EXPONENTIAL STABILITY IN MEAN SQUARE OF A LARGE CLASS OF SINGULARLY PERTURBED STOCHASTIC LINEAR DIFFERENTIAL EQUATIONS [*]

Vasile Drăgan[†]   Ioan-Lucian Popa[‡]   Hiroaki Mukaidani[§]

Toader Morozan[¶]

Dedicated to Professor Mihail Megan
on the occasion of his 70th anniversary

Abstract

A stability problem for a class of large-scale singularly perturbed stochastic systems (SPSSs) with state-multiplicative white noise and Markovian jumping parameters is considered. Based on the linear evolution operator, an exponential stability in mean square is investigated.