

Stein 4-manifolds and corks

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I will first describe corks and plugs of smooth 4-manifolds (fundamental particles in 4-manifolds which make them exotic), and then describe a recent joint work with K. Yasui on constructions of various corks in 4-manifolds, infinitely many disjoint imbeddings (knottings) of corks in 4-manifolds, construction of arbitrarily many exotic Stein copies of a Stein manifold by cork twisting; along the way discuss examples of arbitrary many simply connected compact codimension zero submanifolds of S^4 which are mutually homeomorphic but not diffeomorphic.