

The Central Michigan University AMS Graduate Student Chapter presents

Resolution of Singularities

Karen Smith
University of Michigan



Algebraic varieties are geometric objects defined by polynomials - you have known many examples since high school, where you learned that a circle can be defined by a polynomial equation such as $x^2 + y^2 = 1$. Polynomials can define incredibly complicated shapes, such as a mechanical arm in medical software or Woody's arm in Toy Story, but yet they can be easily manipulated by hand or by computer. For this practical reason, algebraic geometry - the study of algebraic varieties and the equations that define them - is a central research area within modern mathematics. It is also one of the oldest and most beautiful. In this talk, I hope to share my love of the subject, which stems from the way the geometry and algebra interact, including some open problems and my favorite tools for attacking them.

Fri, January 25 at 2 pm

Pearce Hall 138

Karen Smith, the Keeler Professor of Mathematics at the University of Michigan, Ann Arbor, is one of the world's leading experts in Commutative Algebra and Algebraic Geometry. Among the many honors she has received are the Sloan Fellowship, a Fulbright award, an AWM Noether lectureship, an MAA Hedrick lectureship, and the Fellowship of AMS. Smith is also well-known for her textbook *An Invitation to Algebraic Geometry*.

