Mathematics, Statistics, and Computer Science **@ UIC**

Logic Seminar

A backward ergodic theorem and its forward implications

Jenna Zomback (UIUC)

Abstract: A pointwise ergodic theorem for the action of a transformation T on a probability space equates the global property of ergodicity of the transformation to its pointwise combinatorics. Our main result is a backward (in the direction of T^{-1}) ergodic theorem for countable-to-one probability measure preserving (pmp) transformations T. We discuss various examples of such transformations, including the shift map on Markov chains, which yields a new (forward) pointwise ergodic theorem for pmp actions of finitely generated countable groups, as well as one for the (non-pmp) actions of free groups on their boundary. This is joint work with Anush Tserunyan.

Monday, October 26 at 4:00 PM in Zoom