You know, this place makes me wonder. Which would be worse—to live as a monster, or to die as a good man?

—Teddy Daniels in *Shutter Island*

THE TRIVIAL NOTIONS SEMINAR

An "easy" case of the Zariski dense orbit conjecture

a talk by

Sina Saleh

ABSTRACT

The Zariski dense orbit conjecture, originally formulated by Zhang, and later refined independently by Amerik-Campana and Medvedev-Scanlon, states that given a rational self-map Φ of a quasi-projective variety X defined over an algebraically closed field K, the following dichotomy holds: either there exists a point in $X(K)$ with a Zariski dense orbit under Φ, or Φ preserves a non-constant fibration. Amerik and Campana proved the conjecture in the case where K is an uncountable field. However, the case of a countable algebraically closed field is still open. In this talk, I will discuss the easier case of the conjecture where X is assumed to be an algebraic torus (or more generally any split semiabelian variety) and Φ is a group endomorphism composed with a translation. We will see some very interesting facts about split semiabelian varieties that help us prove the conjecture quite easily in this case.

Friday, November 18, 2022
at 11.50am
Science Center, Room 507