Seminar/Talk

Bounds on the Norm of Wigner-type Random Matrices

Peter Mühlbacher
IST Austria

Host: Laszlo Erdös

We consider a Wigner-type ensemble, i.e. large hermitian $N\times N$ random matrices $H=H^*$ with centered independent entries and with a general matrix of variances $S_xy=\mathbb E|H_xy|^2$. The norm of H is asymptotically given by the maximum of the support of the self-consistent density of states. We establish a bound on this maximum in terms of norms of powers of S that substantially improves the earlier bound $2\| S\|^1/2_\infty$. The key element of the proof is an effective Markov chain approximation for the contributions of the weighted Dyck paths appearing in the iterative solution of the corresponding Dyson equation.

Tuesday, January 23, 2018 04:00pm - 06:00pm
Big Seminar room Ground floor / Office Bldg West (I21.EG.101)

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.