Speaker: Bjorn Poonen

Title: Heuristics for boundedness of ranks of elliptic curves

Abstract: We present heuristics that suggest that there is a uniform upper bound on the rank of $E(\mathbb{Q})$ as E varies over all elliptic curves over $\mathbb{Q}$, and we will discuss what happens when $\mathbb{Q}$ is replaced by a global function field. This is joint work with Jennifer Park, John Voight, and Melanie Matchett Wood.

RTG Talk: Rational points on elliptic curves

If E is an elliptic curve over $\mathbb{Q}$, then the set $E(\mathbb{Q})$ of rational points forms an abelian group, and Mordell proved in 1922 that $E(\mathbb{Q})$ is finitely generated. I will explain some of the tools that are used to study this group, and some of the conjectures governing its behavior.