ICTS Postdoc/Graduate Student Seminar Series

Title : Old and New: Matrix, Vector, Matrix-vector Models

Speaker : Junggi Yoon, ICTS-TIFR, Bangalore

Date : Friday, October 28, 2016

Time : 11:15 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Holographic duality, a.k.a. the AdS/CFT correspondence, has been studied vigorously to understand gravity. One simple and concrete example is the O(N)/U(N) vector model, whose singlet sector is dual to higher spin gravitational theories. Due to simple structure of the vector model, it is easy to figure out the holographic duality by elementary group theoretical methods analogous to the addition of angular momentum in quantum mechanics.

However, matrix models have more complicated structures in general. Nevertheless, the quantum mechanics of an (0+1) dimensional matrix model is simple enough, but still provides fruitful insights into 2D gravity.

Recently, another vectorial (0+1) model with random coupling proposed by Sachdev, Ye and Kitaev has been in the spotlight due to its rich properties combined with a simple structure, which makes lower dimensional holography a testing ground for gravity.

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