

Speaker: Michael Zieve

Title: A Uniform Boundedness Theorem for Polynomial Maps

Abstract: I will show that, for any $f(x) \in \mathbb{Q}[x]$, the function $\mathbb{Q} \rightarrow \mathbb{Q}$ given by $c \mapsto f(c)$ is at most six-to-one over all but finitely many rational numbers. I will also present an analogous result over an arbitrary algebraic number field, and discuss a conjecture which generalizes both these results and the theorems of Mazur and Merel on uniform boundedness of torsion on elliptic curves. This is joint work with Alex Carney and Ruthi Hortsch.

In the introductory talk, I will give a Galois-theoretic treatment of components of fibered products of morphisms of curves, and discuss ramification in this context.