

November 27: Lam Pham (Brandeis), *Unitary representations of discrete Zariski dense subgroups of Lie groups*

Lattices in semisimple Lie groups inherit several properties from the ambient Lie group. One such property is Kazhdan's Property (T)—the trivial representation is an isolated point in the unitary dual. On the other hand, given a linear group over a finite field with p elements, it is in general very hard to obtain results which are uniform over p . In this talk, I will introduce the relevant notions of spectral gaps and explain the current state of the art regarding “super-strong approximation” for algebraic groups, present related problems regarding thin groups and connections to the Tits alternative and the Hausdorff-Banach-Tarski paradox.