

Instructional workshop on subfactors and planar algebras

Mar 26 - Apr 3, 2012

IMSc, Chennai

The theory of subfactors was initiated by Vaughan Jones in the early 1980's and has since developed in various directions and established contact with diverse areas of mathematics and physics such as knot theory, tensor categories, topological quantum field theory and quantum computation. Some of these connections go through an axiomatisation of the 'standard invariant of a subfactor' called a planar algebra.

The goal of this workshop is to introduce some aspects of this theory and cover some topics including:

- Planar algebras
- Connection between subfactors and planar algebras
- A type III approach to subfactors
- The Longo-Rehren construction
- Tensor networks and quantum computation

The workshop will feature three mini-courses of lectures, one each by **Masaki Izumi**, **Vaughan Jones** and **Zeph Landau**. and will be followed by a 3-day conference on functional analysis in celebration of V. S. Sunder's 60th birthday.

The institute will be able to accommodate upto 30 participants. People wishing to attend the workshop should indicate their interest in an email addressed to vijay@imsc.res.in and also give a brief description of their background in related areas and why they will benefit from this workshop.