



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

Seminar

Tunable and Driven Colloids

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Abstract: Colloidal self-assembly can be used to address fundamental questions in condensed matter physics. One such question is how to control order and disorder in fluid-solid phase transitions. Tunable inter-particle interactions are one way to achieve (quasi-equilibrium) control. Another way to create ordered structures is via the (non-equilibrium) driving of colloids with time-dependent external forces. I will discuss work carried out in my group that uses external ac electric fields, with amplitude and frequency as control parameters, to probe structure formation in colloidal systems, and finds ordered fluids, crystal-crystal transitions and transitions to glassy states.

Date: *Friday, June 14th 2013*

Time: *04:00PM (Tea/Coffee at 03:30PM)*

Venue: *Conference Hall, TCIS*

All are cordially invited