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M Kate Kearney* (kearney@lsu.edu). *An Obstruction to Knots Bounding Möbius Bands in B^4 .*

The relationship between embedded surfaces and their knotted boundaries has been one of the primary topics of knot theory for much of the last half century. While great progress has been made on the oriented case (in particular the theory of knot concordance), development in the non-orientable case has paled in comparison. However, since the advent of Heegaard-Floer theory, new tools and techniques have proven fruitful in application to both problems. This talk focuses on a particular case, namely whether a given knot in the three-sphere can be the boundary of a Möbius band embedded in the four-ball, B^4 . We will discuss new examples of knots which do not bound Möbius bands in B^4 , and describe how the d-invariant of Heegaard-Floer theory is used as an obstruction to knots bounding Möbius bands in B^4 . (Received August 29, 2013)