Lecture 2.3 (02:50-03:05)

Perturbed Bayesian Best Response in Continuum Games

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The notion of perturbed Bayesian best response dynamic for continuum strategy Bayesian population games is introduced. Fundamental properties of the dynamic such as existence of perturbed equilibrium, convergence of the perturbed equilibrium to the Bayesian equilibrium of the underlying game, as well as existence, uniqueness and continuity of solutions from arbitrary initial conditions is established. As applications to the theory, convergence of solutions to the perturbed equilibria is shown to hold for two classes of games, namely, Bayesian potential games and Bayesian negative semidefinite games.

Joint work with Souvik Roy (Applied Statistics Unit, ISI Kolkata).