Department of Mathematics and Computer Science

Friday, April 24, 2015, 4:10 pm

COLLOQUIUM TALK
Speaker: Konstantin Slutsky
UIC

Old Main 2231

Regular Cross Sections of Borel Flows

Abstract:

A Borel flow is an action of the Euclidean space on a standard Borel space. A cross-section of a Borel flow is a Borel set that intersects every orbit in a countable non empty set. We shall start with one-dimensional flows and shall be interested in constructing cross-sections with a prescribed set of possible distances between adjacent points within orbits. The main result here is that given any two rationally independent positive reals and a free Borel flow one can always find a cross-section with distances between adjacent points being only these two real numbers. If time permits, we shall then discuss partial generalizations of this result to higher dimensions. Regular cross sections is a powerful tool in the theory of Borel flows and as a concrete application of the above constructions we shall give a classification of Borel flows up to Lebesgue orbit equivalence, by which we understand an orbit equivalence which preserves the Lebesgue measure when restricted onto any orbit.

SNACKS IN FACULTY LOUNGE AT 3:30 PM.
EVERYONE WELCOME (EVEN IF YOU ARE UNABLE TO ATTEND THE TALK)