Analytic normal forms for planar vector fields near a saddle point

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Abstract: We give essentially unique "normal forms" for germs of a holomorphic vector field of the complex plane in the neighborhood of an isolated singularity which is a $p : q$ resonant-saddle. Hence each vector field of that type is conjugate, by a germ of a biholomorphic map at the singularity, to a preferred element of an explicit family of vector fields. These model vector fields are polynomial in the resonant monomial. This work is a followup of a similar result obtained for parabolic diffeomorphisms which are tangent to the identity, and solves the long standing problem of finding explicit local analytic models for resonant saddle vector fields.