



**UNIVERSITÄT
BIELEFELD**



Faculty of Physics



Faculty of Mathematics



THE UNIVERSITY OF
MELBOURNE

Seminar

Bielefeld - Melbourne Random Matrices

Alice Guionnet

ENS Lyon

Spherical Integrals and rare events in Random Matrix Theory

Spherical integrals as the HCIZ integral can be thought as Fourier transforms in RMT, and their asymptotics useful to capture the probability of rare events in random matrix theory. In this talk, I will discuss how to study the asymptotics of the HCIZ integral and the rectangular spherical integral by studying large deviations for Dyson Brownian motion and how this can be used to study the probability that the spectral measure of the matrix $A+UBU^*$ takes an unexpected value. This talk is based on a old work with O. Zeitouni, and recent work with S. Belinschi and J. Huang as well as a work in progress with J. Huang.

Wednesday, 12 May 2021, 0900 hrs CEST

Zoom Konferenzschaltung— Please contact Anas Rahmann
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