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Julianna Tymoczko* (tymoczko@math.uiowa.edu), Department of Mathematics, 14 MacLean Hall, University of Iowa, Iowa City, IA 52242. *A simple construction of the irreducible webs in the spider for \mathfrak{sl}_3 .*

A combinatorial spider is a model for representations of a Lie algebra: webs are combinatorial graphs corresponding to representations, and graph-theoretic operations on webs correspond to algebraic operations on representations. Kuperberg described combinatorial spiders explicitly for rank 2 Lie algebras and for \mathfrak{sl}_3 , and in later work with Khovanov gave a bijection between standard Young tableaux of shape (n, n, n) and irreducible webs. We give a simple and direct construction of this bijection, which also simplifies more recent work of Petersen-Pylyavskyy-Rhoades. (Received January 30, 2010)