1014-37-1778   **Christian Rosendal*** (`rosendal@math.uiuc.edu`), Department of Mathematics, University of Illinois at Urbana-Champaign, 273 Altgeld Hall ¡C-382, 1409 W. Green St., Urbana, IL 61801. *Classifying Borel transformations in Kakutani style.*

A classical problem of dynamics and ergodic theory dating back to Poincaré is to classify one-parameter flows up to some suitable notion of time change. One of the main tools in the ergodic part of this theory is a reduction of this problem to the notion of Kakutani equivalence of measure preserving automorphisms. In recent decades there has been an attempt to transfer the problems and techniques of ergodic theory into a purely descriptive setting and we will complete answer the analogue of Poincaré questions for Borel measurable one-parameter flows. Secondly, we will present results on the much harder problem of classifying not necessarily injective Borel transformations up to a notion of Kakutani equivalence. This is a joint work with B.D. Miller. (Received October 13, 2005)