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Ian Montague* (ianmontague@brandeis.edu). *Seiberg-Witten Floer K-theory and cyclic group actions on spin 4-manifolds with boundary.*

I will outline the construction of a metric-independent $\text{Pin}(2) \widetilde{\times} \mathbb{Z}/m$ -equivariant Seiberg-Witten Floer spectrum $\text{SWF}(Y)$ associated to a spin rational homology 3-sphere Y equipped with a spin \mathbb{Z}/m -action, as well as equivariant analogues of Manolescu's invariant $\kappa(Y)$, defined as the minima of a certain semi-infinite lattice associated to the equivariant K-theory of $\text{SWF}(Y)$. As an application, I will discuss how these invariants provide bounds on the intersection forms of equivariant spin fillings of Y , as well as obstructions for H-sliceness in spin 4-manifolds. (Received January 02, 2022)