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SOME SUBCLASSES OF GENERALISED PASCU CLASSES OF FUNCTIONS WITH RESPECT TO SYMMETRIC POINTS

(Beberapa Subkelas bagi Fungsi Kelas Pascu Teritlak terhadap Titik Simetri)

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ABSTRACT

In this paper, some subclasses of generalised Pascu classes of functions with respect to symmetric points are introduced. Here, integral representation formulae are established and sharp coefficient estimates are determined. Further, Fekete Szegö problem is solved and the second Hankel determinant is considered for these classes.

Keywords: **c**oefficient problems; Fekete Szegö problem; second Hankel determinant

ABSTRAK

Dalam makalah ini diperkenalkan beberapa subkelas untuk fungsi kelas Pascu teritlak terhadap titik simetri. Di sini rumus perwakilan kamiran dibina dan anggaran pekali terbaik ditentukan. Seterusnya permasalahan Fekete Szegö diselesaikan dan penentu kedua Hankel dipertimbangkan bagi kelas tersebut.

Kata kunci: masalah pekali; masalah Fekete Szegö; penentu kedua Hankel

References

Carathéodory C. 1911. Über den variabilität bereich der fourier'schen konstanten von positive harmonischen funktionen. *Rend. Circ. Mat. Palermo* **32**: 193-213.

Das R. N. & Singh P. 1977. On subclasses of schlicht mapping. *Indian Journal of Pure and Applied Mathematics* **8**: 864-872.

Duren P. L. 1983. *Univalent Functions*. New York: Springer-Verlag.

Fekete M. & Szegö G. 1933. Eine bemerkung über ungerade schlichte funktionen. *Journal of the London Mathematical Society* **8**: 85-89.

Goel R. M. & Mehrok B. S. 1982. A subclass of univalent functions. *Houston Journal of Mathematics* **8**: 343-357.

Goel R. M. & Mehrok B. S. 1982.A subclass of starlike functions with respect to symmetric points. *Tamkang Journal of Mathematics* **13**:11-24.

Hayman W. K. 1958. *Multivalent Functions*. Cambridge Tracts in Mathematics and Mathematical Physics, No. 48. Cambridge: Cambridge University Press.

Janteng A., Suzeini A. H. & Darus M. 2007. Hankel determinant for starlike and convex functions. *International Journal of Mathematical Analysis* **1**(13): 619-625.

Janteng A., Suzeini A. H. & Darus M. 2008. Estimate on the second Hankel functional for functions whose derivative has a positive real part. *Journal of Quality Measurement and Analysis* **4**(1): 189-195.

Libera R. J. & Zlotkiewicz E. J. 1982. Early coefficients of the inverse of a regular convex function. *Proceedings of the American Mathematical Society* **85**: 225-230.

Littlewood J. E. 1925. On inequalities in the theory of functions. *Proceedings of the London Mathematical Society* **23**: 481-519.

Nehari Z. 1952. *Conformal Mapping.* New York: McGraw-Hill.

Noonan J. W. & Thomas D. K. 1972. On the Hankel determinants of areally mean *p*-valent functions. *Proceeding of the London Mathematical Society* **25**: 503-524.

Noonan J. W. & Thomas D. K. 1976. On the second Hankel determinant of areally mean *p*-valent functions. *Transactions of the American Mathematical Society* **223**: 337-346.

Oqlah A.-R. & Darus M. 2009. Second Hankel determinant for a class of analytic functions defined by a fractional operator. *European Journal of Scientific Research* **28**(2): 234-241.

Pommerenke Ch. 1966. On the coefficient and Hankel determinant of univalent functions. *Journal of the London Mathematical Society* **41**: 111-122.

Pommerenke Ch. 1967. On the Hankel determinant of univalent functions. *Mathematika* **14**: 108-112.
Rogosinski W. W. 1932. On coefficients of subordinate functions. *Proceedings of the London Mathematical Zeith.* 92-123.
Sakaguchi K. 1959. On certain univalent mapping. *Journal of the Mathematical Society of Japan* **11**(1): 72-75.

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