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Jake Pichelmeyer* (jacobpichelmeyer@gmail.com). *Obstructing sliceness in $\mathbb{C}P^2$ using homological degrees.*

The $\mathbb{C}P^2$ genus of a knot K , denoted $g_{\mathbb{C}P^2}(K)$, is the least genus among all orientable surfaces Σ properly embedded in $\mathbb{C}P^2 \setminus B^4$ with boundary $\partial\Sigma = K$. We say a knot K is *slice in $\mathbb{C}P^2$* if $g_{\mathbb{C}P^2}(K) = 0$. One can show that a knot is slice in $\mathbb{C}P^2$ by explicitly constructing a slice disc using diagrammatic methods. But what does one do if no such slice disc exists? In a recently submitted paper, the speaker obstructed some knots from bounding a slice disc by obstructing all possible homological degrees of the disc. These degree obstructions were generated using a variety of results from 4-dimensional smooth topology. In this talk, we will examine these obstructions. (Received August 24, 2020)