Physics Seminar

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Friday January 16, 2009
PSC 3046
4:00 pm

Manipulations and models: Min oscillations within E. coli

A biological physicist does physics on biologically relevant systems. These are typically stochastic non-equilibrium soft-condensed matter systems with scales ranging from molecules to organisms. I study bacteria: the simplest living organisms, with cells of micron scale that each contains roughly 1000 copies of each of 1000 different proteins. I work to understand each mechanism of this micro-machine as a physicist: simply, systematically, and quantitatively. I will talk about one of these mechanisms, a remarkable subcellular Min oscillation that is seen within individual E. coli bacteria. I will discuss how we theoretically model this oscillation and how we are also building experimental tools to both manipulate and exploit the Min oscillation.

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