

1139-57-504

David T Gay* (dgay@uga.edu), Mathematics, University of Georgia, Athens, GA 30602.

Trisection diagrams for surgeries along embedded surfaces. Preliminary report.

Given an embedded surface in a closed 4-manifold, removing a neighborhood of that surface and replacing it with some interesting object (perhaps diffeomorphic to what you removed) via an interesting gluing map produces a new and interesting 4-manifold. The Gluck twist operation is one example, which produces potential counterexamples to the smooth 4-dimensional Poincaré conjecture. I'll discuss how to draw trisection diagrams of the resulting manifold given a trisected description of the original manifold and the embedded surface - at least I'll do this for some simple cases. (Received February 19, 2018)