

## **abstract**

JOINT IAS/PU NUMBER THEORY SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

---

We describe how to use Shioda-Inose structures on K3 surfaces to write down explicit equations for Hilbert modular surfaces, which parametrize principally polarized abelian surfaces with real multiplication by the ring of integers in  $\mathbb{Q}(\sqrt{D})$ . In joint work with Elkies, we have computed several of these (for fundamental discriminants less than 100), including some of general type. These techniques can be used to produce explicit examples of genus 2 curves with real multiplication, and modular forms with coefficients in a real quadratic field.