

Seminar

Additivity and Mass Fluctuation in Nonequilibrium Mass Transport Processes

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Understanding fluctuations is fundamental to the formulation of statistical mechanics, where additivity plays a crucial role. For example, consider equilibrium thermodynamics which is based on the principle of additivity: Macroscopic state of a system, depending on the constraints, is determined by either maximization of entropy or minimization of free energy. Thus, additivity leads to the concept of intensive thermodynamic variable (temperature or chemical potential) and helps in understanding fluctuations in the system. However, in nonequilibrium, there is no unified principle to characterize fluctuations. In this talk, we aim to provide a statistical mechanics framework to characterize steady-state mass fluctuations in a broad class of nonequilibrium mass transport processes.

Friday, Sep 2nd 2016

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

Seminar Hall, TCIS