

**Center for Fluid Mechanics, Division of Applied Mathematics
Fluids and Thermal Systems Group, School of Engineering
Joint Seminar Series**

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**Collective Dynamics of Active Matter: From Self-propelled Particles to Migrating
Cell Layers**

Bacterial suspensions, extracts of cytoskeletal filaments and motor proteins, and cell colonies are examples of assemblies of interacting self-driven units that form a new type of *active* soft matter with intriguing collective behavior. In this talk I will discuss the theoretical modeling of active systems focusing on the relation between structural properties and rheological response. Specific examples will include bacterial swarming and the collective migration of confluent layers of epithelial cells that have been shown to exhibit glassy dynamics at high density.

TUESDAY - SEPTEMBER 27, 2011

3:00 PM

Applied Mathematics Building

182 George Street

Room 110