Statistics Seminar

Department of Mathematics and Statistics

DATE:	Thursday, April 18, 2024
TIME:	1:15pm – 2:15pm
LOCATION:	WH 100E
SPEAKER:	Zengyan Zhang, Binghamton University
TITLE:	Computational modeling of cell migration in microfluidic channel

Abstract

Cell migration plays an important role in various biological processes, such as tissue morphogenesis, wound healing and cancer metastasis, etc. The mechanisms underlying cellular motility involve generating protrusive patches on the moving interfaces and determining moving directions under the guidance of chemotaxis. in our work, we proposed a phase-field model coupled with a reaction-diffusion system to keep track of the morphology changes of the cell membrane and steer the cell by gradients of attractive chemicals. In this talk, I will introduce our phase-field model for the migration of cell through complex channels and some numerical simulation results will be elaborated.