

Indian Statistical Institute



Platinum Jubilee Lecture Series

Indian Statistical Institute is pleased to announce that the first set of lectures in the Platinum Jubilee Lecture Series will be delivered by

Professor Boris Tsirelson

Department of Mathematics, Tel Aviv University

Tel Aviv, Israel

at

**Indian Statistical Institute
Bangalore Centre**

on

1st October 2007

Lecture 1

Date : **October 1, 2007 (Monday)**
Time : **11.30 A.M.**
Title : **Exotic Product Systems from Probability Theory**

Abstract: Arveson systems (that is, product systems of Hilbert spaces) are either classical (type I) or exotic (types II, III). Classical systems are completely classified by a single discrete parameter; in contrast, exotic systems are very diverse. Most examples arise from two sources: dilations of completely positive semigroups, and product systems of measure classes provided by probability theory. In the Gaussian case one can eliminate measures and obtain type III product systems by exponentiating sum systems.

Lecture 2

Date : **October 1, 2007 (Monday)**
Time : **3.00 P.M.**
Title : **Automorphisms of Type II Arveson Systems**

Abstract: Automorphisms of classical (that is, type I) Arveson systems are a Lie group (described by Arveson). For the index 1 system they are basically the motions (shifts and rotations) of the complex plane. Automorphisms of type III systems are still mysterious. For type II, some (scanty) information is available. Restricting all automorphisms to the classical part we get a subgroup of motions. Sometimes the subgroup contains all shifts but no rotations. Sometimes it contains shifts in one direction only (and no rotations), thus, is not transitive.

Both lectures will be held in the Auditorium.

All are welcome.