The Department of Mathematical Sciences presents

Professor Yangjin Kim

University of Michigan – Dearborn

Thursday, November 5, 2009
4 – 5 pm
Room 316 Braunstein Hall

Glioma Invasion and Microenvironment: A Mathematical Model

Abstract:
Tumor proliferation depends on its microenvironment. We analyze the migration patterns of glioma cells (brain cancer cells) from the main tumor, and show that the various patterns observed in experiments can be obtained by a model's simulations, by choosing appropriate values for some of the parameters (chemotaxis, haptotaxis, and adhesion) of the PDE model. Furthermore, a multiscale model will be presented in order to better understand the interaction between a tumor and its environment at the cellular level.

***This is joint work with Avner Friedman (MBI), Sean Lawler, Michal O. Nowicki, and E. Antonio Chiocca (Oncological Neurosurgery) at the Ohio State University.**

Refreshments will be served at 3:30 pm in the Faculty & Graduate Student Lounge Room 840 of the Old Chemistry Building

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