Kubicka, Ewa; **Poreda, Tadeusz**

On the coefficients of the quasi-starlike maps of the unit polydisk in $\mathbb{C}^2$. (English)

Zbl 0719.32007
Zesz. Nauk., Politech. Łódz. 531, Mat. 21, 57-68 (1989).

Let $w = (w_1, w_2)$ be a map of the unit polydisk in $\mathbb{C}^2$ into $\mathbb{C}^2$ with the property $w(0) = 0$ and

$$Re(w_i(z_1, z_2)/z_i) \geq 0 \text{ for } 0 < \max(|z_1|, |z_2|) = |z_i|, \quad i = 1, 2.$$

Denote the class of all such functions by $\mathcal{P}_0$.

The class G_2^M consists of maps g of the unit polydisk in $\mathbb{C}^2$ into $\mathbb{C}^2$ satisfying the condition

$$f(g(z)) = (1/M)f(z),$$

where f is starlike (and properly normalized).

The authors examine the connections between the coefficients of functions of G_2^M and $\mathcal{P}_0$.

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MSC:

32A30 Other generalizations of function theory of one complex variable
30C45 Special classes of univalent and multivalent functions of one complex variable (starlike, convex, bounded rotation, etc.)

Keywords:

quasi-starlike maps; coefficient connections; unit polydisk