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Moshe Cohen and **Adam Lowrance*** (adam-lowrance@uiowa.edu), Department of Mathematics, 14 MacLean Hall, University of Iowa, Iowa City, IA 52242. *A categorification of the Tutte polynomial*. Preliminary report.

We construct a categorification of the Tutte polynomial for graphs and matroids. Our categorification is a triply graded vector space whose graded Euler characteristic is the Tutte polynomial. We discuss generalizations of the deletion-contraction and duality formulas for the Tutte polynomial. We also show how to obtain an invariant of alternating knots and discuss a possible relationship with Khovanov homology. (Received January 30, 2012)