

A SUBCLASS OF UNIFORMLY CONVEX FUNCTIONS
WITH NEGATIVE COEFFICIENTS

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Abstract. Making use of the Salagean operator, we define the class $T(n, \alpha, \beta)$. When $n = 1$ and $n = 0$, we obtain, respectively, a new subclass of uniformly convex functions and a corresponding subclass of starlike functions with negative coefficients. In this paper, we obtain distortion theorem, and obtain radii of close-to-convexity, starlikeness and convexity for functions belonging to the class $T(n, \alpha, \beta)$. We consider integral operators associated with functions belonging to the class $T(n, \alpha, \beta)$. We also obtain several results for the modified Hadamard products of functions belonging to the class $T(n, \alpha, \beta)$. Distortion theorem for the fractional calculus (that is, fractional integral and fractional derivative) of functions in the class $T(n, \alpha, \beta)$ is obtained.

MSC 2010. 30C45.

Key words. Salagean operator, analytic function, uniformly convex function, modified Hadamard products, fractional calculus.

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The author is thankful to the referee for his/her comments and suggestions.

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Received November 7, 2007

Accepted April 17, 2009

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