Subfactor workshop at IMSc, Chennai during 30.12.2013-11.01.2014

The theory of subfactors constitutes an important branch of the theory of von Neumann algebras. It is a relatively new subject (compared to more classical branches of mathematics), with remarkable and deep connections with diverse areas of mathematics and mathematical physics. Some of the more significant accomplishments in this field were Vaughan Jones discovery of the polynomial knot invariant that bears his name (which work earned him the Fields medal) and Popa's recent work on (super-)rigidity in ergodic theory/geometric group theory. There is also an ongoing program to classify subfactors of small index. The most crucial ingredient for this classification program of a supposedly analytical object is an important invariant that is, surprisingly, some highly structured finite dimensional data, which was encoded in terms of pictures on a plane by Jones, who named these objects Planar Algebras and thus opened up a whole new area of research.

This two-week workskop will aim to expose graduate students, with a sound background in Functional Analysis, to some of these ideas via mini-courses covering the basics of von Neumann algebras, subfactors and planar algebras. Typically, there will be two ninety-minute lectures in the forenoons and tutorial sessions in the afternoons devoted to filling in gaps/missing details in the morning sessions.

The expected list of speakers is: Paramita Das and Shamindra Kumar Ghosh (both from ISI, Kolkata), Ved Gupta (JNU, Delhi), Vijay Kodiyalam and V.S. Sunder (both from IMSc).

Interested participants should send an email with a three line description of their level of preparedness (including details of what portions of what books on Functional Analysis they have studied) before November 10th to *sunder@imsc.res.in*