

Shicong Xie

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Education

Undergraduate

B.A. Physics, applied mathematics. University of California, Berkeley, 2006 - 2010. High honors in physics.

Honors thesis: *Super-resolution Imaging of Epidermal Growth Factor Receptor Clustering on the Cell Membrane*. Advisors: John Kuriyan and Jan Liphardt.

Graduate

Computational and Systems Biology. Massachusetts Institute of Technology, 2010 - present. Advisors: Adam Martin.

Research Experience

Massachusetts Institute of Technology

Research rotations 2010-2011.

Sebastian Seung, Department of Brain and Cognitive Science, Department of Physics. Developed a support vector machine-based cell-segmentation algorithm for ssTEM brain slice images.

Bruce Tidor, Department of Biological Engineering, Department of EECS. Modelled deterministic factors impacting the stochastic λ phage lysis-lysogeny decision.

Doctoral thesis 2011-present.

Adam Martin, Department of Biology. Computational characterization of the coordination of multi-cellular forces during ventral furrow formation in *Drosophila* embryogenesis.

University of California, Berkeley

Undergraduate Research Apprentice Program (URAP) 2007-2010.

John Kuriyan, Department of Chemistry, Department of Molecular & Cell Biology. Characterized the physical activation mechanisms of epidermal growth factor receptor (EGFR) through Western blotting, FRET, and PALM.

Jan Liphardt, Department of Physics. PALM study of EGFR clustering on the cell membrane.

Janelia Farm Research Campus, HHMI

Janelia Undergraduate Scholars 2009.

Harald Hess. Automation software for the interferometric photoactivatable localization microscope (iPALM) system; spectral analysis of fiducial markers.

Search for Extra-terrestrial Intelligence (SETI) Institute

NSF REU 2008.

Friedemann Freund. Characterizing the electrochemistry between water andigenous under mechanical stress.

Teaching experience

Massachusetts Institute of Technology

Course assistant, 20.415, physical biology. Fall 2011.

Workshop instructor, introduction to quantitative biology. January 2011.

University of California, Berkeley

Course reader, Physics H7C, honors introductory course in optics and quantum mechanics. Spring 2009.

Honors, Awards, & Scholarships

Poster prize, MIT building 68 retreat. 2012.

Regents' and Chancellors' Scholarship. 2006-2010.

Robert C. Byrd Honors Scholarship. 2006-2010.

Dean's List, University of California, Berkeley. 2006-2008.

Phoebe Hearst Scholarship. 2006-2008

National Merit Scholarship. 2006.

Genzyme Science Scholarship. 2006.

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