

Properties of harmonic functions which are convex of order  $\hat{I}^2$  with respect to symmetric points

ABSTRACT

Let  $\mathcal{H}$  denote the class of functions  $f$  which are harmonic and univalent in the open unit disc  $D = \{z : |z| < 1\}$ . This paper defines and investigates a family of complex-valued harmonic functions that are orientation preserving and univalent in  $\mathcal{D}$  and are related to the functions convex of order  $\beta$  ( $0 \leq \beta < 1$ ), with respect to symmetric points. We obtain coefficient conditions, growth result, extreme points, convolution and convex combinations for the above harmonic functions.