

ISU ALGEBRA SEMINAR



SPRING 2017 SCHEDULE

Wednesdays, 11:00 AM-11:50 AM at STV 216

April 19, 2017

Speaker: Henderson, Lindsay

Abstract: Nilpotent linear maps are linear maps from a vector space to the same vector space, that when composed with itself a sufficient number of times will send everything in the vector space to zero. The null space is a subspace that contains all the elements that are sent to zero via a linear map. Then each power of a nilpotent linear map has its own Null Space. All nilpotent maps can be written as a matrix in Nilpotent Canonical Form, and the vector space has a basis that is comprised of nilpotent chains. In connection with the Nilpotent Canonical Form and the basis of nilpotent chains, we have the dot diagram that represents both of these concepts and various other relationships. The goal of this presentation is to discuss how the null space of nilpotent maps grows, the relationships represented in the dot diagram, and how to construct a basis of nilpotent chains.

