

## ICTS Postdoc/Graduate Student Seminar Series

Title : The simplifying role of symmetries: super-symmetry

Speaker : Victor Ivan Giraldo Rivera, ICTS-TIFR, Bangalore

Date : Friday, March 3, 2017

Time : 11:15 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : I will begin by recalling some very basic facts about how symmetries play a role in simplifying/characterizing physical problems. I will then focus on space-time symmetries, where I will describe super-symmetries: roughly, symmetries that relate Bosons and Fermions. Next, I will describe some of the implications of imposing super-symmetry on simple systems, highlighting the simplifying features. Finally, I will describe the heuristics of super-symmetric localization. In recent years, this has become a prominent tool in the study of super-symmetric theories, since it allows one to compute super-symmetric observables, sometimes even exactly, thus giving remarkable insight into the non-perturbative physics of the theory. This allows the technique to be used as a test of dualities, especially those which relate the strong coupling of one theory with the weak coupling of another.

Note: This will be an ongoing biweekly seminar series (Fridays, 11:15 am) by the ICTS postdocs and graduate students