

1014-46-677

Shukhrat M. Usmanov* (Shukhrat.Usmanov@ndsu.edu), Department of Mathematics, NDSU, P.O.Box 5075, Fargo, ND 58105-5075. *A general Connes-Kakutani-Rokhlin theorem*. Preliminary report.

A famous method of decomposition of transformations, known as Kakutani-Rokhlin Lemma, has proven to be a very important tool in various constructions in ergodic theory as well as in transferring properties from one transformation to another. It was proven independently by S.Kakutani(1943) and V.A.Rokhlin(1948). In 1975 A.Connes obtained a non-commutative generalization of Kakutani-Rokhlin Lemma for trace preserving aperiodic *-automorphisms of finite von Neumann algebra.

We are presenting the generalized version of the theorem for aperiodic *-automorphisms of finite von Neumann algebras. In our version the *-automorphisms need not to be trace preserving. (Received September 22, 2005)