

Beatrice Yormark Distinguished Lecture Series

Thursday,
January 11, 2024
@ 4:30 pm in 380Y

(Reception at 3:30pm in the fourth
floor lounge)



Svitlana Mayboroda
(ETH Zurich and University of Minnesota)

Dimension and structure of the harmonic measure

Abstract:

Harmonic measure is the probability that a Brownian traveler starting from the center of the domain exists through a particular portion of the boundary. It is a fundamental concept at the intersection of PDEs, probability, harmonic analysis, and geometric measure theory, and yet most questions pertaining to its dimension and structure remain open. We will discuss the state of the art and the recent results for the partially reflective Brownian motion, which, contrary to the classical case and to some predictions in physics literature, show absolute continuity of the corresponding harmonic measure with respect to the Hausdorff measure on the boundary.