

Date: February 20th

Time: 11:00 AM

Location: Ames 234

Speaker: Dr. Markus Hilpert
Department of Geography and Environmental Engineering
Johns Hopkins University

Title: "Modeling of Bacterial Chemotaxis"

Abstract

Many motile bacteria can sense certain chemicals dissolved in the liquid and respond to chemical concentration gradients by exhibiting less frequent tumbling and greater run lengths. This response is termed chemotaxis. I will present mathematical models that describe the movement of the bacteria at the cell and the population scale. I will also present a new numerical model for bacterial chemotaxis that is based upon lattice-Boltzmann methods