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Concordance in homology spheres

Although not every knot in the three-sphere can bound a smooth embedded disk in the three-sphere, it must bound a PL disk in the four-ball. This is not true for knots in the boundaries of arbitrary smooth contractible manifolds. We give new examples of knots in homology spheres that cannot bound PL disks in any bounding homology ball and thus not concordant to knots in the three-sphere. This is joint work with Jen Hom and Adam Levine.