Badea, Catalin; Grivaux, Sophie
Kazhdan sets in groups and equidistribution properties. (English) Zbl 1369.22004

A unitary representation of a topological group $G$ on a Hilbert space $H$ is a group morphism from $G$ into the group $U(H)$ of all unitary operators on $H$ which is strongly continuous. A subset $Q$ of a topological group $G$ is called a Kazhdan set in $G$ if there exists an $\epsilon > 0$ such that the following property holds true: any unitary representation $\pi$ of $G$ on a complex Hilbert space $H$ with a $(Q, \epsilon)$-invariant vector has a non-zero $G$-invariant vector.

In the paper under review, the aim of the authors is to identify and study Kazhdan sets in topological groups.

Reviewer: Ömer Gök (Istanbul)

MSC:
22D10 Unitary representations of locally compact groups
22D40 Ergodic theory on groups
37A15 General groups of measure-preserving transformations and dynamical systems
43A07 Means on groups, semigroups, etc.; amenable groups
46M05 Tensor products in functional analysis

Keywords:
Kazhdan sets; Kazhdan pairs; property (T); unitary representation; weakly missing representations

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