1077-57-1882   **Denis Auroux**, **J. Elisenda Grigsby*** (`grigsbyj@bc.edu`) and **Stephan M. Wehrli**. *A relationship between categorified braid invariants from representation theory and Floer theory.* Preliminary report.

Given a braid, one can associate to it a sequence of "categorified" braid invariants (one for each integer in a finite range) in two apparently different ways: "algebraically," via the higher representation theory of $U_q(sl_2)$ (using work of Khovanov-Seidel, Chen-Khovanov, and Brundan-Stroppel), and "geometrically," using the bordered Floer invariants of its double-branched cover (defined by Lipshitz-Ozsvath-Thurston and reinterpreted by Auroux). Both collections of invariants are strong enough to detect the trivial braid.

I will discuss what we know so far about the connection between these invariants, focusing on the relationship between the representation theory and the Floer theory. In addition, I will describe how both invariants can be understood in terms of sutured versions of Khovanov and Heegaard-Floer homology. (Received September 21, 2011)