Waving Tails, Spiny Disks, and Sticky Situations: Explorations in Biological Fluid Dynamics

Lisa Fauci, Department of Mathematics, Tulane University

Phytoplankton floating in the ocean, sperm moving through the reproductive tract, and fish swimming in the sea all rely on an intricate interplay of forces. These are examples of how flexible structures interact with a surrounding fluid—a common theme in biological fluid dynamics. This lecture will explore how mathematical models and computational simulations are being used to study some intriguing biological systems.

March 11, 2015 / 7:00 p.m.

2-650 Moos Tower • 515 Delaware St. SE
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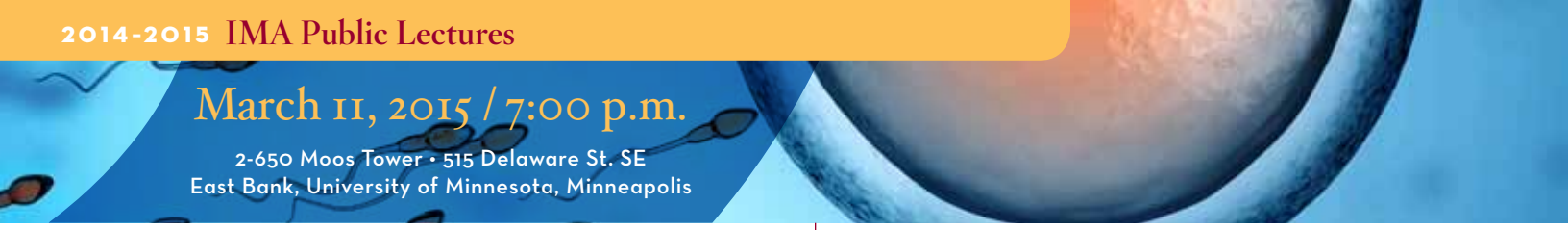

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Lisa Fauci holds a Ph.D. in math from New York University and is the Pendergraft Nola Lee Haynes Professor of Mathematics at Tulane University. Her research focuses on fluid dynamics, mathematical biology, and scientific computing. In particular, she uses methods from computational fluid dynamics to understand biological processes, such as sperm motility, the neuromechanics of locomotion, and phytoplankton dynamics in the ocean. She is a world-renowned speaker on the topic of biological fluid dynamics.

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