



Einladung zum Oberseminar Dynamische Systeme und Kontrolltheorie

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Regularity properties the joint spectral radius

This talk is based on joint work with Jeremias Epperlein.

In 1960 Rota and Strang defined the joint spectral radius of a finite set of matrices as the maximal exponential growth rate that can be attained by arbitrary products from the set. This quantity has found various surprising results in problems arising from graph theory, analysis and dynamical systems. Many authors have contributed to our understanding of the joint spectral radius but the theory is still far from complete. In this talk we will concentrate on regularity properties of the joint spectral radius:

It is already known that the joint spectral radius is locally Lipschitz continuous as a map from the irreducible, compact matrix sets. It is conjectured that it is indeed Hölder continuous on the set of compact matrix sets endowed with the Hausdorff metric. We will report on some progress for this question. For particular types of maps local Hölder continuity can be shown. We will also discuss Hölder continuity at every point and discuss some obstructions to a full proof of local Hölder continuity.

Ort: Mathematik Ost, Seminarraum SE40

Zeit: Freitag, 21.07.2023 14:15

Zu diesem Vortrag laden wir Sie herzlich ein.

gez. Sergey Dashkovskiy