

Tropical ideals, varieties, and schemes

Diane Maclagan
University of Warwick

Abstract:

A tropical ideal is a homogeneous ideal in the semiring of tropical polynomials with the property that each graded piece determines a valuated matroid on the monomials of that degree. I will discuss joint work with Felipe Rincon showing that the variety of a tropical ideal is the support of a polyhedral complex. This supports the proposal that a tropical subscheme of tropical projective space should be defined by a tropical ideal.