

1154-03-54

Alexander S Kechris* (kechris@caltech.edu), Department of Mathematics, California Institute of Technology, Pasadena, CA 91125. *Countable Borel equivalence relations.*

The theory of definable equivalence relations has been a very active area of research in descriptive set theory during the last three decades. It serves as a foundation of a theory of complexity of classification problems in mathematics. Another source of motivation for the theory of definable equivalence relations comes from the study of group actions, in a descriptive, topological or measure-theoretic context, where one naturally studies the structure of the equivalence relation whose classes are the orbits of an action and the associated orbit space. An important part of this theory is concerned with the structure of countable Borel equivalence relations, i.e., those Borel equivalence relations all of whose classes are countable. It turns out that these are exactly the equivalence relations that are generated by Borel actions of countable discrete groups and this brings into this subject important connections with group theory, dynamical systems, and operator algebras. In this talk, I will give an introduction to some aspects of the theory of countable Borel equivalence relations. (Received September 02, 2019)