

# HARDY SPACES AND QUASIREGULAR MAPPINGS

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ABSTRACT. We study Hardy spaces for quasiregular mappings on the unit ball which satisfy appropriate growth and multiplicity conditions. Under these conditions we recover several classical results for analytic functions and quasiconformal mappings. In particular, we characterize Hardy spaces in terms of non-tangential limit functions and non-tangential maximal functions of quasiregular mappings. Among applications we show that every quasiregular map in our class belongs to some Hardy space.

A key difference between the previously known results for quasiconformal mappings and our setting is the role of multiplicity conditions and the growth of mappings that need not be injective. (*Joint work with T. Adamowicz*)