The stability properties of strong invariant approximation property

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Abstract

Let G be a countable exact discrete group. G has the strong invariant approximation property(SIAP) if and only if $C^*{}_u(G, S)^G = C^*{}_\lambda(G) \otimes S$ for any Hilbert space H and closed subspace $S \subseteq H$. We shall use results of Haagerup and Kraus on the approximation property (AP) to investigate some permanence properties of the SIAP for discrete groups. This can be done most efficiently for exact groups. In this paper we describe that the stability properties of the SIAP property pass to semi direct products, and extensions for discrete exact groups.

Author keywords

Invariant approximation property; Strong invariant approximation property; Uniform Roe algebras