INFINITE PARTICLE SYSTEMS WITH HARD CORE AND LONG RANGE INTERACTIONS

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A system of hard balls is represented by that of particles with hard core interaction. When each ball is undergoing Brownian motions, the system can be written by a solution of a Skorohod type equation, that is, a stochastic differential equations with local time. In this talk we consider the case that the number of particles is infinite, and the interaction between balls is long raged in addition to the hard core. We discuss the existence and uniqueness of solutions of infinite dimensional stochastic differential equation.