
ANDREW DONALD, Michigan State University

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 obtained from Donaldson's theorem on the intersection forms of definite 4-manifolds. This can be used to classify the connected sums of lens spaces which smoothly embed and gives restrictions on embedding for Seifert manifolds with non-orientable base surfaces or odd first Betti number.