



& GAMECOCK MATH CLUB

An Invitation to Algebraic Geometry

by Bailey Heath, USC Graduate Student



Bailey Heath

This talk will serve as an introduction to algebraic geometry, which, roughly speaking, is the study of zeros of multivariate polynomials. After introducing some of the key terminology and looking at some examples, we will discuss Hilbert's Nullstellensatz (German for "zero-locus-theorem"), one of the most foundational theorems in the subject. We will conclude by discussing a real-world application of algebraic geometry to robotics.

Bio: Bailey Heath is a fourth year PhD candidate in the mathematics department at USC, where he is researching algebraic geometry and number theory under the advisement of Dr. Alex Duncan. He is also a peer mentor in the math department and a member of the Carolina Judicial Council. Before coming to USC, Bailey earned a B.A. with a double major in math and psychology from Gettysburg College. Outside of academics, he is a big baseball nerd and enjoys listening to music.



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