Local weak-\(*\) convergence and the entropy of algebraic actions

by
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Abstract

I will discuss the entropy of probability measure-preserving actions of sofic groups, due to Bowen and Kerr-Li. I will focus on the case when the action is by automorphisms of a compact metrizable group (these are called algebraic actions). I will give an abstract criterion, in terms of measures on model spaces, which guarantees that the measure-theoretic entropy and topological entropy agree. Some of the techniques required involve ultraproducts of von Neumann algebras and other metric spaces. Knowledge of sofic groups/sofic entropy is not assumed.