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Hao Wu* (haowu@gwu.edu), Math Department, GWU, Monroe Hall, Room 240, 2115 G Street, NW, Washington, DC 20052. *Colored $\mathfrak{sl}(N)$ -homology for links and its deformations.*

I will introduce a homology that categorifies the $\mathfrak{sl}(N)$ -polynomial of links colored by wedge powers of the defining representation. The construction is based on matrix factorizations associated to MOY graphs. I will also discuss deformations of this homology.

This work is a generalization of the Khovanov-Rozansky homology. (Received February 12, 2010)