Title: When do two nilpotent matrices commute?

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Abstract: Given a nilpotent matrix B of Jordan type – sizes of Jordan blocks – a partition P of n, what is the Jordan type $Q(P)$ of the generic nilpotent matrix A commuting with B? We describe results from several groups who have studied this problem recently. An almost rectangular partition is one whose largest part minus smallest part is at most one. It is known that $Q(P)$ has r_P parts that differ pairwise by at least two, where here r_P is the minimum number of almost rectangular partitions whose union is P. We discuss a poset attached to the problem of determining $Q(P)$, and some results and conjectures of Polona Oblak and others about the map $P \rightarrow Q(P)$ and its inverse. We conjecture that there is a bijection between the set of partitions P of n with $r_P = k$ and the set of partitions having $k \times k$ Durfee square.