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Julianna Tymoczko*, Smith College, 44 College Lane, Northampton, MA 01060. *Comparing different bases for irreducible symmetric group representations.*

We describe two different bases for irreducible symmetric group representations: the tableaux basis from combinatorics (and from the geometry of a class of varieties called Springer fibers); and the web basis from knot theory (and from the quantum representations of Lie algebras). We then describe new results comparing the bases for the case $n = 3$, e.g. showing that the change-of-basis matrix is upper-triangular, and sketch some applications to geometry and representation theory. This work is joint with H. Russell, as well as with T. Goldwasser and G. Sun. (Received March 09, 2021)