

Institute for Applied Mathematics, Bonn University

Oberseminar Stochastik

Thursday, 27 April 2023, 16:30

Lipschitz-Saal (LWK 1.016)

Joscha Henheik

Institute of Science and Technology Austria

On eigenvector overlaps for random matrices

Given a large random matrix, how do its eigenvectors typically look like? In this two-part talk, we will first describe and explain a strong form of quantum unique ergodicity (QUE) and Gaussian fluctuations around QUE for deformed Hermitian Wigner matrices. Afterwards, in the second part, we will discuss an almost optimal lower bound on the so-called eigenvalue condition number (or eigenvector overlap) for deformed non-hermitian i.i.d. matrices, which measures the stability of its spectrum. This talk is based on joint work with Giorgio Cipolloni, László Erdős, Oleksii Kolupaiev, and Dominik Schröder.