



Mathematics and CS Seminar

Overlaps between eigenvectors of non-Hermitian random matrices

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Right and left eigenvectors of non-Hermitian matrices form a bi-orthogonal system to which one can associate homogeneous quantities known as overlaps. The matrix of overlaps quantifies the stability of the spectrum; for instance, it characterizes the joint eigenvalues increments under Dyson-type dynamics. Overlaps first appeared in the physics literature: Chalker and Mehlig calculated their conditional expectation for complex Ginibre matrices (1998). For the same model, we extend their results by deriving the distribution of the overlaps and their correlations (joint work with P. Bourgade). Similar results have been obtained in other integrable settings, namely quaternionic Gaussian matrices, as well as matrices from the spherical and truncated unitary ensembles.

Tuesday, October 6, 2020 05:30pm - 06:15pm

IST Austria Campus TU Wien - EI 3 Sahulka HS, Gußhausstraße 25-29 (2nd floor)



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