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On conjugacy classes of nilpotent matrices

The focus of this talk is 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.

This is joint work with Riccardo Biagioli and Mercedes Rosas.