



**UNIVERSITÄT
BIELEFELD**



Faculty of Physics



Faculty of Mathematics



THE UNIVERSITY OF
MELBOURNE

Seminar

Bielefeld - Melbourne Random Matrices

Ward Vleeshouwers

University of Amsterdam

Unitary matrix integrals, spectral form factors, and long range random walk models

Unitary matrix integrals over symmetric functions have a wide variety of applications, including quantum chaos, random processes, enumerative combinatorics, and number theory. In this talk, we derive various novel identities on such integrals, demonstrating universality of the spectral form factor for a broad class of matrix models. We then extend these results and apply them to correlation functions of long-range random walk models, leading to various surprising relations and dualities between them, as well convenient methods for their computation.

**Wednesday, 5 October 2022,
0900 hrs CEST**

Zoom Konferenzschaltung— Please contact Leslie Molag
(lmolag@math.uni-bielefeld.de) for details regarding access