



**UNIVERSITÄT
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Faculty of Physics



Faculty of Mathematics



THE UNIVERSITY OF
MELBOURNE

Seminar

Bielefeld - Melbourne Random Matrices

Maciej A. Nowak

Jagiellonian University, Kraków

Eikonal formulation of large dynamical random matrix models

The standard approach to dynamical random matrix models relies on the description of trajectories of eigenvalues. Using the analogy from optics, based on the duality between the Fermat principle (rays) and the Huygens principle (wavefronts), we formulate the Hamilton-Jacobi dynamics for large random matrix models, and we relate this dynamics to Voiculescu equation. The resulting formalism describes a broad class of random matrix models in a unified way, including normal (Hermitian or unitary) as well as strictly non-normal dynamics. HJ formalism applied to Brownian bridge dynamics allows one for calculations of the asymptotics of the Harish-Chandra-Itzykson-Zuber integrals.

Wednesday, 02 June 2021, 0900 hrs CEST

Zoom Konferenzschaltung— Please contact Gernot Akemann
(akemann@physik.uni-bielefeld.de) for details regarding access