

Borel complexity and automorphisms of C^* -algebras

January 15th, 2014

Workshop on Set Theory

Mathematical Research Institute of Oberwolfach

I will present an overview of results concerning the Borel complexity of the relation of conjugacy of auto-homeomorphisms of compact metrizable spaces, and automorphisms of standard probability measure spaces. I will then consider the noncommutative versions of these problems, concerning the relation of conjugacy of automorphisms of separable C^* -algebras and separable tracial von Neumann algebras. I will conclude presenting some nonclassification results for automorphisms of separable McDuff II_1 factors and separable \mathcal{Z} -absorbing C^* -algebras obtained by David Kerr, Hanfeng Li, and Mikaël Pichot, and in joint work with David Kerr and Chris Phillips.