

Institute for Applied Mathematics, Bonn University

## Oberseminar Stochastik

Thursday, 18 April 2024, 16:30

Lipschitz-Saal (LWK 1.016)

**Mark Rudelson**

University of Michigan

## **A large deviation estimate for the rank of a random matrix.**

Consider an  $n$  by  $n$  random matrix with i.i.d. subgaussian entries. We prove an optimal estimate of probability that such a matrix has rank smaller than  $n - k$ , where  $k$  may depend on  $n$ . As a corollary of this result, we prove a conjecture of Feige and Lellouche related to quantitative group testing.