



**UNIVERSITÄT
BIELEFELD**



Faculty of Physics



Faculty of Mathematics



THE UNIVERSITY OF
MELBOURNE

Seminar

Bielefeld - Melbourne Random Matrices

Martin Zirnbauer

Universität Köln

Color-Flavor Transformation Revisited

The "color-flavor transformation", conceived as a kind of generalized Hubbard-Stratonovich transformation, is a variant of the Wegner-Efetov supermatrix method for disordered electron systems. Tailored to quantum systems with disorder distributed according to the Haar measure of a compact Lie group of any classical type (A, B, C, or D), it has been applied to Dyson's Circular Ensembles, random-link network models, quantum chaotic graphs, disordered Floquet dynamics, and more. We review the method and, in particular, explore its limits of validity. We also sketch a new alternative method to treat models where the color-flavor transformation fails.

Wednesday, 01 December 2021, 0900 hrs CET

Zoom Conference Call— Please contact Mario Kieburg
(m.kieburg@unimelb.edu.au) for details regarding access