STEVENS Institute of Technology

Arthur E. Imperatore School of Sciences & Arts

Department of Mathematical Sciences

Seminar in Nonlinear Systems

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Newtonian Random Walks in 2D

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4:00 pm
Peirce 218

Abstract: Persistent, or Newtonian, random walks (RWs) are RWs whose transition probabilities depend both on the walker's position and incoming direction (the latter can be construed as the walker's velocity, whence the term 'Newtonian'). The environment of a RW is the collection of all transition probabilities at all points of the space. An environment is said *homogeneous* if it is translation invariant.

I will discuss the question of recurrence for persistent RWs in $\mathbb{Z}^2$ with homogeneous, random, and some special cases of inhomogenous environments.

Refreshments provided

For additional information contact Marco Lenci (201-216-5453) or Pavel Dubovski (201-216-5426).