UNIVERSITÄT BIELEFELD

Faculty of Physics
Faculty of Mathematics

THE UNIVERSITY OF MELBOURNE

Seminar

Bielefeld - Melbourne Random Matrices

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Fluctuation around the circular law for non-Hermitian i.i.d. random matrices

We consider a large non-Hermitian i.i.d. matrix X with real or complex entries and show that the linear statistics of the eigenvalues are asymptotically Gaussian for test function having 2+\epsilon derivatives. Previously this result was known only for the Ginibre ensemble where explicit formulas for the correlation functions are available; our result holds for general distribution of the matrix entries. The proof relies on two main novel ingredients: (i) local law for product of resolvents of the Hermitisation of X at two different spectral parameters, (ii) coupling of several weakly dependent Dyson Brownian motions.

Wednesday, 22 July 2020, 0900 hrs CEST

Zoom Konferenzschaltung— Please contact Anas Rahmann (anas.rahman@unimelb.edu.au) for details regarding access

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