Asymptotic Behavior and Stability of Nonautonomous Linear Differential Equations with Kirchhoff Coefficients

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Abstract

In this talk, we consider nonautonomous linear ordinary differential equations with Kirchhoff coefficients. We give sufficient conditions for the global asymptotic stability of the solutions. Under appropriate additional assumptions, we give an asymptotic description of the solutions in terms of the Perron vectors of the coefficient matrices. This is a joint work with Professors Josef Diblík (Brno University of Technology, Czech Republic) and Gábor Szederkényi (Pázmány Péter Catholic University and HUN–REN Institute for Computer Science and Control, Hungary).