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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Probability Seminar

Title : Maximum of log-correlated Gaussian fields

Speaker : Rishideep Roy, Indian Institute of Management Bangalore

Date : Wednesday, September 5, 2018

Time : 2:15 PM

Venue : Chern Lecture Hall, ICTS Campus, Bangalore

Abstract : Extremal process for log-correlated fields are of significant interest, in the backdrop of the works on random energy models, gaussian free fields, gaussian multiplicative chaos, Liouville quantum gravity etc. Our work is on a general class of Gaussian fields with logarithmic correlations, of which the discrete Gaussian free field in 2 dimension is a particular example. We will first conclude tightness for this field from the correlation structure. It also involves defining a general class of models with some assumptions on the covariance structure at microscopic and macroscopic levels which are good enough to ensure convergence of distribution of the maximum, after appropriate centering.