Bibliography

[1] U. Abel and O. Agratini. Asymptotic behaviour of Jain operators. *Numer. Algorithms*, 71:553–565, 2016.

[2] U. Abel and V. Gupta. Rate of convergence of Stancu-Beta operators for functions of bounded variation. *Rev. Anal. Numér. Théor. Approx.*, 33(1):3–9, 2004.

[3] T. Acar, O. Alagöz, A. Aral, D. Costarelli, M. Turgay, and G. Vinti. Convergence of generalized sampling series in weighted spaces. *Demonstr. Math.*, 55(1):153–162, 2022.

[4] T. Acar, O. ALAGÖZ, A. Aral, D. Costarelli, M. Turgay, and G. Vinti. Approximation by sampling Kantorovich series in weighted spaces of functions. *Turk. J. Math.*, 46(7):2663–2676, 2022. https://doi.org/10.55730/1300-0098.3293.

[5] T. Acar, A. Aral, and V. Gupta. On approximation properties of a new type of Bernstein-Durrmeyer operators. *Math. Slovaca*, 65(5):1107–1122, 2015.

[6] T. Acar, A. Aral, and S. A. Mohiuddine. On Kantorovich modification of (p, q)-Baskakov operators. *J. Inequal. Appl.*, 2016(1):1–14, 2016.

[7] T. Acar, A. Aral, and S. A. Mohiuddine. Approximation by bivariate (p, q)-Bernstein–Kantorovich operators. *Iran. J. Sci. Technol. Trans. A: Sci.*, 42(2):655–662, 2018.

[8] T. Acar, D. Costarelli, and G. Vinti. Linear prediction and simultaneous approximation by m-th order Kantorovich type sampling series. *Banach J. Math. Anal.*, 14:1481–1508, 2020.

[9] T. Acar and S. Kursun. Pointwise convergence of generalized Kantorovich exponential sampling series. *Dolomites Res. Notes Approx.*, 16(1), 2023.

[10] T. Acar, S. Kursun, and M. Turgay. Multidimensional Kantorovich modifications of exponential sampling series. *Quaestiones Math.*, 46(1):57–72, 2023.

[11] T. Acar, M. Mursaleen, and S. A. Mohiuddine. Stancu type (p, q)-Szász-Mirakyan-Baskakov operators. *Commun. Fac. Sci. Univ. Ank. Ser. A1 Math. Stat.*, 67(1):116–128, 2018.

[12] T. Acar and G. Ulusoy. Approximation by modified Szász-Durrmeyer operators. *Period. Math. Hung.*, 72(1):64–75, 2016.

[13] A.-M. Acu, T. Acar, and V. A. Radu. Approximation by modified U_n^ρ operators. *Rev. Real Acad. Cienc. Exactas Fis. Nat. Ser. A-Mat.*, 113:2715–2729, 2019.

[14] A.-M. Acu and G. Başcanbaz-Tunca. Approximation by complex perturbed Bernstein-type operators. *Results Math.*, 75(3):120, 2020.

[15] A.-M. Acu, N. Manav, and D. F. Sofonea. Approximation properties of λ-Kantorovich operators. *J. Inequal. Appl.*, 2018(1):1–12, 2018.

[16] O. Agratini. Approximation properties of a class of linear operators. *Math. Meth. in the Appl. Sci.*, 36(17):2353–2358, 2013.

[17] P. N. Agrawal, V. Gupta, and A. S. Kumar. On q-analogue of Bernstein–Schurer–Stancu operators. *Appl. Math. Comput.*, 219(14):7754–7764, 2013.

[18] P. N. Agrawal, N. Ispir, and A. Kajla. Approximation properties of Bezier-summation-integral type operators based on polya–Bernstein functions. *Appl. Math. Comput.*, 259:533–539, 2015.

[19] P. N. Agrawal, A. S. Kumar, and T. Sinha. Stancu type generalization of modified Schurer operators based on q-integers. *Appl. Math. Comput.*, 226:765–776, 2014.

[20] O. Alagoz, M. Turgay, T. Acar, and M. Parlak. Approximation by sampling Durrmeyer operators in weighted space of functions. *Numer. Funct. Anal. Optim.*, 43(10):1223–1239, 2022.

[21] F. Altomare and M. Campiti. *Korovkin-type approximation theory and its applications*, volume 17. Walter de Gruyter, 2011.

[22] G. A. Anastassiou and S. G. Gal. Approximation by complex Bernstein–Schurer and Kantorovich–Schurer polynomials in compact disks. *Comput. Math. Appl.*, 58(4):734–743, 2009.

[23] L. Angeloni, N. Çetin, D. Costarelli, A. R. Sambucini, and G. Vinti. Multivariate sampling Kantorovich operators: quantitative estimates in Orlicz spaces. *Constr. Math. Anal.*, 4(2):229–241, 2021.

[24] L. Angeloni and D. Costarelli. Approximation by exponential-type polynomials. *J. Math. Anal. Appl.*, 532(1):127927, 2024.

[25] A. Aral and T. Acar. Weighted approximation by new Bernstein-Chlodowsky-Gadjiev operators. *Filomat*, 27(2):371–380, 2013.

[26] A. Aral and V. Gupta. On the q analogue of Stancu-Beta operators. *Appl. Math. Lett.*, 25(1):67–71, 2012.

[27] R. Aslan. Approximation properties of univariate and bivariate new class λ-Bernstein–Kantorovich operators and its associated GBS operators. *Comp. Appl. Math.*, 42, 2023. https://doi.org/10.1007/s40314-022-02182-w.

[28] S. Bajpeyi and A. S. Kumar. On approximation by Kantorovich exponential sampling operators. *Numer. Funct. Anal. Optim.*, 42(9):1096–1113, 2021.

[29] G. Bascanbaz-Tunca, M. Bodur, and D. Soylemez. On Lupas–Jain operators. *Stud. Univ. Babes-Bolyai Math.*, 63(4):525–537, 2018.

[30] M. Basit and F. Khan. An effective approach to solving the system of Fredholm integral equations based on Bernstein polynomial on any finite interval. *Alex. Eng. J.*, 61(4):2611–2623, 2022.

[31] S. Bernštein. Démonstration du théoreme de weierstrass fondée sur le calcul des probabilities. *Comm. Soc. Math. Kharkov*, 13:1–2, 1912.

[32] S. Bernstein. Sur la convergence de certaines suites de polynomes. *J. Math. Pures Appl.*, 15:345–358, 1936.

[33] M. Bodur, Ö. G. Yilmaz, and A. Ali. Approximation by Baskakov-Szász-Stancu operators preserving exponential functions. *Constr. Math. Anal.*, 1(1):1–8, 2018.

[34] R. Bojanic and F. Cheng. Rate of convergence of Bernstein polynomials for functions with derivatives of bounded variation. *J. Math. Anal. Appl.*, 141(1):136–151, 1989.

[35] R. Bojanic and M. Vuilleumier. On the rate of convergence of Fourier-Legendre series of functions of bounded variation. *J. Approx. Theory*, 31(1):67–79, 1981.

[36] B. Boyanov and V. Veselinov. A note on the approximation of functions in an infinite interval by linear positive operators. *Bull. Math. Soc. Sci. Math. Roum.*, 14(1):9–13, 1970.

[37] N. L. Braha, T. Mansour, M. Mursaleen, and T. Acar. Convergence of λ-Bernstein operators via power series summability method. *J. Appl. Math. Comput.*, 65(1):125–146, 2021.

[38] Q.-B. Cai. The Bézier variant of Kantorovich type λ-Bernstein operators. *J. Inequal. Appl.*, 2018(1):1–10, 2018.

[39] Q. B. Cai and R. Aslan. On a new construction of generalized q-Bernstein polynomials based on shape parameter λ. *Symmetry*, 13(10):1919, 2021.

[40] Q.-B. Cai, B.-Y. Lian, and G. Zhou. Approximation properties of λ-Bernstein operators. *J. Inequal. Appl.*, 2018(1):1–11, 2018.

[41] Q.-B. Cai, M. Sofyalıoglu, K. Kanat, and B. Cekim. Some approximation results for the new modification of Bernstein-Beta operators. *AIMS Math.*, 7(2):1831–1844, 2022.

[42] N. Çetin. Approximation and geometric properties of complex α-Bernstein operator. *Results Math.*, 74(1):40, 2019.

[43] N. Çetin. A new generalization of complex Stancu operators. *Math. Methods Appl. Sci.*, 42(16):5582–5594, 2019.

[44] X. Chen, J. Tan, Z. Liu, and J. Xie. Approximation of functions by a new family of generalized Bernstein operators. *J. Math. Anal. Appl.*, 450(1):244–261, 2017.

[45] F. Cheng. On the rate of convergence of Bernstein polynomials of functions of bounded variation. *J. Approx. Theory*, 39(3):259–274, 1983.

[46] D. Costarelli, M. Natale, and G. Vinti. Convergence results for nonlinear sampling Kantorovich operators in modular spaces. *Numer. Funct. Anal. Optim.*, 44(12):1276–1299, 2023.

[47] D. Costarelli and G. Vinti. Approximation by nonlinear multivariate sampling Kantorovich type operators and applications to image processing. *Numer. Funct. Anal. Optim.*, 34(8):819–844, 2013.

[48] D. Costarelli and G. Vinti. Order of approximation for nonlinear sampling Kantorovich operators in Orlicz spaces. *Comment. Math.*, 53(2), 2013.

[49] D. Costarelli, G. Vinti, et al. Sampling Kantorovich operators and their applications to approximation problems and to digital image processing. In *Proceedings of 8th International Conference on Applied Mathematics Simulation, Modelling (ASM'14)*, pages 22–24, 2014.

[50] R. A. DeVore and G. G. Lorentz. *Constructive approximation*, volume 303. Springer Science & Business Media, 1993.

[51] M. Dhamija, R. Pratap, and N. Deo. Approximation by Kantorovich form of modified Szász–Mirakyan operators. *Appl. Math. Comput.*, 317:109–120, 2018.

[52] T. Diogo. Collocation and iterated collocation methods for a class of weakly singular Volterra integral equations. *J. Comput. Appl. Math.*, 229(2):363–372, 2009.

[53] T. Diogo, N. Franco, and P. Lima. High order product integration methods for a Volterra integral equation with logarithmic singular kernel. *Commun. Pure Appl. Anal.*, 3(2):217–236, 2004.

[54] Z. Ditzian and V. Totik. *Moduli of smoothness*, volume 9. Springer Science & Business Media, 2012.

[55] J. Durrmeyer. Une formule d'inversion de la transformée de laplace. *Applications a la theorie des moments, These de 3e cycle Faculté des Sciences Univ., Paris*, 1967.

[56] Z. Finta. Remark on Voronovskaja theorem for q-Bernstein operators. *Stud. Univ. Babes-Bolyai Math.*, 56(2), 2011.

[57] A. D. O. Gadzhiev. Theorems of Korovkin type. *Mat. Zametki*, 20(5):781–786, 1976.

[58] S. G. Gal. *Approximation by complex Bernstein and convolution type operators*, volume 8. World scientific, 2009.

[59] G. Gasper and M. Rahman. *Basic Hypergeometric series*. Cambridge university press, 2004.

[60] M. Goyal. Approximation properties of complex genuine α–Bernstein-Durrmeyer operators. *Math. Methods Appl. Sci.*, 45(16):9799–9808, 2022.

[61] M. Goyal and P. Agrawal. Bézier variant of the Jakimovski–Leviatan–Păltănea operators based on appell polynomials. *Ann. Univ. Ferrara*, 63:289–302, 2017.

[62] S. S. Guo, G. F. Liu, and Z. J. Song. Approximation by Bernstein-Durrmeyer-Bezier operators in L_p spaces. *Acta Math. Sci. Ser. A Chin. Ed*, 30(6):1424–1434, 2010.

[63] V. Gupta. Approximation properties by Bernstein–Durrmeyer type operators. *Complex Anal. Oper. Theory*, 7:363–374, 2013.

[64] V. Gupta and M. A. Noor. Convergence of derivatives for certain mixed Szász–Beta operators. *J. Math. Anal. Appl.*, 321(1):1–9, 2006.

[65] V. Gupta, G. Tachev, and A. M. Acu. Modified Kantorovich operators with better approximation properties. *Numer. Algorithms*, 81(1):125–149, 2019.

[66] A. Holhos. Quantitative estimates for positive linear operators in weighted spaces. *Gen. Math*, 16(4):99–110, 2008.

[67] G. C. Jain. Approximation of functions by a new class of linear operators. *J. Aust. Math. Soc.*, 13(3):271–276, 1972.

[68] A. Kajla and T. Acar. Blending type approximation by generalized Bernstein-Durrmeyer type operators. *Miskolc Math. Notes*, 19(1):319–336, 2018.

[69] A. Kajla and P. N. Agrawal. Szász-Kantorovich type operators based on Charlier polynomials. *Kyungpook Math. J.*, 56(3):877–897, 2016.

[70] L. V. Kantorovich. Sur certains développements suivant les polynômes de la forme de s. *Bernstein, I, II, CR Acad. URSS*, 563(568):595–600, 1930.

[71] M. Kara and N. Mahmudov. Approximation theorems for complex α-Bernstein–Kantorovich operators. *Results Math.*, 79(2):72, 2024.

[72] J. King. The Lototsky transform and Bernstein polynomials. *Can. J. Math*, 18:89–91, 1966.

[73] J. King. Positive linear operators which preserve x^2. *Acta Math. Hung.*, 99(3):203–208, 2003.

[74] P. Korovkin. On convergence of linear positive operators in the space of continuous functions. In *Dokl. Akad. Nauk SSSR*, volume 90, pages 961–964, 1953.

[75] A. Kumar. Approximation properties of generalized λ-Bernstein–Kantorovich type operators. *Rend. Circ. Mat. Palermo (2)*, 70(1):505–520, 2021.

[76] A. Kumar and R. Pratap. Approximation by modified Szász-Kantorovich type operators based on Brenke type polynomials. *Ann. Univ. Ferrara*, 67(2):337–354, 2021.

[77] A. Kumar and R. Pratap. Approximation by modified Szász-Kantorovich type operators based on Brenke type polynomials. *Ann. Univ. Ferrara.*, 67(2):337–354, 2021.

[78] A. S. Kumar and T. Acar. Approximation by generalized Baskakov–Durrmeyer–Stancu type operators. *Rend. Circ. Mat. Palermo (2)*, 65(3):411–424, 2016.

[79] A. S. Kumar and S. Bajpeyi. Direct and inverse results for Kantorovich type exponential sampling series. *Results Math.*, 75(3):1–17, 2020.

[80] A. S. Kumar, P. Kumar, and P. Devaraj. Approximation of discontinuous functions by Kantorovich exponential sampling series. *Anal. Math. Phys.*, 12(3):1–21, 2022.

[81] N. I. Mahmudov. Approximation by Bernstein–Durrmeyer-type operators in compact disks. *Appl. Math. Lett.*, 24(7):1231–1238, 2011.

[82] N. I. Mahmudov, M. Kara, et al. Approximation theorems for generalized complex Kantorovich-type operators. *J. Appl. Math.*, 2012:1–14, 2012.

[83] K. Maleknejad, E. Hashemizadeh, and R. Ezzati. A new approach to the numerical solution of Volterra integral equations by using Bernstein's approximation. *Commun. Nonlinear Sci. Numer. Simul.*, 16(2):647–655, 2011.

[84] S. Micula. An iterative numerical method for fractional integral equations of the second kind. *J. Comput. Appl. Math.*, 339:124–133, 2018.

[85] G. Mirakjan. Approximation of continuous functions with the aid of polynomials. In *Dokl. Akad. Nauk SSSR*, volume 31, pages 201–205, 1941.

[86] L. N. Mishra, A. Kumar, and V. N. Mishra. Approximation of functions by Lupas-Kantorovich-Stancu type operators based on polya distribution. *Appl. Math*, 16(2):259–268, 2022.

[87] V. N. Mishra, K. Khatri, and L. N. Mishra. Inverse result in simultaneous approximation by Baskakov-Durrmeyer-Stancu operators. *J. Inequal. Appl.*, 2013(1):1–11, 2013.

[88] V. N. Mishra, K. Khatri, and L. Narayan Mishra. Some approximation properties of Baskakov-Beta-Stancu type operators. *J. Calc. Var.*, 2013, 2013.

[89] V. N. Mishra, P. Sharma, and L. N. Mishra. On statistical approximation properties of q-Baskakov–Szász–Stancu operators. *J. Egypt. Math. Soc.*, 24(3):396–401, 2016.

[90] S. A. Mohiuddine, T. Acar, and A. Alotaibi. Construction of a new family of Bernstein-Kantorovich operators. *Math. Methods Appl. Sci.*, 40(18):7749–7759, 2017.

[91] M. Mursaleen and K. J. Ansari. Approximation of q-Stancu-Beta operators which preserve x^2. *Bull. Malays. Math. Sci. Soc.*, 40(4):1479–1491, 2017.

[92] M. Mursaleen and A. Khan. Statistical approximation properties of modified q-Stancu-Beta operators. *Bull. Malays. Math. Sci. Soc.(2)*, 36(3):683–690, 2013.

[93] A. Olgun, F. Taşdelen, and A. Erençin. A generalization of Jain's operators. *Appl. Math. Comput.*, 266:6–11, 2015.

[94] M. A. Özarslan. Local approximation behavior of modified SMK operators. *Miskolc Math. Notes*, 11(1):87–99, 2010.

[95] M. A. Özarslan. Approximation properties of Jain-Stancu operators. *Filomat*, 30(4):1081–1088, 2016.

[96] M. A. Özarslan and H. Aktuğlu. Local approximation properties for certain King type operators. *Filomat*, 27(1):173–181, 2013.

[97] P. Patel and M. Bodur. On integral generalization of Lupaş-Jain operators. *Filomat*, 36(3):729–740, 2022.

[98] R. Plato. Fractional multistep methods for weakly singular Volterra integral equations of the first kind with perturbed data. *Numer. Funct. Anal. Optim.*, 26(2):249–269, 2005.

[99] D. Popa. An intermediate Voronovskaja type theorem. *Rev. Real Acad. Cienc. Exactas Fis. Nat. Ser. A-Mat.*, 113:2421–2429, 2019.

[100] D. Popa. Intermediate Voronovskaja type results for the Lototsky–Bernstein type operators. *Rev. Real Acad. Cienc. Exactas Fis. Nat. Ser. A-Mat.*, 114(1):12, 2020.

[101] R. Pratap. The family of λ -Bernstein-Durrmeyer operators based on certain parameters. *Mathe. Found.of Comput.*, 6(3):546–557, 2023.

[102] S. Rahman, M. Mursaleen, and A. M. Acu. Approximation properties of λ-Bernstein-Kantorovich operators with shifted knots. *Math. Methods Appl. Sci.*, 42(11):4042–4053, 2019.

[103] R. Ruchi, N. Ispir, and P. Agrawal. Kantorovich variant of a new kind of q-Bernstein–Schurer operators. *Math. Methods Appl. Sci.*, 40(16):5687–5706, 2017.

[104] A. Senapati, A. Kumar, and T. Som. Convergence analysis of modified Bernstein–Kantorovich type operators. *Rend. Circ. Mat. Palermo, II. Ser*, pages 1–16, 2023. https://doi.org/10.1007/s12215-022-00860-6.

[105] H. Srivastava and V. Gupta. Rate of convergence for the Bézier variant of the Bleimann–Butzer–Hahn operators. *Appl. Math. Lett.*, 18(8):849–857, 2005.

[106] H. Srivastava and X.-M. Zeng. Approximation by means of the Szász-Bézier integral operators. *Int. J. Pure Appl. Math.*, 14:283–294, 2004.

[107] H. M. Srivastava, F. Özger, and S. A. Mohiuddine. Construction of Stancu-type Bernstein operators based on Bézier bases with shape parameter λ. *Symmetry*, 11(3):316, 2019.

[108] O. Szasz. Generalization of S. Bernstein's polynomials to the infinite interval. *J. Res. Nat. Bur. Standards*, 45(3):239–245, 1950.

[109] F. Usta. On new modification of Bernstein operators: theory and applications. *Iran. J. Sci. Technol. Trans. A: Sci.*, 44(4):1119–1124, 2020.

[110] F. Usta. Bernstein approximation technique for numerical solution of Volterra integral equations of the third kind. *Comput. Appl. Math.*, 40(5):161, 2021.

[111] F. Usta, M. Akyiğit, F. Say, and K. J. Ansari. Bernstein operator method for approximate solution of singularly perturbed Volterra integral equations. *J. Math. Anal. Appl.*, 507(2):125828, 2022.

[112] K. Weierstrass. Über die analytische darstellbarkeit sogenannter willkürlicher functionen einer reellen veränderlichen. *Sitzungsber. Kgl. Preuss. Akad. Wiss.*, 2(633-639):364, 1885.

[113] Z. Ye, X. Long, and X.-M. Zeng. Adjustment algorithms for Bézier curve and surface. In *2010 5th International conference on computer science & education*, pages 1712–1716. IEEE, 2010.

[114] X. Zeng and A. Piriou. On the rate of convergence of two Bernstein-Bézier type operators for bounded variation functions. *J. Approx. Theory*, 95(3):369–387, 1998.

[115] X.-M. Zeng, V. Gupta, and O. Agratini. Approximation by Bézier variant of the Baskakov-Kantorovich operators in the case $0 < \alpha < 1$. *Rocky Mountain J. Math.*, 44(1):317–327, 2014.

LIST OF PUBLISHED/COMMUNICATED/PREPRINT ARTICLES

Journal Articles/Preprints

1. **A. Senapati**, A. Kumar, T. Som, "Convergence analysis of modified Bernstein–Kantorovich type operators", **Rendiconti del Circolo Matematico di Palermo Series 2**, 2023. pp. 1–16, vol. 2023. doi: 10.1007/s12215-022-00860-6.

2. A. Kumar, **A. Senapati**, T. Som, "Approximation by Szász–Kantorovich type operators associated with d-symmetric d-orthogonal polynomials of Brenke type", **The Journal of Analysis**, vol. 32, no. 1, pp. 555–571, 2024. doi: 10.1007/s41478-023-00668-2.

3. **A. Senapati**, A. Kumar, T. Som, "On stancu-type integral generalization of modified jain operators", **Filomat**, vol. 37, no. 22, pp. 7607–7622, 2023. doi: 10.2298/FIL2322607S.

4. A. Kumar, **A. Senapati**, T. Som, "Convergence properties of new α-Bernstein–Kantorovich type operators", **Indian Journal of Pure and Applied Mathematics** vol. 2024, pp. 1–14, 2024. doi: 10.1007/s13226-024-00577-5.

5. **A. Senapati**, A. Kumar, T. Som, "Blending type approximation by λ-Bernstein-Beta type operators", **Filomat**, *(17 pages, Accepted, 2024).*

6. **A. Senapati**, A. Kumar, T. Som, "Rate of Convergence of λ-Bernstein-Beta type operators", *(18 pages, Communicated, 2023).*

7. A. Kumar, **A. Senapati**, T. Som, "Quantitative upper estimation of a new class of Complex Durrmeyer operators in its analytic domain", *(10 pages, Communicated,2024).*

8. **A. Senapati**, A. Kumar, T. Som, "Numerical solution of Volterra integral equations using λ-Bernstein operators", *(13 pages, Communicated,2024).*

List of Papers presented in National and International Conferences

1. **A. Senapati**, A. Kumar, and T. Som, "Convergence analysis of new α-Bernstein-Kantorovich type operators," in *3rd International Conference on Non-linear Analysis And Optimization (ICNAAO)*, NIT, Durgapur, West Bengal, India, 2023.

2. **A.Senapati**, A. Kumar, and T. Som, "Convergence properties of modified Jain operators and a new variant of α-Bernstein-Kantorovich operators," in *Conference on Functional Analysis and Fractals (CFAF)*, IIIT Allahbad, India, 2024.