Michael Zieve
University of Michigan
Functional equations in algebraic dynamics

In recent years, many results in algebraic dynamics have been proved by using the known solutions to certain classes of functional equations. I will present a new technique which makes it possible to solve many more classes of functional equations than before, including many functional equations involving rational functions rather than polynomials. I will also explain several dynamical consequences of these results, for instance to the problem of classifying endomorphisms of a variety over a field L which have an orbit containing infinitely many points defined over a subfield K of L.