

ANALYSIS SEMINAR

Stochastic Horseshoes

by

Ami Radunskaya

Pomona College

ABSTRACT

In 1965 Stephen Smale described a mapping in the plane now called the “Smale horseshoe” in order to disprove one of his own conjectures. Since then, these dynamic horseshoes have become the hallmark of chaotic dynamical systems. More recently, much attention has been given to random dynamical systems, where a parameter in the deterministic system is replaced by a random variable.

In this talk we explore the dynamics of a random dynamical system in an effort to make connections between the deterministic and stochastic worlds. In particular, we find that the notion of a horseshoe persists in the context of random dynamical systems, and we discuss the implications. We will finish with some open problems.

Monday, February 20, 2012 at 3:00-4:00 pm

Davidson Lecture Hall, Claremont McKenna College

For more information contact Asuman G. Aksoy at aaksoy@cmc.edu