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TITLE: SOME REMARKS TO THE CLASS OF HARMONIC QUASICONFORMAL MAPPINGS AND APPLICATIONS

Abstract: We give a new idea how to consider some important properties of the hyperbolic metric to obtain results of the Schwarz-Pick type for the class of HQC mappings. By using some estimates for hyperbolic partial derivatives for HQC mappings, that act between various domains, we discuss the hyperbolic bi-Lipschicity of those mappings.

Key words: Quasiconformal mapping, Harmonic mapping, Riemann surface, Universal covering, Conformal metric, Gaussian curvature, Hyperbolic density, Hyperbolic length, Hyperbolic distance, Hyperbolic derivative, Quadratic differential, Quasi-isometry, Lipschitz i co-Lipschitz mapping.

Scientific field: Mathematics

Scientific subfield: Complex analysis, Differential geometry