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Matthew Housley* (housley@math.byu.edu), **Heather M. Russell** and **Julianna S. Tymoczko**. *Skein Theory and Kazhdan-Lusztig Bases*. Preliminary report.

Kazhdan and Lusztig constructed a remarkable canonical basis of the Hecke algebra \mathcal{H} for the symmetric group which leads naturally to left cells and left cell representations. These based representations have important applications in the study of simple Lie algebras of type A . Hecke algebra representations with canonical bases can also be defined via webs and skein relations, structures arising in category theory. While web bases and Kazhdan-Lusztig left cell bases are in general not the same, I will discuss combinatorial facts that indicate a close relationship between them and suggest the possibility of using webs as a tool to compute left cell bases. (Received January 17, 2012)