

## INEQUALITIES INVOLVING CERTAIN INTEGRAL OPERATORS

M. K. AOUF

**Abstract.** Two integral operators  $I_p^\alpha$  ( $\alpha > 0$ ;  $p \in N$ ) and  $Q_{\beta,p}^\alpha$  ( $\alpha > 0$ ;  $\beta > -1$ ;  $p \in N$ ), where  $N = \{1, 2, \dots\}$ , are introduced for functions of the form  $f(z) = z^p + \sum_{n=1}^{\infty} a_{p+n} z^{p+n}$  which are analytic and  $p$ -valent in the open unit disc  $U = \{z : |z| < 1\}$ . The object of the present paper is to give an applications of the above operators to the differential inequalities.

*Mathematics subject classification* (2000): 30C45.

*Keywords and phrases:* Analytic,  $p$ -valent, integral operators.

### REFERENCES

- [1] M. K. AOUF, H. M. HOSSEN AND A. Y. LASHIN, *An application of certain integral operator*, J. Math. Anal. Appl., **248** (2000), 475-481.
- [2] I. B. JUNG, Y. C. KIM AND H. M. SRIVASTAVA, *The Hardy space of analytic functions associated with certain one-parameter families of integral operators*, J. Math. Anal. Appl., **176** (1993), 138-147.
- [3] J.-L. LIU AND S. OWA, *Properties of certain integral operators*, Internat. J. Math. Math. Sci., —; 3(2004), no.1, 69-75.
- [4] S. S. MILLER AND P. T. MOCANU, *Second order differential inequalities in the complex plane*, J. Math. Anal. Appl., **65** (1978), 289-305.
- [5] S. SHAMS, S. R. KULKARNI AND J. M. JAHANGIRI, *Subordination properties of  $p$ -valent functions defined by integral operators*, Internat. J. Math. Math. Sci., Volume 2006 (2006), Article ID 94572, 1-3.