

Im

Oberseminar Analysis

hält

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einen Vortrag zum Thema

Power iteration for matrices with power series entries

Abstract:

We prove the method of power iteration for matrices with at most finite entries from the Levi-Civita field \mathbb{C} under the assumption that there exists an eigenvalue with the strictly largest in absolute value complex part. In this case the weak convergence of a start vector to the eigenvector, that corresponds to the largest eigenvalue, is proven. Further, we prove that the Rayleigh quotient of the largest eigenvector also converges weakly to the corresponding eigenvalue. As a corollary, the same holds for matrices and polynomials over the Puiseux series field. In addition to that, we deliver an implementation of our method in Python.

This is a joint work with Ragon Ebker and Anna Muranova.

Datum: **Donnerstag, 18. Januar 2024**

Zeit: **15:15 Uhr**

Raum: **WIL C 129**

Kontakt: Prof. Dr. Ralph Chill

Alle Interessent:innen sind herzlich eingeladen.