journal of inequalities in pure and applied mathematics
issn: 1443-5756

Volume 3, Issue 4, Article 61

On Univalent Harmonic Functions

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Keywords: Convex harmonic functions, Starlike harmonic functions, Extremal problems.

Date Received: 18/01/02

Date Accepted: 26/06/02

Subject Codes: 30C45,31A05

Editors: Hari M. Srivastava,

Abstract: Two classes of univalent harmonic functions on unit disc satisfying the conditions $\sum_{n=2}^{\infty}(n-\alpha)(|a_n|+|b_n|)\leq(1-\alpha)(1-|b_1|)$ and $\sum_{n=2}^{\infty}n(n-\alpha)(|a_n|+|b_n|)\leq(1-\alpha)(1-|b_1|)$ are given. That the ranges of the functions belonging to these two classes are starlike and convex, respectively. Sharp coefficient relations and distortion theorems are given for these functions. Furthermore results concerning the convolutions of functions satisfying above inequalities with univalent, harmonic and convex functions in the unit disk and with harmonic functions having positive real part.

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