Jesse Thorner* (jthorner@stanford.edu). Mass equidistribution on average.

Let \( f \) traverse the self-dual Hecke-Maass forms of squarefree level \( N \) and Laplace eigenvalue \( \lambda \) as \( N \lambda \to \infty \). We prove that for 100% of such forms \( f \), the push-forward of the \( L^2 \) mass of \( f \) to the modular curve \( X_0(1) \) of level 1 equidistributes with respect to the uniform hyperbolic measure on \( X_0(1) \) with a power-saving rate of convergence in the hybrid \( \lambda \) and \( N \) aspects. This builds on the works of Soundararajan and Nelson on the quantum unique ergodicity conjecture. The key new input is a zero-density estimate for Rankin-Selberg \( L \)-functions that extends prior work of Kowalski and Michel. This is joint work with Asif Zaman. (Received October 17, 2018)