Applied Mathematics Seminar

Dr. Maggie Regan – GVSU Math

Friday, Oct. 24 1-1:50pm

MAK A-2-610 (PCS) or via zoom (request password from ortizron at gvsu dot edu)

Using homotopy continuation to solve parameterized polynomial systems in applications

Abstract: Many problems that arise in mathematics, science, and engineering can be formulated using a parameterized system of polynomials which must be solved for given instances of the parameters. In applications, some examples of how the parameters arise are as image points in computer vision, leg lengths in kinematics, and reaction rates in chemical reaction networks. Real solutions and their behavior over the real numbers based on the parameter values are those that provide meaningful information for these applications. One way to solve these systems is to use a common technique within numerical algebraic geometry called homotopy continuation. My talk will give background on homotopy continuation and parametrized polynomial systems. In addition, I will give examples from applications in computer vision, kinematics, and chemical reaction networks.

Applied Math Seminar- Pizza RSVP

More info: http://bit.ly/applied-math-seminar

**Hosted by the Mathematics Department, GVSU