

Presents ...

Monday, February 28, 2011 12:00pm MIT Room 4-331



## **SPECIAL CHEZ PIERRE SEMINAR**

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## "Chromosome, cell cycle and entropy (or: Why I love E. coli)"

Before an Escherichia coli cell divides to give two viable daughters, the cell must replicate, topologically decatenate, and spatially segregate its genetic materials. These processes pose non-trivial questions at the interface between physics and biology. In this talk, I will describe theoretical and experimental studies of two different aspects -- spatial and temporal -- of the problems: the first aspect concerns the guiding force, or "directionality," for organization and segregation of chromosomes in confined space. The second concerns growth of the cell, and "causality" of the cell cycle events.