

Singular symplectic isotopy problems

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The smooth symplectic isotopy problem asks for the classification of smooth symplectic submanifolds of the complex projective plane. This problem remains open in degrees greater than 17. Here we will consider a singular version of the problem—classifying symplectic submanifolds of CP^2 with singularities of specified types. We will show that for certain rational cuspidal curves, the classification can be made completely. This is based on joint work with Marco Golla.