



**TIFR Centre for Interdisciplinary Sciences,
Narsingi, Hyderabad 500075**

Seminar

**Stochastic thermodynamics and its implications for active
particles**

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In the last couple of decades, traditional thermodynamics has been extended to describe small systems in terms of stochastic versions of thermodynamic quantities like energy, entropy etc. A number of exact equalities, known as Fluctuation theorems, were derived. We extend these notions to self propelled Brownian particles, a natural example being molecular motors. We derive fluctuation theorems for entropy production, and characterize the linear response at non-equilibrium steady states in terms of modified fluctuation dissipation relations. In this context, I'll discuss some simple models of self propelled particles.

Thursday, Oct 3rd 2013

11:30 AM (Tea/Coffee at 11:15 PM)

Seminar Hall, TCIS