Theoretical Statistics and Mathematics Unit

Indian Statistical Institute

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SEMINAR

Date: July 22, 2026
Time: 03:30 PM

VENUE:
L-Infinity, 5th Floor, A.N. Kolmogorov Bhavan, ISI Kolkata

SPEAKER:

Suchetana Samadder

Stat-Math Unit, ISI Kolkata

TITLE:

Symmetry given by Discrete Quantum Groups

ABSTRACT:

In this talk, we introduce and give an overview of the work done so far to understand discrete quantum group (DQG) symmetry of unital C^*-algebras and tracial von Neumann algebra $(\mathcal{A}, \tau)$ both from the perspective of coaction of discrete quantum groups and through the lens of category theory via injective action of unitary tensor categories on the bimodule category of von Neumann algebras. In particular, we formulate a notion of a discrete quantum group of outer automorphisms of a tracial von Neumann algebra, $(\mathcal{A}, \tau)$, using the notion of the Normalizer category of a C^*-tensor category, and also explicitly compute it for a few examples. Besides that, we also discuss about certain sufficient conditions under which the conjugate $(U^c, \overline{\mathcal{H}_U})$ of a unitary element $(U, \mathcal{H}_U)$ remains unitary and state a few results obtained in that respect. This is based on a joint work with my supervisor Professor Debashish Goswami.

ALL ARE CORDIALLY INVITED

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