

Seminar

Guided self assembly of competing structures

Srikanth Sastry

JNCASR, Bangalore

Selective assembly of a given structure in the presence of other possible end products is a generic problem in self assembly. A particular, challenging, problem is to design and develop protocols whereby a self assembling system could be dynamically guided towards one of several competing structures, which may in principle have different functionality. We consider such guided self assembly, through simple temperature protocols, in an idealised multi-component system which is capable of forming two stable, competing structures. We demonstrate that suitable temperature protocols can indeed be defined for selective retrieval of either of the stable structures. The ability to do so with high selectivity and avoidance of spurious (or chimeric) aggregates places constraints on the design of these structures, which will be discussed.

Thursday, Sep 22nd 2022

4:00 PM (Tea/Coffee at 3:45 PM)

Auditorium, TIFR-H