

Constructing Small Exotic 4-Manifolds via Configurations of Complex Curves

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We will discuss the existence problem for small exotic 4-manifolds which are required to be closed, simply connected and minimal. Here we consider this problem for both symplectic and also (non-symplectic but) smooth 4-manifolds. We will present our constructions of such manifolds with negative and nonnegative signatures respectively, which are joint works with A. Akhmedov. On the way we will mention some open problems and if time permits, we will elaborate the so called spin geography problem.