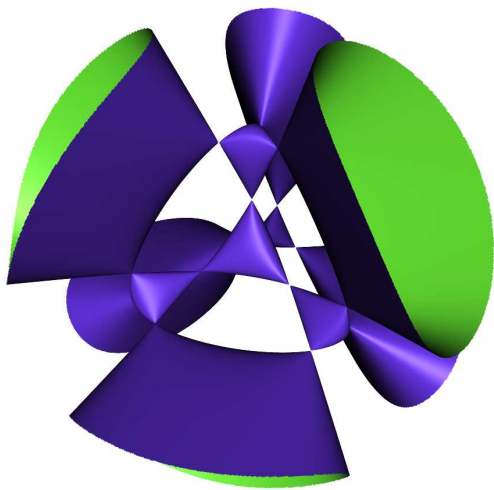


Why Solving Polynomials Is Hard And What We Can Do About It

Undergraduate Math Club
CORNELL UNIVERSITY



SPEAKER

Professor Brian Hwang

ABSTRACT

Polynomials are ubiquitous in mathematics, but while we learn many techniques to solve ones of low-degree in school, there's a good reason (aside from sheer tedium) as to why we don't just continue studying more and more elaborate methods for solving polynomials of higher and higher degree. For one, it turns out if there were some deterministic way to, say, find integer solutions to a general multivariate polynomial with integral coefficients, then we would essentially have an algorithm that could theoretically solve almost every problem in mathematics. Such an algorithm was proven not to exist, so we must restrict ourselves to particular settings, but for a certain class of polynomials (of arbitrarily large degree!), it turns out that we know the whole story.

APR 17 at 4:45pm

Malott 532 ★ Refreshments