



NIMBioS

National Institute for Mathematical
and Biological Synthesis



NIMBioS Interdisciplinary Seminar

Dr. Julia Earl
NIMBioS Postdoctoral Fellow

3:30 p.m.**, Tuesday, October 30, 2012

Hallam Auditorium, Room 206
Claxton Education Building, 1122 Volunteer Blvd.

“Animal behavior and ecosystems: Linking movement ecology to spatial subsidies”

Cross-ecosystem transfer of energy and nutrients (spatial subsidies) can greatly impact recipient ecosystems. These impacts can be positive, including ecosystem services, and negative, such as the transport of contaminants. Many subsidies are actively moved by animals, which regularly transfer nutrients within and among ecosystems. The movement ecology of these animals determines where and when active subsidies are deposited. In this talk, I will examine how different animal movement strategies (correlated random walks) and patterns of mortality risks (uniform, edge and gradient risks) alter the spatial extent and density of nutrient/energy subsidies (dead animals) and consumer subsidies (alive animals). These types of predictions will help us to identify scenarios where active subsidies are likely to have large impacts on recipient systems and subsequently function as important ecosystem services or contaminant vectors.

***Join us for refreshments at 3 p.m. in the 1st floor visitor breakroom.*

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The National Institute for Mathematical and Biological Synthesis (NIMBioS) brings together researchers from around the world to collaborate across disciplinary boundaries to investigate solutions to basic and applied problems in the life sciences. NIMBioS is sponsored by the National Science Foundation, the U.S. Department of Homeland Security, and the U.S. Department of Agriculture with additional support from The University of Tennessee, Knoxville.