LOG-SCALE EQUIDISTRIBUTION OF ZEROS OF QUANTUM ERGODIC EIGENSECTIONS

ROBERT CHANG

Let $(L, h) \to (M, \omega)$ be a prequantum line bundle over a Kähler manifold. A symplectic map on M may be quantized as a sequence of unitary Toeplitz operators acting on the spaces of holomorphic sections of L^N assuming certain quantizability conditions are satisfied. In a joint work with Steve Zelditch, we show that if χ satisfies additional dynamical assumptions, then for a density one subsequence of eigensections of the quantization, the masses and zeros are asymptotically equidistributed in balls are radii $|\log N|^{-\gamma}$, where $N \to \infty$ is the degree of the line bundle and $\gamma > 0$ is a constant independent of N.