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M Kate Kearney* (kearney@lsu.edu). *An obstruction to knots bounding Mobius bands in B^4 .*

The relationship between embedded surfaces and their knotted boundaries has been one of the main topics of knot theory for much of the last half century. This talk focuses on a particular case, namely whether a given knot in the three-sphere can be the boundary of a Mobius band embedded in the four-ball, B^4 . We will discuss a new example of a knot which does not bound a Mobius band in B^4 , and describe how the d-invariant of Heegaard-Floer theory is used to obstruct this and other knots from bounding Mobius bands in B^4 . (Received January 17, 2012)