

## $\delta$ -SPIRALLIKE FUNCTIONS WITH RESPECT TO A BOUNDARY POINT

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**ABSTRACT.** The aim of this paper is to present a new method of the proof of an analytic characterization of  $\delta$ -spirallike functions with respect to a boundary point.

**1. Introduction.** In this paper we examine the class  $\mathcal{S}_0^\triangleright(\delta)$  of  $\delta$ -spirallike functions with respect to a boundary point. This geometric idea arises from the concepts of  $\delta$ -spirallikeness with respect to an inner point as well as from starlikeness with respect to a boundary point. Spirallikeness with respect to a boundary point is a quite fresh idea introduced and studied by Elin, Reich and Shoikhet [3] and Aharonov, Elin and Shoikhet [1], who developed the methods based on Robertson's formula for starlike functions with respect to a boundary point [11], and on some dynamical system.

An alternative analytic formula for functions in  $\mathcal{S}_0^\triangleright(\delta)$  was proposed in [7, Theorems 3.5 and 3.8], where the method based on the Julia lemma was explored. This technique of study of the class  $\mathcal{S}_0^\triangleright(\delta)$  is a continuation of ideas from [6, 8], where an analytic description of starlike functions with respect to a boundary point, other than the characterization found by Robertson [11] and completed by Lyzzaik [9], was shown.

In this paper we reprove results from [7] in a new way. Let us emphasize that the proofs of main results in [7] were based on geometrical argument, now are mainly analytical.

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