

## **Students' Annual Seminar**

### **Pinning Susceptibility: A Novel Method to Study Growth of Amorphous Order in Glass-forming Liquids**

**Rajsekhar Das**

Existence and growth of amorphous order in supercooled liquids approaching glass transition is a subject of intense research. Even after decades of work, there is still no clear consensus on the molecular mechanisms that lead to a rapid slowing down of liquid dynamics approaching this putative transition. The existence of a correlation length associated with amorphous order has recently been postulated and also been estimated using multi-point correlation functions which cannot be calculated easily in experiments. Thus the study of growing amorphous order remains mostly restricted to systems like colloidal glasses and simulations of model glass-forming liquids. In this work, we propose an experimentally realizable yet simple correlation function to study the growth of amorphous order. We then demonstrate the validity of this approach for a few well-studied model supercooled liquids and obtain results which are consistent with other conventional methods.

***Thursday, May 11<sup>th</sup> 2017***

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

***Seminar Hall, TCIS***