

April 15, 2024
2:00pm-3:00pm
KAP 414

Prof. Tomoyuki Ichiba
(UC Santa Barbara)

Smoothness of Directed Chain Stochastic Differential Equations and Its Applications

Abstract: On a filtered probability space for the space of continuous functions, we shall consider a system of stochastic equations called directed chain stochastic differential equations for a pair of stochastic processes whose marginal distributions in the path space are identical and their joint distribution is uniquely determined by the system of equations with the distributional constraints. In this talk we discuss the smoothness of the solutions of the equations under some regular conditions first, and then consider some relaxation of the conditions on the coefficients and the distributional constraints. We also introduce its applications of such systems in the stochastic filtering problem and in the generative adversarial network problem.

Zoom Link: USC Math Finance Colloquium

Join Zoom Meeting

<https://usc.zoom.us/j/94973619069?pwd=VnU5bVlMc1pzVTlEYUVaZUYyNSt6UT09>

Meeting ID: 949 7361 9069

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