

1104-57-254

Andrew Donald* (adonald@math.msu.edu). *Embedding 3-manifolds smoothly in S^4 .*

We discuss the question of when a closed 3-manifold can be smoothly embedded in the 4-sphere. An obstruction to embedding can be derived from Donaldson's theorem on the intersection forms of definite 4-manifolds and this can be used to classify the connected sums of lens spaces which smoothly embed. Seifert manifolds with non-orientable base surfaces or odd first Betti number are amenable to similar methods. (Received September 02, 2014)