List of publications of Lucian Coroianu

1. Ph.D thesis

Title of the thesis: "FUZZY APPROXIMATION OPERATORS"
Institution: "Babeş-Bolyai" University from Cluj-Napoca
Domain: Mathematics
Adviser: Prof. dr. Petru Blaga
Date of public defense: 20.09.2013

2. Books and monographs

1. A. I. Ban, **L. Coroianu**, P. Grzegorzewski, Fuzzy numbers: approximations, ranking and applications, Institute of Computer Science, Polish Academy of Science, 2015, ISBN: 978-83-63159-21-4.
2. B. Bede, **L. Coroianu**, S. G. Gal, Approximation by Max-Product type operators, Springer, 2016, ISBN: 978-3-319-34189-7.
3. **L. Coroianu**, Interactive arithmetic and metrical structures on fuzzy numbers, Editura Universităţii din Oradea, 2015, ISBN: 978-606-10-1698-3.
4. **L. Coroianu,** Results in nonlinear approximation, Editura Universităţii din Oradea, 2024, ISBN: 978-606-10-2341-7.

3. Chapters in books

1. **L. Coroianu**, S. G. Gal, Approximation by max-product operators of Kantorovich type, Mathematical Analysis in Interdisciplinary Research, Springer, 2021, 135-168, ISBN: 978-3-030-84720-3.

4. Courses

1. A. M. Bica, A Cătaş, **L. Coroianu,** Curs de analiză matematică, Editura Universităţii din Oradea, 2019, ISBN: 978-606-10-2024-9.

5. Didactic materials

1. A. M. Bica, A. Cătaş, **L. Coroianu**, Analiză matematică, suport de seminar.

6. Citations (by 28 July 2024)

1722 citations in Google Scholar
Google Scholar H-index: 25
869 citations in Web of Science with 674 independent citations
Web of Science H-index: 18

7. Selection of 10 relevant papers

1. **L. Coroianu**, S. G. Gal, Localization results for the Bernstein max-product operator, Applied Mathematics and Computation, 231 (2014) 73-78.
2. A. I. Ban, **L. Coroianu**, Simplifying the search for effective ranking of fuzzy numbers, IEEE Transactions on Fuzzy Systems, 23 (2015) 327-339.
3. **L. Coroianu**, Best Lipschitz constants of solutions of quadratic programs, Journal of Optimization Theory and Applications, 170 (2016) 853-875.
4. **L. Coroianu**, L. Stefanini, Properties of fuzzy transform obtained from L_p minimization and a connection with Zadeh's extension principle, Information Sciences, 478 (2019) 331-354.
5. **L. Coroianu**, R. Fullér, M. Gagolewski, S. James, Constrained ordered weighted averaging aggregation with multiple comonotone constraints, Fuzzy Sets and Systems, 395 (2020) 21-39.
6. **L. Coroianu**, D. Costarelli, S. G. Gal, G. Vinti, Approximation by max-product sampling Kantorovich operators with generalized kernels, Analysis and Applications, 19, Issue 2 (2021) 219-244.
7. **L. Coroianu**, Trapezoidal approximations of fuzzy numbers using quadratic programs, Fuzzy Sets and Systems, 417 (2021) 71-92.
8. **L. Coroianu**, S. G. Gal, On the inequalities of Turán, Bernstein and Erdős–Lax in quaternionic setting, Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas, 115 (2021), paper no. 187.
9. **L. Coroianu**, D. Costarelli, U. Kadak, Quantitative estimates for neural network operators implied by the asymptotic behaviour of the sigmoidal activation functions, Mediterranean Journal of Mathematics, 19 (5) (2022), paper no. 211.
10. **L. Coroianu**, Bernstein inequalities for quaternionic polynomials in the setting of generalized polynomials, Journal of Mathematical Analysis and Applications, 538 (1) (2024), 128383.

8. Papers indexed in Web of Science

1. G. Anatassiou, S. G. Gal, **L. Coroianu**, Approximation by a nonlinear Cardaliaguet-Euvrard neural network operator of max-product kind, Journal of Computational Analysis and Applications, 12 No. 2 (2010) 396-406.

2. B. Bede, **L. Coroianu**, S. G. Gal, Approximation and shape preserving properties of the nonlinear Favard-Szasz-Mirakjan operator of max-product kind, Filomat, 24 Issue 3 (2010), No. 3, 55-72.

3. B. Bede, **L. Coroianu**, S. G. Gal, Approximation and shape preserving properties of the nonlinear Meyer-Konig and Zeller operator of max-product kind, Numerical Functional Analysis and Optimization, 31 Issue 3 (2010), 232-253.

4. **L. Coroianu** and S. G. Gal, Approximation by nonlinear Lagrange interpolation operators of max-product kind on Chebyshev knots of second kind, Journal of Computational Analysis and Applications, 13 Issue 2 (2011) 211-224.

5. **L. Coroianu**, Best Lipschitz constant of the trapezoidal approximation operator preserving the expected interval, Fuzzy Sets and Systems, 165 Issue 1 (2011) 81-97.

6. B. Bede, L. Coroianu, S. G. Gal, Approximation and shape preserving properties of the truncated Baskakov operator of max-product kind, Revista De La Union Matematica Argentina, 52 (2011) 89-107.

7. A. I. Ban, A. Brandas, **L. Coroianu**, O. Nica. C. Negrutiu, Approximations of fuzzy numbers by trapezoidal fuzzy numbers preserving the ambiguity and value, Computers and Mathematics with Applications, 161 (2011) 1379-1401.

8. A. I. Ban, L. **Coroianu**, Metric properties of the nearest extended parametric fuzzy number and applications, International Journal of Approximate Reasoning, 52 (2011) 488-500.

9. **L. Coroianu**, S. G. Gal, Classes of functions with improved estimates in approximation by the max-product Bernstein operator, Analysis and Applications 9 (2011) 249-274.

10. A. I. Ban, **L. Coroianu**, P. Grzegorzewski, Trapezoidal approximation and aggregation, Fuzzy Sets and Systems, 177 (2011) 45-59.

11. M. Balaj, **L. Coroianu**, Matching theorems and simultaneous relation problems, Bulletin of the Korean Mathematical Society, 48 (2011) 939-949.

12. A. I. Ban, **L. Coroianu**, Discontinuity of the trapezoidal fuzzy number-valued operators preserving core, Computers and Mathematics with Applications, 62 (2011) 3103-3110.

13. **L. Coroianu**, Lipschitz functions and fuzzy number approximations, Fuzzy Sets and Systems, 200 (2012), 116-135.

14. A. I. Ban, **L. Coroianu**, Nearest interval, triangular and trapezoidal approximation of fuzzy number preserving ambiguity, International Journal of Approximate Reasoning, 5 (2012), 805-836.

15. M. Balaj, **L. Coroianu**, S. G. Gal, S. Muresan, Iterations and fixed points for Bernstein max-product operator, Fixed Point Theory 14 (2013) 39-52. IF=0.548,SRI=0.263.

16. **L. Coroianu**, S.G. Gal, Localization results for the Meyer-Konig and Zeller operator of max-product kind, Numerical Functional Analysis and Optimization 34, (2013) 713-727.

17. **L. Coroianu**, M. Gagolewski, P. Grzegorzewski, Nearest piecewise approximation of fuzzy numbers, Fuzzy Sets and Systems, 233 (2013) 26-51.

18. **L. Coroianu**, S. G. Gal, Localization results for the Bernstein max-product operator, Applied Mathematics and Computation, 231 (2014) 73-78.

19. **L. Coroianu**, S. G. Gal, B. Bede, Approximations of fuzzy numbers by nonlinear Bernstein operators of max-product kind, Fuzzy Sets and Systems 257 (2014) 41-66.

20. A. I. Ban, L. **Coroianu**, Existence, uniqueness and continuity of trapezoidal approximation under a general condition, Fuzzy Sets and Systems 257 (2014) 3-22.

21. **L. Coroianu**, S. G. Gal, Saturation and inverse results for the Bernstein max-product operator, Periodica Mathematica Hungarica, 69 (2014) 126-133.

22. A. I. Ban, **L. Coroianu**, Simplifying the search for effective ranking of fuzzy numbers, IEEE Transactions on Fuzzy Systems, 23 (2015) 327-339.

23. A. I. Ban, **L. Coroianu**, Existence, uniqueness, calculus and properties of triangular approximation under a general condition, International Journal of Approximate Reasoning, 62 (2015) 1-26.

24. **L. Coroianu**, Necessary and sufficient conditions for the equality of the interactive and non-interactive sums of two fuzzy numbers, Fuzzy Sets and Systems, 283 (2016) 40-55.

25. A. I. Ban, **L. Coroianu**, A. Khastan, Conditioned weighted L-R approximations of fuzzy numbers, Fuzzy Sets and Systems, 283 (2016) 40-55.

26. A. I. Ban, **L. Coroianu**, Symmetric triangular approximations of fuzzy numbers under a general condition, Soft Computing, 20 (2016) 1249-1261.

27. **L. Coroianu**, L. Stefanini, General approximation of fuzzy numbers by F-transform, Fuzzy Sets and Systems, 288 (2016) 46-74.

28. **L. Coroianu**, Best Lipschitz constants of solutions of quadratic programs, Journal of Optimization Theory and Applications, 170 (2016) 853-875.

29. **L. Coroianu**, S. G. Gal, B. D. Opris, S. Trifa, Feller's Scheme in Approximation by Nonlinear Possibilistic Integral Operators, Numerical Functional Analysis and Optimization, 38 (2017) 327-343.

30. **L. Coroianu**, S. G. Gal, L^{p} approximation by truncated max-product sampling operators of Kantorovich-type based on Fejer kernel, Journal of Integral Equations and Applications, 29 (2017) 349-364 .

31. **L. Coroianu**, R. Fullér, On the constrained OWA aggregation problem with single constraint, Fuzzy Sets and Systems, 332 (2018) 37-43.

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38. S. V. Oprea, A. Bâra, G. Ifrim, **L. Coroianu,** Day-ahead electricity consumption optimization algorithms for smart homes, Computers and Industrial Engeneering, 135 (2019) 382-401.

39. **L. Coroianu**, M. Gagolewski, P. Grzegorzewski, Piecewise linear approximation of fuzzy numbers: algorithms, arithmetic operations and stability of characteristics, Soft Computing, 23 (2019) 9491-9505.

40. **L. Coroianu**, S. G. Gal, Approximation by max-product operators of Kantorovich type, Studia Univ. Babes-Boliay, Mathematica, 64, No. 2 (2019) 207-223.

41. **L. Coroianu**, D. Costarelli, S. G. Gal, G. Vinti, Approximation by multivariate max-product Kantorovich-type operators and learning rates of least-squares regularized regression, Communications on Pure and Applied Analysis, 19, Isuue 8 (2020) 4213-4225.

42. S. V. Oprea, A. Bâra, D. Preotescu, R. A. Bologa, **L. Coroianu**, A Trading Simulator Model for the Wholesale Electricity Market, IEEE Access, 8 (20220) 184210-184230.

43. **L. Coroianu**, R. Fullér, M. Gagolewski, S. James, Constrained ordered weighted averaging aggregation with multiple comonotone constraints, Fuzzy Sets and Systems, 395 (2020) 21-39.

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47. **L. Coroianu**, S. G. Gal, On the inequalities of Turán, Bernstein and Erdős–Lax in quaternionic setting, Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas, 115 (2021), paper no. 187.

48. M Cantarini, **L Coroianu**, D Costarelli, SG Gal, G Vinti, Inverse result of approximation for the max-product neural network operators of the Kantorovich type and their saturation order, Mathematics, 10 (2022), article no. 63.

49. **L. Coroianu**, D. Costarelli, U. Kadak, Quantitative estimates for neural network operators implied by the asymptotic behaviour of the sigmoidal activation functions, Mediterranean Journal of Mathematics, 19 (2022), article no. 211.

50. **L. Coroianu**, R. Fullér, I. Á. Harmati, Best approximation of OWA Olympic weights under predefined level of orness, Fuzzy Sets and Systems, 448 (2022), 127-144.

51. U. Kadak, **L. Coroianu**, Integrating multivariate fuzzy neural networks into fuzzy inference system for enhanced decision making, Fuzzy Sets and Systems, 470 (2023), 108668.

52. U. Kadak, D. Costarelli, **L. Coroianu**, Neural network operators of generalized fractional integrals equipped with a vector-valued function, Chaos, Solitons and Fractals, 177 (2023), 114272.

53. I. Á. Harmati, **L. Coroianu**, R. Fullér, The Median under Orness, Fuzzy Sets and Systems, 481 (2024), 108901.

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9. Papers indexed in Scopus, Mathematical Reviews, Zentralblatt für Mathematik, Google Scholar, et

1. B. Bede, **L. Coroianu** and S. G. Gal, Approximation and shape preserving properties of the Bernstein operator of max-product kind, Intern, J. Math. Math. Sci., vol 2009, Article ID 590589, 26 pages, 2009. doi:10.1155/2009/590589.

2. Adrian I. Ban and **L. Coroianu**, A method to obtain trapezoidal approximations of intuitionistic fuzzy numbers from trapezoidal approximations of fuzzy numbers, Notes on Intuitionistic Fuzzy Sets, 15 (2009), 13-25.

3. **L. Coroianu**, S. G. Gal, Approximation by nonlinear generalized sampling operators of max-product kind, Sampling Theory in Signal and Image Processing, 9 No 1-3 (2010) 59-75.

4. **L. Coroianu**, S. G. Gal, Approximation by nonlinear Hermite-Fejer interpolation operators of max-product kind on Chebyshev nodes, Revue D'Analyze Numerique et de theorie de l'approximation, 39 No. 1 (2010) 21-31.

5. S. G. Gal, B. Bede and **L. Coroianu**, Approximation and shape preserving properties of the nonlinear Bleimann-Butzer-Hahn operator of max-product kind, Commm. Math. Univ. Carol., 51, 3 (2010) 397-415.

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8. **L. Coroianu**, S. G. Gal, Approximation by max-product Langrage interpolation operators, Studia Univ. Babes-Boliay, Mathematica, 56 No 2 (2011) 315-325.

9. A. I. Ban, **L. Coroianu**, Approximate solutions preserving parameters of intuitionistic fuzzy linear systems, Notes on Intuitionistic Fuzzy Sets, 17 No 1 (2011) 58-70.

10. **L. Coroianu**, S. G. Gal, Approximation by max-product sampling operators based on sinc-type kernels, Sampling Theory in Signal and Image Processing, 10 No 3 (2011) 211-230.

11. **L. Coroianu**, S. G. Gal, Global smoothness preservation by some nonlinear max-product operators, Matematicki Vesnik, 64 No 4 (2012), 303-315.

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15. **L. Coroianu**, S. G. Gal, On copositive approximation by bivariate polynomials on rectangular grids, Journal of Applied Functional Analysis, vol 9 No 3-4 (2014) 272-276.

16. **L. Coroianu**, S. G. Gal, Localization results for the non-truncated max-product sampling operators based on Fejer and Sinc-type kernels, Demonstratio Mathematica, 49 (2016), 38-49.

17. **L. Coroianu,** D. Bongiorno, Uniform convergence for sequences of best L^{p} approximation, arXiv preprint arXiv:2111.15324.

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10. Papers published in volumes of conferences based on a reviewing process

1. A. I. Ban, **L. Coroianu**, Continuity and Additivity of the Trapezoidal Approximation Preserving the Expected Interval Operator, International Fuzzy Systems Association World Congress, Lisbone 20-24

   July, 2009, 798-802.

2. A.I. Ban and **L. Coroianu**, Triangular, trapezoidal and parametric approximations of intuitionistic fuzzy numbers and applications, Ninth International workshop on Intuitionistic Fuzzy Sets and Generalized Nets, Warsaw, October 8, 2010.

3. **L. Coroianu**, S. G. Gal, B. Bede, Approximations of fuzzy numbers by nonlinear Bernstein operators of max-product kind, EUSFLAT-LFA Conference, France, Aix-Les-Bains, 18-23 July 2011, pp 734-741.

4. A. I. Ban, **L. Coroianu**, Translation invariance and scale invariance of approximations of fuzzy numbers, EUSFLAT-LFA Conference, France, Aix-Les-Bains, 18-23 July 2011, pp 742-748.

5. A. I. Ban, A. M. Bica, **L. Coroianu**, Metric Properties of the Extended Weighted Semi-trapezoidal Approximations of Fuzzy Numbers and Their applications, Advances in Computational Intelligence, Communications in Computer and Information Science, 299 (2012) 29-38.

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8. **L. Coroianu**, R. Fullér, On Multiplication of Interactive fuzzy numbers, Eleventh IEEE International Symposium on Intelligent Systems and Informatics, (SISY 2013), September 26-28, Subotica, Serbia, pp. 181-185.

9. **L. Coroianu**, R. Fullér, On Additivity of the Weighted Possibilistic Mean Operator, Fourteenth IEEE International Symposium on Computational Intelligence and Informatics, November 19-21, 2013, Budapest, Hungary, pp. 303-308.

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12. **L. Coroianu**, L. Stefanini, A note on Fuzzy-Transform approximation of fuzzy numbers, Annual Conference of the North American Fuzzy Information Processing Society (NAFIPS) 2015, Redmond, USA.

13. A. I. Ban, **L. Coroianu**, Ranking of L-R fuzzy numbers, Annual Conference of the North American Fuzzy Information Processing Society NAFIPS (2015), Redmond, USA.

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15. **L. Coroianu**, R. Fullér, Characterization of the level sets for interactive additions, 17-th International Symposium on Computational Intelligence and Informatics (CINTI 2016), November 17-19, Budapest, Hungary, pp. 35-40.

16. **L. Coroianu**, R. Fuller, Minimum of constrained OWA aggregation problem with a single constraint, In: Fullér R., Giove S., Masulli F. (eds) Fuzzy Logic and Applications. WILF 2018. Lecture Notes in Computer Science, vol 11291 (2019), pp. 183-192. Springer, Cham.

17. **L. Coroianu**, M. Gagolewski, Penalty-Based Data Aggregation in Real Normed Vector Spaces, New Trends in Aggregation Theory, 160-171, Springer, Cham.

Date: ö4.08 .2024 **Coroianu Lucian**