

Non-proper actions and C^* -algebras with bounded trace

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Abstract

Let G be a locally compact group acting freely and continuously on a space X . There are lovely characterizations of many representation-theoretic properties of the associated C^* -algebra $C_0(X) \rtimes G$ in terms of the action of G on X . In particular, the action of G on X is proper if and only if $C_0(X) \rtimes G$ has continuous trace. I will use examples to explain proper actions and continuous-trace C^* -algebras, and discuss how to quantify the failure of an action to be proper in $C_0(X) \rtimes G$. This is joint work with Robert Archbold from the University of Aberdeen.