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INTERNATIONAL
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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Seminar

Title : Critical dynamics in Complex Systems: From environment to markets

Speaker : Anirban Chakraborti, Jawaharlal Nehru University, New Delhi

Date : Monday, June 17, 2019

Time : 11:00 AM

Venue : Chern Lecture Hall, ICTS Campus, Bangalore

Abstract : Catastrophic or critical events, though rare, do occur and when they occur, they have devastating effects. The study of the critical dynamics in complex systems is always interesting yet challenging. First, we present a brief overview of the random matrix theory and correlated Wishart ensemble. Then, we use empirical data from environmental ozone layers and financial markets to study the evolution of cross-correlation structure patterns. Finally, we apply simple tools from random matrix theory to study the critical behavior in these dynamical systems.