1151-57-273   **Samantha Allen*** (`samantha.g.allen@dartmouth.edu`) and **Charles Livingston**. *Unknotting with a single twist.*

Ohyama showed that any knot can be unknotted by performing two full twists, each on a set of parallel strands. We consider the question of whether or not a given knot can be unknotted with a single full twist, and if so, what are the possible linking numbers associated to such a twist. It is observed that if a knot can be unknotted with a single twist, then some surgery on the knot bounds a rational homology ball. With this, a wider range of tools become available, including Casson-Gordon invariants and a set of obstructions that Aceto-Golla developed using Heegaard-Floer theory. Using these tools, if a knot K can be unknotted with a single twist of linking number l, we give restrictions on the genus, signature function, Upsilon function, and V and ν^+ invariants of K in terms of l and the sign of the twist. This talk is based on joint work with Charles Livingston. (Received August 20, 2019)