

INCLUSION PROPERTIES FOR CERTAIN CLASS OF ANALYTIC FUNCTIONS INVOLVING MULTIPLIER TRANSFORMATION OPERATOR

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Abstract. A multiplier transformation is used to define certain new subclasses of analytic functions in the open unit disk \mathbb{U} . For each of these new function classes, several inclusion relationships are established. Some interesting corollaries and consequences of the main inclusion relationships are also considered.

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REFERENCES

- [1] T. M. FLETT, *The dual of an inequality of Hardy and Littlewood and some related inequalities*, J. Math. Anal. Appl. **38** (1972), 746–765.
- [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] Y. KOMATU, *On analytic prolongation of a family of integral operators*, Mathematica(cluj) **32**, 55 (1990), 141–145.
- [4] S. S. MILLER, *Differential inequalities and caratheordary functions*, Bull. Amer. Math. Soc. **81** (1975), 79–81.
- [5] K. I. NOOR, *On quasi convex functions and related topics*, Int. J. Math. Math. Sci. **10** (1987), 241–258.
- [6] K. I. NOOR, *On close-to-convex and related functions*, Ph. D. Thesis, University of Wales, U. K., 1972.
- [7] K. I. NOOR, *On analytic function related to certain family of integral operators*, J. Inequal. Pure and Appl. Math. **7**, 2 (2006), 1–6, Article 69 (Electronic).
- [8] K. S. PADAMANABHAN AND R. PARVATHAM, *Properties of a class of functions with bounded boundary rotation*, Ann. Polon. Math. **31** (1975), 311–323.
- [9] B. PINCHUK, *Functions with bounded boundary rotation*, Israel J. Math. **10** (1971), 7–16.
- [10] J. K. PRAJAPAT, *Inclusion properties for certain classes of analytic functions involving a family of fractional integral operators*, Frac. Cal. Appl. Analysis **11**, 1 (2008), 27–34.
- [11] G. S. SĂLĂGEAN, *Subclass of univalent functions*, in: Lecture Notes in Math., Vol. 1013, Springer-verlag, 1983, pp. 362–372.
- [12] H. M. SRIVASTAVA AND S. OWA, *Current Topics in Analytic Function Theory*, World Scientific Publishing Company, Singapore, New Jersey, London and Hongkong, 1992.
- [13] B. A. URALEGADDI AND C. SOMANATHA, *Certain classes of univalent functions*, in: H. M. Srivastava, S. Owa (Eds.), Current Topics in Analytic Function Theory, World Scientific Publishing Company, Singapore, 1992, pp. 371–374.