

**Meeting:** 1006, Lubbock, Texas, SS 15A, Special Session on Discrete Groups, Homogeneous Spaces, Rigidity

1006-37-89            **Alex Furman\*** (furman@math.uic.edu), Mathematics, Statistics and Computer Science, (m/c 249), 851 S. Morgan Str, Chicago, IL 60607. *Measurable rigidity for group actions on infinite volume homogeneous spaces.*

Let  $G$  be semi-simple group,  $H < G$  a unimodular subgroup s.t.  $X = G/H$  carries an infinite  $G$ -invariant measure  $m$ . Given an abstract group  $\Gamma$  and an embedding  $\Gamma \rightarrow G$  we consider the action  $(X, m, \Gamma)$  from the measurable point of view: studying measurable centralizers, quotients, isomorphism problem and classifying joinings. It turns out that for a very wide class of situations such actions are measurably rigid - the only measurable centralizers, quotients, isomorphisms, joinings are algebraic and can be explicitly described. First results in this direction were obtained by Y. Shalom and T. Steger using unitary representation techniques. We shall present a completely different purely dynamical approach. (Received February 08, 2005)