

Banach J. Math. Anal. 3 (2009), no. 1, 61–67

BANACH JOURNAL OF MATHEMATICAL ANALYSIS ISSN: 1735-8787 (electronic) http://www.math-analysis.org

## ON A CLASS OF UNIVALENT FUNCTIONS DEFINED BY SĂLĂGEAN DIFFERENTIAL OPERATOR

## ADELA OLIMPIA TĂUT<sup>1\*</sup>, GEORGIA IRINA OROS<sup>2</sup> AND ROXANA ŞENDRUŢIU<sup>3</sup>

Communicated by M. S. Moslehian

ABSTRACT. By using a certain operator  $S^n$ , we introduce a class of holomorphic functions  $S_n(\beta)$ , and obtain some subordination results. We also show that the set  $S_n(\beta)$  is convex and obtain some new differential subordinations related to certain integral operators.

<sup>1,3</sup> FACULTY OF ENVIRONMENTAL PROTECTION, UNIVERSITY OF ORADEA, STR. UNIVERSITĂȚII, NO.1, 410087 ORADEA, ROMANIA. *E-mail address*: adela\_taut@yahoo.com and roxana.sendrutiu@gmail.com

<sup>2</sup> FACULTY OF SCIENCES, UNIVERSITY OF ORADEA, STR. UNIVERSITĂȚII, NO.1, 410087 ORADEA, ROMANIA. *E-mail address:* georgia\_oros\_ro@yahoo.co.uk

Date: Received: 17 August 2008; Accepted: 5 September 2008.

<sup>\*</sup> Corresponding author.

<sup>2000</sup> Mathematics Subject Classification. Primary 30C80; Secondary 30C45, 30A20, 34A40. Key words and phrases. Differential operator, differential subordination, dominant, best dominant.