ICTS Seminar

Title : Well-posedness, propagation of chaos and numerical schemes for McKean-Vlasov stochastic differential equations.

Speaker : Chaman Kumar (Indian Institute of Technology, Roorkee)

Date : Thursday, 28th January 2021

Time : 03:30 pm (IST)

Abstract : First, we establish well-posedness (using a fixed point argument) and propagation of chaos for the Mckean-Vlasov stochastic differential equations (MV-SDEs), possibly with super-linearly growing coefficients. Then, we propose two new explicit tamed schemes, namely the Euler-type scheme and the Milstein-type scheme for the interacting particle system connected with the MV-SDEs having super-linearly growing coefficients. Their rates of strong convergence are shown to be equal to 1/2 and 1 respectively. Finally, theoretical rates of convergence are demonstrated through numerical simulations.

Venue : Please click on the link to join the meeting.

https://zoom.us/j/91782816944?pwd=SHNMc2lKb1U2UzBMb1NVbU93c0ZPUT09
Meeting ID: 917 8281 6944

Passcode: 503063