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Heather M. Russell* (hrussell@math.lsu.edu). *The topology of Springer varieties.*

In recent years, Springer varieties have appeared with increasing frequency in the study of knot theory especially connected to categorified knot invariants. We will discuss a topological model for two-row Springer varieties that generalizes work of Khovanov and leads to a diagrammatic and skein-theoretic formulation of the Springer representation. We will also discuss progress towards developing a topological model for three-row Springer varieties. (Received September 14, 2010)