1072-57-251 **Allison L Gilmore*** (gilmore@math.columbia.edu), NY. *Knot Floer homology and Soergel bimodules.*

Abstract: We offer a construction of knot Floer homology modeled on the algebraic structure of HOMFLY-PT homology, as defined in Khovanov's "Triply-graded link homology and Hochschild homology of Soergel Bimodules." First, we enlarge the category of Soergel bimodules to obtain a categorification of $H(b,q) \otimes \mathbb{Z}[\ell, \ell^{-1}]$, where $H(b,q)$ is the Hecke algebra. We describe an action of $\mathrm{Br}_b \oplus \mathbb{Z}\langle\lambda\rangle$ on this category, where Br_b is the braid group on b strands. Then we introduce an operation $\mathcal{Q}$ that we claim recovers knot Floer homology of a braid's closure when applied to the generalized Soergel bimodule associated to the braid. We prove a weaker statement, outline the proof, and suggest how the same techniques could be used to prove the full result. (Received June 29, 2011)