Abstract

Groebner bases arise in computational algebra as a method of performing polynomial long division in several variables, and are often used to study solutions to systems of polynomial equations. Groebner bases have been used in a multitude of applications spanning every STEM discipline and more, and can provide useful insight nearly anywhere systems of polynomial equations are found. This talk gives a self-contained introduction to Groebner bases, including general motivation and a variety of examples. If time permits, connections to Markov bases will also be discussed. No background in abstract algebra or computation will be assumed for this talk.

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