Topology Seminar

Eoin Mackall

of The University of Maryland, College Park will be speaking on

Naive $\mathbb{A}^1$-homotopy equivalences and theorems of Whitehead and Zariski

on October 31 at 4:30 in
MIT Room 2-131

A naive $\mathbb{A}^1$-homotopy between morphisms f, g from a variety X to a variety Y is a cycle on $(X \times \mathbb{A}^1) \times Y$ whose support is finite and surjective over $X \times \mathbb{A}^1$ and whose fibers over 0 and 1 are the graphs of f and g respectively. Using this notion of naive $\mathbb{A}^1$-homotopy, one can define naive $\mathbb{A}^1$-homotopy equivalences of varieties. In this talk, we'll discuss how an analog of a theorem of Whitehead can be used to show that there are no nontrivial $\mathbb{A}^1$-homotopy equivalences between smooth projective varieties.

For information, write: `camkru@mit.edu`