



Exponential Stability of Linear Time-Invariant Systems on Time Scales

T.S. Doan, A. Kalauch and S. Siegmund*

*Department of Mathematics, Dresden University of Technology
01069 Dresden, Germany*

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Abstract: Several notions of exponential stability of linear time-invariant systems on arbitrary time scales are discussed. We establish a necessary and sufficient condition for the existence of uniform exponential stability. Moreover, we characterize the uniform exponential stability of a system by the spectrum of its matrix. In general, exponential stability of a system can not be characterized by the spectrum of its matrix.

Keywords: *time scale; linear dynamic equation; exponential stability; uniform exponential stability.*

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