

# *Graduate Student Seminar*

Speaker: Perna Bihani

---

In recent decades model theory has had significant interactions with algebra and geometry, both in the form of applications to these areas as well as generalizations of some concepts from them in order to better understand structures. In particular, within the branch known as stability theory there has been a development of an "abstract algebraic geometry" that has contributed to the algebraic classification of models of theories.

I will begin with a brief introduction to basic model theory, highlight some key results in stability theory, and point out the ways in which groups tend to arise naturally in structures that are "rich enough". This will lead us to Zilber's Trichotomy, a conjecture stating that an uncountably categorical theory's model looks either like 1) a linear order, 2) a vector space over a division ring, or 3) an algebraically closed field.