1154-58-629 **Steven Hurder*** (hurder@uic.edu). *Classification of weak solenoids.*

In this talk, we address the classification problem for equicontinuous foliated spaces, from the viewpoint of classifying homogenous spaces over profinite groups, and the properties of the adjoint action of the isotropy group of the action. For homogeneous spaces over a Lie group, this classification is well-known. But for quotients of profinite groups, this is a subtle problem, which is tractable when the acting group G is nilpotent, but is far from understood otherwise. Various invariants of these actions have been discovered in a series of works with Olga Lukina. For example, the discriminant is a profinite group associated to a weak solenoid, which is a measure of the local non-homogeneity of the leaf space. The discriminant can be either a finite group, possibly trivial, or a Cantor group, in which case the algebraic properties of this group yield topological invariants of the weak solenoid. Another wild case is when the global monodromy admits non-Hausdorff elements for its action, such as happens for actions of weakly branch groups. The classification of wild actions presents many puzzles. (Received September 08, 2019)