Cho, Nak Eun; Jain, Naveen Kumar; Ravichandran, V. Convex combination of analytic functions. (English) Zbl 1362.30014 Open Math. 15, 331-339 (2017).

Summary: Radii of convexity, starlikeness, lemniscate starlikeness and close-to-convexity are determined for the convex combination of the identity map and a normalized convex function $F$ given by $f(z) = \alpha z + (1 - \alpha)F(z)$.

MSC:
30C45 Special classes of univalent and multivalent functions of one complex variable (starlike, convex, bounded rotation, etc.)
30C80 Maximum principle, Schwarz’s lemma, Lindelöf principle, analogues and generalizations; subordination

Keywords: convex function; star-like function; close-to-convex function; lemniscate of Bernoulli; radius of starlikeness; convolution; convex combination

Full Text: DOI

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