INDIAN STATISTICAL INSTITUTE

Theoretical Statistics and Mathematics Unit, Kolkata

LECTURE

Date: January 26, 2024
Time: 04:15 PM

VENUE:

L-infinity

(5th Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

Live-streaming link: https://www.youtube.com/@csscisikolkata5034/streams

TITLE:

Geometric spaces at finite resolution: operator systems

SPEAKER:

Walter van Suijlekom

Radboud University, Nijmegen

ABSTRACT:

We extend the framework of noncommutative geometry in order to deal with two types of approximations of metric spaces. On the one hand, we consider spectral truncations of geometric spaces, while on the other hand, we consider metric spaces up to finite resolution. In our approach, the traditional role played by C*-algebras is taken over by so-called operator systems. Essentially, this is the minimal structure required on a space of operators to be able to speak of positive elements, states, pure states, etc. We illustrate our methods in concrete examples obtained by spectral truncations of the circle and of metric spaces up to finite resolution.

ALL ARE CORDIALLY INVITED