

# Folner nets for semidirect products of locally compact groups

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## **Abstract**

Abstract: Let  $G$  be a locally compact group. A Folner net is a net of subsets of  $G$  such that the elements of the net eventually satisfy the Folner condition for each compact set and positive epsilon. The existence of a Folner net on  $G$  is equivalent to  $G$  being amenable, but constructing these nets can be difficult. I will present two methods for combining two Folner nets for two groups into a Folner net for the semidirect product of the groups.

Additionally I will discuss similar concepts defined on discrete semigroups, and present a necessary condition for a semidirect product of semigroups to be amenable.