Quantum unique ergodicity on locally symmetric spaces: the degenerate lift
Lior Silberman

Abstract. Given a measure $\bar{\mu}_\infty$ on a locally symmetric space $Y = \Gamma \backslash G/K$, obtained as a weak-* limit of probability measures associated to eigenfunctions of the ring of invariant differential operators, we construct a measure $\bar{\mu}_\infty$ on the homogeneous space $X = \Gamma \backslash G$ which lifts $\bar{\mu}_\infty$ and which is invariant by a connected subgroup $A_1 \subset A$ of positive dimension, where $G = NAK$ is an Iwasawa decomposition. If the functions are, in addition, eigenfunctions of the Hecke operators, then $\bar{\mu}_\infty$ is also the limit of measures associated to Hecke eigenfunctions on $X$. This generalizes results of the author with A. Venkatesh in the case where the spectral parameters stay away from the walls of the Weyl chamber.