

Algebra and Geometry Seminar

Speaker: Taylor Brysiewicz (University of Western Ontario)

Title: Trace Tests in Numerical Algebraic Geometry.

Abstract: At its core, the computational framework of numerical algebraic geometry involves computing floating point approximations of points on linear intersections of varieties. Symbolic techniques exist for certifying that our approximations indeed correspond to true solutions, whereas numerical trace tests establish the other direction: that every solution has been (approximately) computed. I will give an overview of the classical trace test and discuss joint work with Michael Burr (Clemson) on our extension to zero-dimensional, Bernstein-generic, polynomial systems: the sparse trace test.