Physics Colloquium

Room 310, Flarsheim Hall
October 17, 2008
Coffee at 3:15, Colloquium Start at 3:30

The Transportation System inside a Living Cell

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Abstract

A living cell has an infrastructure much like that of a city. We will describe the transportation system that consists of roads (filaments) and molecular motors (proteins) that haul cargo along these roads. We will give an example showing how pigment cells regulate this transport.

Biography of the speaker

Clare Yu is currently a professor of Physics and Astonomy at the University of California, Irvine. She received her A.B and Ph. D in physics from Princeton University (advisor: P. W. Anderson, Nobel laureate 1977). She was a postdoc at the University of Illinois, Urbana-Champaign (mentor: Anthony Leggett, Nobel laureate 2003) and Los Alamos National Laboratory before joining the faculty at UC Irvine.

Her present research interests include biological physics and condensed matter physics. In biological physics she is working on intracellular transport and developmental biology. Her condensed matter physics interests include glassy and disordered systems, noise, and superconducting Josephson junction qubits. She has also contributed to problems in strongly correlated electrons, quantum magnetism, superconducting vortices, phase transitions, and quantum solids.

She was an Alfred P. Sloan Fellow and is a Fellow of the American Physical Society. She has served as a member-at-large of the executive committee of the APS Division of Condensed Matter Physics (DCMP), and as a member of the nominating committee of the APS DCMP. She was a co-organizer of the 2006 Workshop on Opportunities in Biological Physics sponsored by the APS Division of Biological Physics. She was co-leader of a Campus-Laboratory Collaboration (involving 5 campuses and Los Alamos) on Superconducting Vortices and Related Phenomena. She is currently a member of the University of California Academic Council Special Committee on (National) Lab Issues.