This summer school is designed for graduate students, postdoctoral fellows, and researchers in chemical and life sciences, biophysics, physics and engineering who would like to expand their research skills into these areas. The workshop will consist of an initial period of ‘basic training’ on technique fundamentals followed by a four day ‘advanced laboratory module’ on a selected topic which integrates both experimental and theoretical components.

PARTICIPATING FACULTY

UIUC
Taekjip Ha
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Registration Fee*: $75 students; $150 non-student academics; $250 all others
Housing and all course materials will be provided.
Application Deadline: April 1, 2010
Selection and notification of Participants to be completed by April 15, 2010
*Registration Fee is due from Selected Participants by May 1, 2010.