Theoretical Statistics and Mathematics Unit
Indian Statistical Institute
203 B.T. Road, Kolkata-700108

MONDAY COLLOQUIUM

Date: November 02, 2026 **Time:** 04:15 P.M.

Venue: L-infinity, Stat-Math Unit (5th Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

Bernard Bercu
University of Bordeaux, France

TITLE:

A martingale approach for the Ewens-Pitman process

ABSTRACT:

The Ewens-Pitman process refers to a distribution for random partitions of [n]={1,...,n}, parameterized by a pair of parameters alpha in [0,1[and theta>-alpha, where the special case alpha=0 corresponds to the Ewens model in population genetics. It is also well-known as the Chinese restaurant process. The large n asymptotic properties of the Ewens–Pitman process have been the subject of numerous studies.

In this talk, we make use of a martingale approach to develop a unified and comprehensive treatment of the large n asymptotic behaviours of the number of partition sets K_n and the number of partition subsets K_{r,n} of size r, providing alternative, and rigorous, proofs of the almost-sure convergences of K_n and K_{r,n} and covering the gap of Gaussian fluctuations. We shall also provide a new proof of the large deviation principle for K_n.

Finally, we investigate the asymptotic behavior of the self-normalized Ewens-Pitman process.
.

ALL ARE CORDIALLY INVITED

Click here for More Seminar Information

Stat-Math Unit, ISI Kolkata