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Quantum variance restriction problem for holomorphic Hecke cusp forms

In this talk we explore a distribution result for holomorphic Hecke cusp forms on the vertical geodesic. More precisely, we show how to evaluate the quantum variance of holomorphic Hecke cusp forms on the vertical geodesic for smooth, compactly supported test functions. The variance is related to an averaged shifted-convolution problem that we evaluate asymptotically. We encounter an off-diagonal term that matches exactly with a certain diagonal term, a feature reminiscent of moments of L-functions.