



Speaker: Jeff Madsen
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Monday, February 8, 2016

4:00 PM

229 Hayes-Healy Hall

Title: Parametrization and implicitization of projective plane curves

Abstract:

A curve in the projective plane is the vanishing locus of a homogeneous polynomial. We refer to this polynomial as the implicit equation of the curve. Sometimes, the curve may also be described parametrically by polynomial equations. In geometric modeling, both the implicit and parametric equations are important, so it is useful to be able to convert between the two descriptions of a curve. I will explain how this conversion can be done. Along the way, we'll encounter some of the major tools used in the study of projective plane curves, such as blowing up, Bezout's theorem, linear systems, and adjoint curves.