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Construction of planar harmonic functions. (English) Zbl 1139.31300

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Summary: Complex-valued harmonic functions that are univalent and sense-preserving in the open unit disk can be written in the form $f = h + \bar{g}$, where h and g are analytic in the open unit disk. The functions h and g are called the analytic and coanalytic parts of f , respectively. In this paper, we construct certain planar harmonic maps either by varying the coanalytic parts of harmonic functions that are known to be harmonic starlike or by adjoining analytic univalent functions with coanalytic parts that are related or derived from the analytic parts.

Reviewer: [Reviewer \(Berlin\)](#)

MSC:

[31A05](#) Harmonic, subharmonic, superharmonic functions in two dimensions

Full Text: [DOI](#) [EuDML](#)

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