Rectifiability of quasiplanes

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ABSTRACT: We will discuss some recent results about sufficient conditions on a quasisymmetric map in Euclidean space that guarantee it has a "partially" rectifiable image. The first, based on work with Tatiana Toro and Matthew Badger, is given in terms of a Carleson condition on the weak-quasisymmetry constant of a quasisymmetric map, and employs a useful extension theorem based on the work of Tukia and Väisälä; the second is in terms of a quantity that measures how affine a function is locally, and invokes the techniques of Guy David and Stephen Semmes.