

# AG Zufallsmatrizen

# Seminar

**Johannes Alt**  
University of Geneva

## Spectral radius of random matrices with independent entries

We consider random  $n \times n$  matrices  $X$  with independent and centered entries and a general variance profile. We show that the spectral radius of  $X$  converges with very high probability to the square root of the spectral radius of the variance matrix of  $X$  when  $n$  tends to infinity. We also establish the optimal rate of convergence, that is a new result even for general i.i.d. matrices beyond the explicitly solvable Gaussian cases. The main ingredient is the proof of the local inhomogeneous circular law [arXiv:1612.07776] at the spectral edge. This is joint work with László Erdős and Torben Krüger.

**Wednesday, 23.10.2019, 16:15 Uhr**  
**V3-201**