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**Sherry Gong\*** (ggyiran@gmail.com) and **Marco Marengon**. *Non-orientable cobordisms and torsion in Floer homology*.

We use unoriented versions of instanton and knot Floer homology to give bounds on the number of critical points appearing in not-necessarily orientable cobordisms, extending results of a recent paper by Juhasz, Miller, and Zemke concerning orientable cobordisms. The versions of instanton and knot Floer homology that induce maps for non-orientable cobordisms require a decoration—much of the subtlety in our arguments lies in choosing the necessary decorations. We introduce unoriented versions of the band unknotting number and the refined cobordism distance and use our results to give bounds on these based on the torsion orders of the Floer homologies. (Received January 15, 2021)