

Exponential input-to-state stability of composite stochastic systems

ABSTRACT

Sufficient conditions for the exponential input-to-state stability in probability in r th mean and for the almost sure exponential input-to-state stability in probability of a composite stochastic system are established. Illustrating example is provided to validate our results.

Keyword: Composite stochastic control system; Control Lyapunov function; Exponential input-to-state stability in probability.