Jason Joseph and Puttipong Pongtanapaisan* (puttipong-pongtanapaisan@uiowa.edu).

Bridge numbers of knotted surfaces in the four-sphere. Preliminary report.

Meier and Zupan showed that every smoothly embedded surface in the 4-sphere can be put in bridge position. This is a 4-dimensional analog of bridge position for a knot in the 3-sphere, and gives rise to a complexity for knotted surfaces called the bridge number. In this talk, we discuss computations of the bridge numbers for various families of knotted surfaces. The lower bound involves calculations of the meridional rank, which is the minimum number of meridional generators taken over all presentations of the fundamental group of the surface's exterior in the 4-sphere. (Received September 12, 2020)