1142-57-123   **John A Baldwin*** (`john.baldwin@bc.edu`), Boston, MA 02131, and **Steven Sivek**.
Applications of sutured instanton Floer homology to low-dimensional topology.

I'll discuss several applications of Kronheimer and Mrowka's sutured instanton Floer homology to problems in low-dimensional topology coming out of my joint work with Steven Sivek. These include a new link between Stein fillings of a 3-manifold and $SU(2)$ representations of the 3-manifold group, and a proof that Khovanov homology detects the trefoil. I'll also discuss other problems that these techniques may solve. (Received August 31, 2018)