

1063-57-144

**Eamonn Tweedy\*** (eptweedy@math.ucla.edu). *On the  $\mathcal{R}$ -filtration for the Heegaard Floer chain complex of a branched double-cover.*

Seidel and Smith defined a knot invariant called symplectic Khovanov homology using braid closures. One can relate a set of generators for their complex to one for the hat-Heegaard Floer complex  $\widehat{CF}$  for the branched double-cover, and the Seidel-Smith homological grading induces a filtration  $\mathcal{R}$  on the  $\widehat{CF}$  complex. We mention a proof that the  $\mathcal{R}$ -filtered chain homotopy type of  $\widehat{CF}$  is a knot invariant. Further, we discuss the behavior of the  $\mathcal{R}$ -filtration with respect to connected sums of knots. The filtered  $\widehat{CF}$  complex provides a spectral sequence computing  $\widehat{HF}$ , and one obtains an absolute Maslov grading on the homology group  $\widehat{HF}$  when this spectral sequence collapses at the  $E_2$ -page (which occurs for all two-bridge knots, for example). We conclude with some speculation regarding the nature of this filtration. (Received August 13, 2010)