September 24: Akshay Venkatesh (MIT), "Microlocal lifts for locally symmetric spaces."

Let M be a Riemannian manifold. An old construction (the microlocal lift) due to Schnirelman, Colin de Verdiere and Zelditch, starts with a measure arising from a classical limit of eigenfunctions (on M) and lifts it to a measure on the unit tangent bundle which is invariant by geodesic flow.

I will describe an "equivariant" version of this result in the case where M is a locally symmetric space. The construction uses only some basic representation theory of the group (spherical representations, Harish–Chandra homomorphism).

I'll discuss applications to the "quantum unique ergodicity" conjecture of Rudnick-Sarnak. Joint work with L. Silberman.