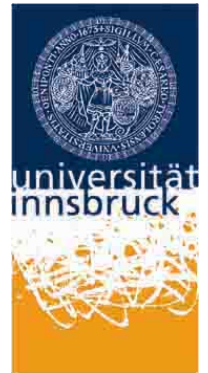




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MATHEMATIKKOLLOQUIUM

Das Institut für Mathematik lädt zu folgendem Vortrag ein:

Prof. Vu Hoang Linh

Vietnam National University - Hanoi

Spectral intervals of linear differential-algebraic equations and their numerical approximation

In this talk, theoretical and numerical aspects of the spectral analysis for linear time-varying differential-algebraic equations (DAEs) are discussed. First, the theory of Lyapunov and Sacker-Sell spectral intervals is extended from ODEs to DAEs. The spectral intervals and their associated directions for DAEs are analysed via those of essential underlying ODEs, which can be constructed by using an arbitrary smooth basis of the DAE solution subspace. Based on this theoretical background, efficient numerical methods based on smooth decompositions such as QR and SVD are proposed for approximating the spectral intervals and their associated leading directions. Numerical experiments are given for illustration.

Zeit: Freitag, den 31. August 2012 um 11:00 Uhr

Ort: Bauingenieur-Gebäude, Technikerstraße 13, B 609

Gäste sind herzlich willkommen!

Alexander Ostermann