Local spectral gap for translation actions

by
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Abstract

This talk will be devoted to the local spectral gap property for translation actions on locally compact groups $G$. I will present two results in the case when $G$ is (1) a connected simple Lie group, or (2) the group of isometries of the Euclidean space $\mathbb{R}^n$. I will also discuss applications of local spectral gap to strong ergodicity, orbit equivalence rigidity and the Banach-Ruziewicz problem. This is based on joint works with Remi Boutonnet and Alireza Salehi-Golsefidy.