

## TRUNCATED TANGENT POLYNOMIALS EQUIPPED WITH GENERALIZED PASCAL SNAIL

OLUSHOLA ADEYEMO<sup>1</sup>, ABIODUN TINUOYE OLADIPO<sup>2</sup> AND RABHA  
M.EL-ASHWAH<sup>3</sup>

ABSTRACT. Truncated tangent polynomials associated with generalised Pascal snail defined by subordination are investigated. Coefficient inequalities describing the univalence of the defined classes is established. Graphs are used to present some consequences of the parameter involved. Furthermore, bounds for the first coefficients are derived and their relevance to classical Fekete Szego inequality is established. To the best of our knowledge the results presented are new.

### REFERENCES

- [1] Acala, N.,G. and Montero, M.B.: *Truncated tangent polynomial*, European Journal of Pure and Applied Mathematics 13(4), 2020, 948-963
- [2] Ali, R.,M., Ravichandran., V. and Seenivasagan, N.: *Coefficient bounds for  $p$ -valent functions*, Appl.Math.Comput., 187(1), 2007, 35-46.
- [3] Bildirici, C., Ackgoz M., and Araci S.: *A note on analogues of tangent polynomials*, J. Algebra Number Theor. Acad., 4(1), 2014, 21-29.
- [4] Duran, U. and Ackigoz M.: *On degenerate truncated special polynomials*, Mathematics, 8(1), 2020, 144.
- [5] Kanas, S. and Masih, V.,S.: *Analytic representation of the generalised Pascal snail and its application*, arXiv 2004.00063V1 (math.CV) 2020.
- [6] Keogh, F., R. and Merken, E., P.: *A coefficient inequalities for certain classes of analytic function*, Proc. Amer. Math. Soc. 20, 1969.
- [7] Oladipo, A., T.: *Generalised discrete probability distribution bounded by generalised pascal snail domain*, Afrika Matematika, 33(51), 2022.
- [8] Riyasat, M., Nahid, T., and Khan, S.: *An algebraic Approach to Degenerate Appell Polynomials and Their Hybrid Forms via Determinants*, Acta Math sci 43(2023), 719-735.
- [9] Robertson, M., S.: *On the theory of univalent functions*, Ann.,Math., 37(1936), 374-408.
- [10] Ryoo, C., S.: *A numerical investigation on the zero of the tangent polynomials*, J. Appl. Math. Inform. 32(3), 2014, 315-322.
- [11] Ryoo, C., S.: *A note on the tangent number and polynomials*, Adv. Stud. Theor. Phys 7(9), 2013, 447-454.

---

2020 Mathematics Subject Classification. 30C45, 30C50, 30C80.

Key words and phrases. Analytic, univalent, truncated, tangent, polynomials, Fekete-Szego inequality.

- [12] Khan, S., Nahid, T., Riyasat, M.: *On degenerate Apostol-type polynomials and applications*, Bol. Soc. Mat. Mex. (3) 25, (2019), 509–528.
- [13] Tabinda, N., Parvez, A. and Junesang, C.: *Truncated  $p$ -exponential  $p$ -Based Appell-Type Changhee Polynomials*, Symmetry (2020).

*Received 11 January 2023*

<sup>1</sup> DEPARTMENT OF PURE AND APPLIED MATHEMATICS, LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY OGBOMOSO, P.M.B. 4000, OYO STATE NIGERIA.

<sup>2</sup> DEPARTMENT OF PURE AND APPLIED MATHEMATICS, LADOKE AKINTOLA UNIVERSITY OF TECHNOLOGY OGBOMOSO, P.M.B. 4000, OYO STATE NIGERIA.

<sup>3</sup> MATH.DEPT., FACULTY OF SCIENCE, DAMIETTA UNIVERSITY, NEW DAMIETTA, EGYPT.

*Email address:* <sup>1</sup> oadeyemo28@lautech.edu.ng, <sup>2</sup> atoladipo@lautech.edu.ng,  
<sup>3</sup> r.ElAshwah@yahoo.com