The Hong Kong University of Science and Technology

Joint Seminar



Department of ISOM & Department of MATH

Exact Simulation of Generalized Gamma Process and Its Application in Caron-Fox Random Graph

By

Dr. Junyi ZHANG

Department of Applied Mathematics The Hong Kong Polytechnic University

Date: 25 February, 2022 (Friday) Time: 11:00am – 12:00noon Venue: Zoom ID 920 0082 3966 (Passcode: STAT)

Abstract

Generalized Gamma process is a pure-jump subordinator with infinite activity, it can be used to construct a flexible two-parameter complete random measure, whose application has appeared in various areas. In this talk, we present an exact simulation algorithm to sample from the largest n jumps of a generalized Gamma process. The algorithm immediately implies a method to sample from the celebrated Poisson-Dirichlet distribution, we will illustrate this method with numerical examples. As an application of our algorithm, we review the construction of the Caron-Fox random graph and discuss a potential modification to its simulation algorithm.

All interested are welcome!

For details, please contact ISOM Department.