Hilbert’s Nullstellensatz: A Generalization of The Fundamental Theorem of Algebra

Tuesday, April 7, 4:00 pm - 5:00 pm
Pearce Hall, Room 227

In high school, we were introduced to the notion that every non-constant polynomial of a single variable with real coefficients has at least one complex root. Thanks to Hilbert, we are able to generalize this idea to polynomials of several variables with coefficients from any algebraically closed field. In this talk, we will explore what the Nullstellansatz says, a slick way of proving the result, and look at some examples of how we can use the Nullstellansatz to our advantage.