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Riccardo Biagioli and **Sara Faridi*** (faridi@mathstat.dal.ca), Department of Mathematics & Statistics, Dalhousie University, Halifax, NS B3J 2J2, Canada, and **Mercedes Rosas**. *Ideals defining conjugacy classes of nilpotent matrices.*

This talk focuses on ideals associated to conjugacy classes of nilpotent matrices. These ideals are indexed by partitions of the size of the matrix. In this talk we review these constructions, and study generating sets and properties of these ideals based on the Young diagrams of the partitions. We use our techniques to produce a counterexample to a related conjecture of Weyman. We also discuss resolutions of these ideals based on the shape of the Young diagrams associated to the corresponding partitions. (Received July 21, 2008)