



The University of Chicago
Department of Statistics

Seminar Series

EDWIN MUNRO
Cell and Molecular Biology
University of Chicago

Dynamics of Cell Polarization: Experiments and Models

MONDAY, January 11, 2010, at 4:00 PM
133 Eckhart Hall, 5734 S. University Avenue
Refreshments following the seminar in Eckhart 110.

ABSTRACT

Biologists have made rapid progress in identifying and characterizing the molecular networks that “control” embryonic development. A current challenge is to understand how these networks operate in the physical context of living embryos to orchestrate complex cell and tissue level behaviors. My lab seeks to address this challenge through studies of cell polarization and cellular morphogenesis in early embryos, combining quantitative microscopy and experimental manipulations with detailed agent-based computer simulations. In this talk, I will highlight our efforts to understand how the newly fertilized egg of the nematode worm *C.elegans* polarizes in response to a transient localized cue. My aim will be to provide enough of the biology background to give a general audience a clear sense of motivation for our work, but I will emphasize the computational approaches we are using and how biological insight emerges from the interplay between theory, computation and experiment.

For further information and about building access for persons with disabilities, please contact Kelly Macias at 773.834.5169 or send email (kmacias@galton.uchicago.edu). If you wish to subscribe to our email list, please visit the following web site: <https://lists.uchicago.edu/web/info/statseminars>.