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Andrey Gogolev*, agogolev@math.binghamton.edu. *Surgery constructions of higher dimensional Anosov flows.*

I will discuss joint work with T. Barthelme, C. Bonatti and F. Rodriguez Hertz. We begin with the geodesic flow on a closed hyperbolic manifold. Then we explain how to excise a neighborhood of a totally geodesic codimension one submanifold and take a "twisted double" which can be equipped with an Anosov flow (derived from the geodesic flow). This yields new examples of higher dimensional Anosov flows (any odd dimension). The construction follows the idea of classical Franks-Williams construction of a non-transitive Anosov flow. (Received March 18, 2017)