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Jason Joseph* (jason.joseph@rice.edu). *Unknotting numbers of 2-spheres in the 4-sphere.*

In this talk we consider two unknotting operations on knotted spheres embedded in 4-space. One, the stabilization number, is the minimal number of 1-handle stabilizations needed to produce an unknotted surface. The other, which we call the Casson-Whitney number, counts the minimal number of pairs of finger and Whitney moves needed during a regular homotopy to the unknotted sphere. Using an algebraic lower bound coming from the knot group we will prove that these unknotting numbers are distinct in infinitely many examples. Time permitting we will show that both unknotting numbers can exhibit strongly nonadditive behavior under connected sum. This is joint work with Michael Klug, Benjamin Ruppi, and Hannah Schwartz. (Received August 31, 2020)