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"Entropy, orbit equivalence, and sparse connectivity"

## Abstract:

Beginning with the pioneering work of Zimmer in the 1970s on the ergodic theory of Lie groups and their lattices, Kazhdan's property (T) has played a fundamental role in the study of rigidity for group actions on both probability spaces and smooth manifolds. Work of Popa and others over the last fifteen years has revealed, however, that measure rigidity is less tied to property (T) per se than to various expressions of anti-freeness or anti-treeability. I will discuss some joint work with Hanfeng Li on entropy rigidity for group actions in which a tantalizingly similar picture seems to be evolving, only now within a different regime in which anti-freeness should be understood in a less measure-theoretic and more topological way, as captured in the concept of sparse connectivity.