

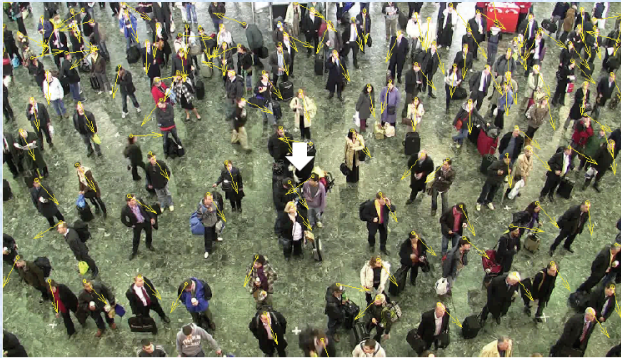
The Reese T. Prosser
Mathematics Lecture Series
Presents

From Democratic Consensus to Cannibalistic Hordes: The Principles of Collective Behavior

Tuesday, November 15, 2011

7:00 – 8:00 PM

**Filene Auditorium
Moore Hall**



Abstract:

Collective organization is everywhere, both around us and within us. Our brains are composed of billions of interconnected cells communicating with chemical and electrical signals. We are integrated in our own collective human society. Elsewhere in the natural world a flock of birds arcs and ripples while descending to roost, and a fish school convulses, as if it is a single entity, when attacked by a predator. How can animal groups move in unison? How does individual behavior produce group dynamics? Do animal groups function as a “collective mind”? From locust swarms to bird flocks, from consensus decision-making in fish and among humans, Couzin employs an integrated mathematical and experimental approach to investigate how, and why, coordinated collective behavior is so pervasive within the natural world.



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The Reese Prosser Memorial Lectures were inaugurated in 2002 by the Department of Mathematics at Dartmouth College to honor their long time colleague Reese Prosser. This lecture series, endowed by the late Nancy Prosser and her family, is intended to introduce the general public to mathematical research related to their daily lives.

Free and open to the public.