GENERALIZED PROJECTED CONTINUOUS-TIME LYAPUNOV EQUATION

A. Aasaraai and S. Khaleghizadeh

Abstract

It is worth mentioning that this paper concerns describing an iterative method for the generalized projected Lyapunov equation. Moreover, Krylov subspace method has been employed in the iterative method in spite of the fact that generalized Lyapunov equation in positive systems can viably be converted into standard Lyapunov equation. Furthermore, it has been found that an $n \times n$ Lyapunov matrix equation is equivalent to a standard linear system with n^2 unknowns and requires $o(n^2)$ flops. To enclose, it is necessary to state that reducing the given requirement to $o(n)$ be a possible phenomenon, as well.