

The Trivial Notions Seminar  
Proudly Announces

Fundamental groups of projective varieties

A talk by  
Alexander Perry

**Abstract**

There are nontrivial restrictions on the topology of a complex projective variety. One of the most basic questions we can ask is: what can the fundamental group be? For arbitrary compact manifolds, the fundamental group can be any finitely presented group — in fact, every such group already arises as the fundamental group of a 4-manifold. In this talk, we will see that this is far from true for projective varieties. Most of the obstructions we will discuss come from basic topology and Hodge theory. We may also discuss fundamental groups of special classes of varieties, e.g. rationally connected varieties, and some positive characteristic examples.

Thursday April 11<sup>th</sup>, at 1:00 pm  
Science Center 310