
Asymptotic values of quasiregular maps

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Suslin analytic sets characterize the sets of asymptotic values of entire holomorphic functions. By a theorem of Ahlfors, the set of asymptotic values is finite for a function with finite order of growth. Quasiregular maps are a natural generalization of holomorphic functions to dimensions $n \geq 3$ and, in fact, many of the properties of holomorphic functions have counterparts for quasiregular maps. In a joint work with Qu Jingjing, it is shown that analytic sets also characterize the sets of asymptotic values of quasiregular maps in \mathbb{R}^n , even for those with finite order of growth. Our construction is based on Drasin's quasiregular sine function.

Joint work with Qu Jingjing.