



**UNIVERSITÄT
BIELEFELD**



Faculty of Physics



Faculty of Mathematics



THE UNIVERSITY OF
MELBOURNE

Seminar

Bielefeld - Melbourne Random Matrices

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Large deviations for the largest eigenvalues for some random matrix models

In random matrix theory, the question of large deviations of spectral quantities (that is: how does the probability that these quantities take atypical values decay?) remains mysterious outside of some specific models. However, recent advances on this question make use of HCIZ integrals (also known as spherical integrals) as proxy for the largest eigenvalues. In this talk I will expose how to determine the asymptotics of these spherical integrals when the rank is constant and I will explain how to use these integrals to estimate the large deviations of the largest eigenvalues. This talk is mainly based on two joint works with A. Guionnet and a joint work with F. Augeri and A. Guionnet.

Wednesday, 19 May 2021, 0900 hrs CEST

Zoom Konferenzschaltung— Please contact Anas Rahmann
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