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Quasi-conformal mapping theorem and bifurcations. (English) Zbl 0930.30019
Bol. Soc. Bras. Mat., Nova Sér. 29, No. 2, 229-251 (1998).

Let H be a germ of holomorphic diffeomorphism at $0 \in \mathbb{C}$, such that $H(0) = 0$. Applying the quasi-conformal mapping theorem of Ahlfors-Bers, the author gives a direct construction of a germ of analytic multivalued mapping S , with $S(0) = 0$, such that $S(z)$ obtained after one turn around the origin is equal to $H \circ S(z)$, i.e. he solves the equation

$$S(ze^{2\pi i}) = H \circ S(z), \quad S(0) = 0.$$

With the aid of another method this problem was solved by [*R. Pérez-Marco and J.-C. Yoccoz* in: Complex analytic methods in dynamical systems, IMPA, January 1992, Astérisque 222, 345-371 (1994; Zbl 0809.32008)]. An application to the bifurcation theory of vector fields of the plane is given.

Reviewer: [J.Matkowski \(Bielsko-Biala\)](#)

MSC:

30C62 Quasiconformal mappings in the complex plane

Cited in 1 Document

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