

Chez Pierre

Presents ...

Tuesday, February 3, 2009

1:15pm

MIT Room 4-331



Ido Golding

The University of Illinois at Urbana-Champaign

“Information Processing in Living Cells: Beyond First Approximations”

In my lab, we attempt to better understand the way living cells represent information about their environment through the activity of their genes. To achieve this aim, one has to reexamine “first approximations” currently used when quantifying cellular information processing: (1) the description of cellular response in terms of a single “transcription rate” rather than in terms of discrete events; (2) the treatment of cellular reactions as governed by diffusion and occurring in a “well-mixed” cell. As a model system, we use the bacterium *E. coli* and its virus, phage lambda. We study their complex interaction at the level of individual events in space and time, thus going beyond the aforementioned “first approximations”.