

Analysis and Applied Mathematics Seminar

Some existence results for mean field games

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Abstract: When considering N-player differential games, making the approximation that there are instead infinitely many agents leads to the mean field games system of PDEs. This system has two unknowns, the probability distribution of the players, and the value function being optimized by a representative agent. One of these satisfies a forward parabolic equation and the other satisfies a backward parabolic equation. The forward parabolic equations comes with initial data while terminal data (at a fixed time $T > 0$) is specified for the backward parabolic equation. We will describe some existence results for this coupled forward-backward system, including for a specific system which has been given as a model of household wealth.

Monday, March 16 at 4:00 PM in 636 SEO