Jennifer Hom* (hom@math.gatech.edu). Getting a handle on the Conway knot.

When does a knot bound a disk? In three dimensions, the only knot that bounds a smoothly embedded disk is the unknot. However, if one considers disks in the four-ball, the answer becomes significantly more difficult.

A knot is called slice if it bounds a smooth disk in the four-ball. For 50 years, it was unknown whether a certain 11 crossing knot, called the Conway knot, was slice or not, and until recently, this was the only one of the thousands of knots with fewer than 13 crossings whose slice-status remained a mystery. In this talk, we will describe Lisa Piccirillo's proof that the Conway knot is not slice. The main idea of her proof is given in the title of this talk. (Received September 12, 2020)