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# Full Semigroups of Equivalence Relations and Soficity

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## Abstract

Measurable dynamical systems have been extensively studied in the last decades, due to the several relations with other areas of Mathematics (in particular Operator Algebras).

In this work we consider a discrete measure-preserving equivalence relation  $R$  on a standard measure space  $(X, \mu)$ . The triple  $(X, \mu, R)$  naturally gives rise to the full group  $[R]$  and the semigroup  $\llbracket R \rrbracket$  of  $R$ , and a well-known result of Dye (1963) states that, in the ergodic case,  $[R]$  completely determines  $R$  (up to isomorphism). In the first part of this work we study the ergodic case.

The second part of this work is concerned with the sofic property, which is a weak notion of approximability by finite structures. The present work was supported by CAPES, Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil.

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