

Conferință Lunară

Some results in stability and stochastic control problems

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Abstract: A selection of my results in stability and control problems is presented. Firstly some results on absolute stability of nonlinear control systems are presented. Then I present some results concerning mean-square exponential stability and properties of Lyapunov type operators for stationary Markovian systems, general linear jump Markovian systems and general time-varying linear stochastic systems subjected both to multiplicative white noise and to jump Markovian perturbations. The last part of the lecture deals with the Stochastic Bounded Real Lemma and H_∞ stochastic control problem for stochastic differential systems, jump Markovian systems and general time-invariant systems subjected both to multiplicative white noise and to Markovian switching.