WEI SUN, Concordia University

Periodic and stationary solutions of distribution-dependent SDEs

We investigate the periodic and stationary solutions of distribution-dependent stochastic differential equations. While generally, the semigroups associated with the equations are nonlinear, we show that the methods of weak convergence and Lyapunov functions can be combined to give efficient criteria for the existence of periodic and stationary solutions. Concrete examples are presented to illustrate the novel criteria. This talk is based on joint work with Ethan Wong.