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**Jessica Dyer, Steven Hurder** and **Olga Lukina\*** (lukina@uic.edu), 322 SEO (M/C 249),  
University of Illinois at Chicago, 851 S. Morgan St., Chicago, IL 60607. *The discriminant invariant  
of Cantor group actions.*

In this talk, we consider minimal equicontinuous actions of non-abelian groups on Cantor sets. Such an action may be classified as regular, weakly regular or irregular by the properties of its automorphism group. We introduce an invariant, called the discriminant function, which assigns to each point of a Cantor set a profinite group. The cardinality of the group does not depend on the point and is related to the type of the action. We give new examples of minimal actions of the Heisenberg group for which the invariant is not trivial. (Received August 04, 2015)