INDIAN STATISTICAL INSTITUTE

203 B.T. Road, Kolkata-700108

Theoretical Statistics and Mathematics Unit

Monday Colloquium

Date: September 02, 2024 Time: 04:15 P.M.

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

Antar Bandyopadhyay

Indian Statistical Institute, Delhi

TITLE:

Interacting Urn Schemes

ABSTRACT:

In this talk, we will introduce some models of "interactive urns" with the goal of obtaining a limiting distribution which may be considered as examples of "self-organized criticality (SOC)". We will show that if the interactions are defined via a network (possibly infinite) which is a Directed Acyclic Graph (DAG) with no vertex having an infinite line of descent, then limit exists for fairly general class of replacements including the Pólya-type replacements. The limit may be described as a solution of a Dirichlet Problem on an appropriate space on measures. If time permits, we will also indicate what happens if infinite line of descent is present.

[This is a joint work with Deborshi Das]

ALL ARE CORDIALLY INVITED