Speaker: Maksym Radziwill

Title: Automorphic approaches to the mixing conjecture of Michel-Venkatesh

Abstract: I will discuss joint work with Blomer and Brumley on an automorphic approach to the mixing conjecture of Michel-Venkatesh.

Specifically, we prove a conjecture of MichelVenkatesh on joinings of distinct Linnik problems, in the setting of simultaneous quaternionic embeddings of imaginary quadratic fields having sufficiently many small split primes. This splitting condition is expected to hold for all discriminants, and is known to hold unconditionally for all but $\mathcal{O}((\log\log X)^{1+o(1)})$ discriminants up to X.

We also treat a non-equivariant form of this conjecture proposed by Aka-Einsiedler-Shapira, which in particular applies to the classical Gauss construction joining Linnik points on the sphere with CM points on the modular surface.