

Stable functions and Folner's Theorem

Gabriel Conant

Universty of Illinois at Chicago

A 1954 result of Folner says that if A is a set of integers with positive upper Banach density, then the difference set $A-A$ almost contains a identity neighborhood in the Bohr topology on $\mathbb{Z}$. This result was generalized to countable amenable groups by Bergelson, Beiglbock, and Fish in 2010. In this talk, I will sketch a new proof of Folner's Theorem for arbitrary amenable groups, which uses ideas from local stable group theory in continuous logic.

In Special Session 27 on Pure and Applied Model Theory at the Mathematical Congress of the Americas 2025.