

Interior estimates for Poisson type inequality and qc hyperbolic harmonic mappings

Miodrag Mateljević

University of Belgrade, Faculty of Mathematics, Belgrade, SERBIA
[miodrag@matf.bg.ac.rs]

We study quasiconformal (qc) mappings in plane and space and in particular Lipschitz-continuity of mappings which satisfy in addition certain PDE equations (or inequalities). Some of the obtained results can be considered as versions of Kellogg-Warshawski type theorem for qc-mappings. We plan to discuss a major breakthrough concerning the initial Schoen Conjecture (and more generally the Schoen-Li-Wang conjecture) made very recently (Marković and the others including members of Belgrade seminar). Among the other things, as tool we use the interior estimates for Poisson type inequality and try to imply it to study boundary regularity of Dirichlet Eigenfunctions on bounded domains which are C^2 except at a finite number of corners (related to Y. Sinai's question).
