Special Lecture: Thursday, 22 October 2009, 10:30AM, Hill 525, Busch

Speaker: Professor Inessa Epstein

Title: Orbit equivalence and ergodic theory

Abstract: The study of orbit equivalence and rigidity has become an important meeting point for functional analysts, geometric groups theorists and descriptive set theorists. We consider actions of countable groups on standard probability spaces and consider two such actions to be orbit equivalent if their orbit equivalence relations can be measurably identified almost everywhere. Orbit equivalence has a strong connection to operator algebras, which was first exhibited by Murray and von Neumann in 1936. We discuss the history of the work problem concerning the number of orbit inequivalent actions of a given group and culminate the talk with an answer that provides a dichotomy.

Short biographical sketch:

Inessa Epstein is originally from Vitebsk, Belarus. She graduated from Rutgers University in 2000 with a bachelors degree in Mathematics and Computer Science. She then moved to UCLA to pursue graduate studies under Greg Hjorth, finishing in 2008. Her thesis "Some results on orbit inequivalent actions of non-amenable groups" was awarded the Sacks Prize for the best dissertation in the field of mathematical logic in 2008. Epstein currently holds a position as a National Science Foundation postdoctoral fellow at the California Institute of Technology.

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