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William Graham* (wag@uga.edu). *A generalization of the Springer resolution.*

There is a bijective correspondence between conjugacy classes of nilpotent complex $n \times n$ matrices and irreducible representations of the symmetric group S_n , since both are in bijection with the partitions of n . In 1976, Springer gave an explanation of this bijection which is connected to a resolution of singularities of the variety of nilpotent matrices called the Springer resolution. This explanation extends to the setting of arbitrary semisimple groups, and was further extended by Lusztig, who introduced a generalized Springer correspondence to complete the picture. Springer's theory, and its extension by Lusztig, have had important applications in a number of areas in representation theory. This talk will discuss some of this background, as well as joint work with Martha Precup and Amber Russell on a new approach to the generalized Springer correspondence in type A using a generalization of the Springer resolution. (Received January 19, 2016)