Stanford University  
Departments of Mathematics and Statistics

PROBABILITY SEMINAR

4pm, Monday, October 9, 2017  
Sequoia Hall Room 200

Refreshments served at 3:30pm in the Lounge.

Speaker: Chikara Nakamura, Kyoto University, Japan

Title: The Cutoff Phenomenon for Lamplighter Chains on Fractals

Abstract:

The lamplighter graph of a graph $G$ is a graph equipped with lamps ($\{0, 1\}$) on each vertex of $G$. $G$ is called the underlying graph. A lamplighter random walk not only moves on the underlying graph but also switches a lamp randomly. For a finite Markov chain, we can consider the mixing time and the cutoff phenomenon. In this talk, we consider the case where the underlying graphs are fractals, and discuss the cutoff phenomenon for the lamplighter random walks. All necessary notions such as the cutoff phenomenon and fractals will be explained in the talk.

Based on joint work with Amir Dembo and Takashi Kumagai.