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Kari Astala, Albert Clop, Joan Mateu, Joan Orobítg and Ignacio Uriarte-Tuero*
(ignacio@math.missouri.edu), 222 College Street, Toronto, Ontario M5T 3J1, Canada. *Sharp nonremovability examples for BMO and Hölder quasiregular mappings.*

A classical problem in complex analysis is to characterize the removable sets for various classes of analytic functions: Hölder, BMO, bounded.

Consider the same questions for K -quasiregular maps (since they are a K -quasiconformal map followed by an analytic map.) We (joint with K. Astala, A. Clop, J. Mateu and J. Orobítg) dealt with most of the bounded case [ACMOUT]. The BMO case was dealt with in [ACMOUT] except for a gap at the critical dimension (Question 4.2 in [ACMOUT].) I answered the question filling the gap in [UT].

Most of the Hölder case was dealt with by A. Clop, except again for a gap at the critical dimension. We (joint with A. Clop) closed the gap [CUT].

I will summarize the results and give some ideas of the proofs. The talk will be self-contained.

References:

[ACMOUT] Kari Astala, Albert Clop, Joan Mateu, Joan Orobítg and Ignacio Uriarte-Tuero. Distortion of Hausdorff measures and improved Painlevé removability for bounded quasiregular mappings. *Duke Math J.*, to appear.

[CUT] Albert Clop and Ignacio Uriarte-Tuero. Sharp Nonremovability Examples for Hölder continuous quasiregular mappings in the plane.

[UT] Ignacio Uriarte-Tuero. Sharp Examples for Planar Quasiconformal Distortion of Hausdorff Measures and Removability. (Received February 01, 2008)