Queen's Algebraic Geometry
— Seminar —

THE TWO FACES OF THE TWISTED KUMMER SURFACE

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Abstract

In studying the Jacobian of a curve of genus 2 it is often helpful to consider its quotient by multiplication by -1. The resulting surface, known as the *Kummer surface* of the curve, can be embedded projectively either as a quartic surface in $\mathbb{P}^3$ or as the intersection of three quadrics in $\mathbb{P}^5$. In this talk, we will consider the quotient of a twist of the Jacobian by ± 1 and discuss two questions: first, how to find its embeddings in $\mathbb{P}^3$ and in $\mathbb{P}^5$; and second, how to show that it has no rational points. Surprisingly, these questions turn out to be closely connected.

Monday, October 22, 2007
4:30pm – 5:30pm
319 Jeffery Hall