

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

TUESDAY – APRIL 9, 2013

4:00pm

Barus & Holley, Room 190

Dr. David Hu
Georgia Institute of Technology
Atlanta, GA

From Ant Rafts to Wet-dog Shakes: A Decade after Double-majoring in
Mathematics and Mechanical Engineering

Water is a paradox: it is essential to life, but in large amounts, brings certain death. In this presentation, we embark on a visual journey through the fascinating ways animals have evolved to cope with life on a watery planet. We use photography, high-speed and time-lapse film to visualize these animal adaptations at work across land, sea and air. The audience will learn how certain animals can walk on water, how others can build rafts with their own bodies, how flushing cockroaches down a toilet fails to kill them, how mosquitoes can still get to you in a rainstorm, and how dogs and other furry mammals dry 70% of their entire bodies within fractions of a second. We demonstrate how these natural adaptations have inspired a new generation of animal-like robots that can handle varied terrain, such as water surfaces, rainstorms and deserts.