

---

**PAUL BOURGADE**, Cambridge University and Institute for Advanced Study  
*Quantum unique ergodicity for generalized Wigner matrices*

For large generalized Wigner matrices, we prove a probabilistic version of quantum unique ergodicity at any scale, and gaussianity of the eigenvectors entries. The proof relies on analyzing the effect of the Dyson Brownian motion on eigenstates. Relaxation to equilibrium of the eigenvectors is related to a new multi-particle random walk in a random environment, the eigenvector moment flow. This is joint work with H.T. Yau.