

1056-47-1754

Julian Michael Buck* (jbuck1@uoregon.edu), 2250 Patterson Street unit 194, Eugene, OR 97405. *Crossed Products by Automorphisms with the Tracial Quasi-Rokhlin Property.*

Crossed product constructions of C^* -algebras associated to minimal topological dynamics have been an area of intense study in recent years. We introduce a new property for automorphisms of a C^* -algebra, the tracial quasi-Rokhlin property, which is related to the various Rokhlin properties that have already appeared in the literature. We show that the crossed product C^* -algebras by certain automorphisms with this property can have good structure properties. In particular, we consider the case where the automorphism is for the algebra $C(X,A)$, the continuous functions from some compact metric space to a C^* -algebra A . It is shown that under suitable conditions on the space X (what we have termed the dynamic comparison property), then an automorphism of $C(X,A)$ which acts minimally on $C(X)$ has the tracial quasi-Rokhlin property (in particular, this property applies to the well-known case of a minimal homeomorphism acting on $C(X)$). It will follow that the crossed products of $C(X,A)$ by such automorphisms have good structure properties, which partly generalizes the situation for $C(X)$. (Received September 22, 2009)