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Abstract

ON AREA AND LENGTH DISTORTION UNDER PLANAR HARMONIC MAPPINGS

In this presentation, distortion of lengths and areas, and Lipschitz-type spaces of planar harmonic mappings [D,PR] are investigated. First, a three circles type theorem, involving the harmonic area function, for is established for planar harmonic mappings. Second, bounds for length and area distortion for harmonic quasiconformal mappings are given. Finally, certain Lipschitz-type spaces on harmonic mappings are discussed. This presentation is based on joint research with Sh. Chen (Hengyang Normal University) and S. Ponnusamy (IIT Madras and Indian Statistical Institute Chennai Centre) [CPR].

References

[CPR] Sh. Chen, S. Ponnusamy, A. Rasila: Lengths, areas and Lipschitz-type spaces of planar harmonic mappings. arXiv:

[D] P. Duren: Harmonic Mappings in the Plane. Cambridge Univ. Press, 2004.

[PR] S. Ponnusamy, A. Rasila: Planar Harmonic and Quasiregular Mappings. RMS Lecture Notes Series 19: Topics in Modern Function Theory, 267-333.