1108-57-273 **Jeffrey Meier*** (jlmeier@indiana.edu) and **Alexander Zupan**. *Bridge trisections of knotted surfaces in S^4.*

Recently, Gay and Kirby introduced a new way of describing a 4–manifold called a *trisection*, which involves decomposing the 4–manifold into three 4–dimensional handlebodies and serves as a 4–dimensional analogue to a Heegaard splitting of a 3–manifold. We adapt their approach to the setting of knotted surfaces in S^4; namely, we show that every such surface $\mathcal{K}$ admits a *bridge trisection*, which is a decomposition of $(S^4, \mathcal{K})$ into three pieces, each of which is a collection of trivial disks in B^4. A bridge decomposition associates two complexity parameters to $\mathcal{K}$, which are analogous to the bridge number of a classical knot, and we give a classification of knotted surfaces with low bridge number. We also introduce a new way to describe knotted surfaces in S^4 diagrammatically in terms of a triple of classical tangles called a *tri-plane diagram*. This is joint work with Alexander Zupan. (Received January 16, 2015)