Surface knots with small bridge number

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Abstract. Recently, Gay and Kirby introduced a 4-dimensional analogue of a Heegaard splitting called a trisection. We adapt their approach to show that every knotted surface in the 4-sphere admits a bridge trisection; namely, there is a decomposition of the 4-sphere into three 4-balls which splits the surface into a collection of boundary parallel disks. This may be viewed as the 4-dimensional version of a bridge decomposition for a knot in the 3-sphere, and as such, a bridge trisection has two complexity parameters akin to the bridge number of a knot. We will discuss a classification of bridge trisections with relatively low complexity. This talk is based on joint work in progress with David Gay and Jeffrey Meier.