ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

17. Control Theory and Optimization

1991 MS Classification: 39,49,60
Shaikhet, Leonid, Donetsk State University and Shaikhet, Gennadii, Donetsk State Academy of Management, Ukraine

Stability of stochastic difference equations with varying delays

By virtue of general method of Lyapunov functionals construction the sufficient conditions of asymptotic mean square stability for stochastic linear difference equations with varying delays, for example, $x_{i+1} = ax_i + bx_{i-k(i)} + \sigma x_{i-m(i)}\xi(i)$, are obtained.

Reference: V. Kolmanovskii, and L. Shaikhet, General method of Lyapunov functionals construction for stability investigation of stochastic difference equations, WSSIAA, *Dynamic Systems and Applications*, **4**(1995), 397-439.