

Applied Mathematics Seminar



Dr. Xiaoming Zheng

Mathematics – Central Michigan University

Friday, December 1 1-1:50pm

MAK A-2-155 or [via zoom](#) (request password from ortizron at gvsu dot edu)

A Darcy's law model of tumor growth

Abstract: This talk introduces a popular mathematical model to simulate tumor growth. It is based on the Darcy's law in porous medium. It assumes the tumor cells migrate in a porous tissue with holes and the pressure produced by cell proliferation and death creates the flow that pushes cells to move. The tumor cells rely on the nutrients from surrounding regions to proliferate and thus the tumor volume increases. We will focus on a one-dimensional model to derive some of its interesting mathematical properties. The material is accessible to undergraduates with Calculus knowledge.



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**Hosted by the Mathematics Department, GVSU