

Hölder and Lipschitz continuity of mapping in the Sobolev classes $W^{1,p}(G)$

Miodrag Mateljević

*University of Belgrade, Faculty of Mathematics and Serbian Academy of Sciences and Arts
e-mail: miodrag@matf.bg.ac.rs*

Abstract. In this research among the other things, we combine the method of the flattening the boundary with the Sobolev-Riesz embeddings theorem. Our results include domains which are locally good Greenian and C^1 domains.

In particular we study the Dirichlet problem for generalized harmonic mappings and boundary behaviour of partial derivatives for solutions to certain Laplacian-gradient inequalities and generalized harmonic mappings.

Keywords: The Sobolev-Riesz embeddings theorem; Laplacian-gradient inequalities

References

- [1] **M. Mateljević.** Boundary behaviour of partial derivatives for solutions to certain Laplacian-gradient inequalities and spatial qc maps. *Springer Proceedings in Mathematics & Statistics*, 2021, **357**, p. 393-418.
- [2] **M. Mateljević, N. Mutavdžić.** On Lipschitz Continuity and Smoothness up to the Boundary of Solutions of Hyperbolic Poisson's Equation. *J. Geom. Anal.*, 34, 83 (2024).