

“Nine-tenths of tactics are certain, and taught in books: but the irrational tenth is like the kingfisher flashing across the pool, and that is the test of generals.”

-T. E. Lawrence

The Trivial Notions Seminar  
Proudly Announces  
Irrationality of cubic threefolds

A talk by  
Phil Tynan

**Abstract**

Understanding the criteria for rationality has always been of great importance to algebraic geometers. In particular, the question of whether a seemingly weaker condition, such as unirationality, was sufficient, had long been pondered. In the case of curves, we know this to be true, and Castelnuovo’s theorem gives us this result for surfaces as well. The first, and in many ways simplest, counterexample is the cubic threefold. We give an overview of the proof by Clemens and Griffiths, from the paper “The Intermediate Jacobian of the Cubic Threefold,” and discuss related questions as well, time permitting.

Wednesday, October 22<sup>nd</sup>, at 1:00 pm  
Science Center 411