

## LIST OF SCIENTIFIC PUBLICATIONS

### DOCTORAL THESIS

Adrian Nicoale Branga, *Contributions to the theory of spline functions and applications* (in Romanian), Babeş-Bolyai University, Cluj- Napoca, Romania, 200 pg, 2003, supervisor: Professor Ph.D. Alexandru Lupaş.

### BOOKS AND MONOGRAPHS

1. Amelia Bucur, Adrian Nicolae Branga, *Theory and applications of numerical approximation techniques*, Cambridge Scholars Publishing, Newcastle upon Tyne, United Kingdom, ISBN (10): 1-5275-9383-5, ISBN (13): 978-1-5275-9383-1, 246 pg, 2024.
2. Adrian Nicolae Branga, Alina Totoi, *Numerical methods. Seminar lecture notes and practical laboratory work* (in Romanian), Techno Media Publishing House, Sibiu, Romania, ISBN 978-606-616-384-2, 202 pg, 2020.
3. Adrian Nicoale Branga, *Advanced numerical computation* (in Romanian), Lucian Blaga University Publishing House, Sibiu, Romania, ISBN 978-606-12-0917-0, 200 pg, 2014.
4. Adrian Nicoale Branga, *Numerical methods* (in Romanian), vol. 1, Alma Mater Publishing House, Sibiu, Romania, ISBN 978 973-632-793-3, ISBN vol. 978-973-632-794-0, 202 pg, 2013.
5. Adrian Nicoale Branga, *Approximation and optimization by spline functions* (in Romanian), Casa Cărţii de Ştiinţă Publishing House, Cluj-Napoca, Romania, ISBN 978-973-133-550-6, 350 pg, 2009.
6. Adrian Nicolae Branga, Silviu Crăciunaş, Nicolae Secelean, *Functional analysis and approximation theory* (in Romanian), Casa Cărţii de Ştiinţă Publishing House, Cluj-Napoca, Romania, ISBN 978-973-133-545-2, 303 pg, 2009.
7. Adrian Nicolae Branga, Dana Simian, *The Radon transform and applications* (in Romanian), Transilvania University Publishing House, Braşov, Romania, ISBN 973-635-338-9, 121 pg, 2004.
8. Adrian Nicolae Branga, *Programming problems* (in Romanian), Lucian Blaga University Publishing House, Sibiu, Romania, ISBN 973-651-020- 4, 376 pg, 1999.
9. Emil Marin Popa, Adrian Nicolae Branga, *The C/C++ programming language: theory and programs* (in Romanian), Lucian Blaga University Publishing House, Sibiu, Romania, ISBN 973-95604-1-4, 260 pg, 1997.
10. Alexandru Lupaş, Florin Sofonea, Adrian Nicolae Branga, *Numerical analysis: algorithms and problems* (in Romanian), Lucian Blaga University Publishing House, Sibiu, Romania, ISBN 973-9280-39-0, 142 pg, 1997.

**ARTICLES**  
**PUBLISHED IN INTERNATIONAL SCIENTIFIC JOURNALS**

**a) Scientific Articles indexed in Web of Science Core Collection**  
**(Science Citation Index Expanded, Emerging Sources Citation Index)**

1. Abdelkader Belhenniche, Amelia Bucur, Liliana Guran, Adrian Nicolae Branga, *Using computational techniques of fixed point theory for studying the stationary infinite horizon problem from the financial field*, AIMS Mathematics, ISSN 2473-6988, vol. 9, no. 1, pp 2369-2388, 2024. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
2. Adrian Nicolae Branga, Ion Marian Olaru, *Generalized perturbed contractions with related fixed point results*, Carpathian Journal of Mathematics, ISSN 1584-2851, vol. 39, no. 3, pp 633–640, 2023. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
3. Adrian Nicolae Branga, Ion Marian Olaru, *Generalized contractions and fixed point results in spaces with altering metrics*, Mathematics, ISSN 2227-7390, vol. 10, no. 21, art. 4083, pp 1-13, 2022. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
4. Adrian Nicolae Branga, Ion Marian Olaru, *Some fixed point results in spaces with perturbed metrics*, Carpathian Journal of Mathematics, ISSN 1584-2851, vol. 38, no. 3, pp 641–654, 2022. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
5. Adrian Nicolae Branga, *Some conditions for the existence and uniqueness of monotonic and positive solutions for nonlinear systems of ordinary differential equations*, Electronic Research Archive, ISSN 2688-1594, vol. 30, no. 6, pp 1999 - 2017, 2022. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
6. Adrian Nicolae Branga, *Fixed point results for F-contractions in cone metric spaces over topological modules and applications to integral equations*, Fractal and Fractional, ISSN 2504-3110, vol. 6, no. 1, art. 16, pp 1-14, 2022. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
7. Adrian Nicolae Branga, Ion Marian Olaru, *An application of the fixed point theory to the study of monotonic solutions for systems of differential equations*, Mathematics, ISSN 2227-7390, vol. 8, no. 7, art. 1183, pp 1-8, 2020. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
8. Adrian Nicolae Branga, Ion Marian Olaru, *Cone metric spaces over topological modules and fixed point theorems for Lipschitz mappings*, Mathematics, ISSN 2227-7390, vol. 8, no. 5, art. 724, pp 1-14, 2020. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
9. Ion Marian Olaru, Adrian Nicolae Branga, *Some fixed point results in  $D^*$ -quasimetric spaces*, Journal of Fixed Point Theory and Applications, ISSN 1661-7738, vol. 20, no. 2, art. 78, pp 1-10, 2018. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)

10. Adrian Nicolae Branga, Eugen Constantinescu, *On a property of the spline functions*, Journal of Science and Arts, ISSN 1844-9581, vol. 11, no. 4 (17), pp 413-416, 2011. (Clarivate Analytics - Web of Science Core Collection - Emerging Sources Citation Index)
11. Adrian Nicolae Branga, Mugur Acu, *A remarkable equality referring to spline functions in Hilbert spaces*, Filomat, ISSN 0354-5180, vol. 24, no. 4, pp 121-127, 2010. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)
12. Adrian Nicolae Branga, *Natural splines of Birkhoff type and optimal approximation*, Journal of Computational Analysis and Applications, ISSN 1521-1398, vol. 7, no. 1, pp 81-88, 2005. (Clarivate Analytics - Web of Science Core Collection - Science Citation Index Expanded)

#### **b) Scientific Articles indexed in other International Databases**

13. Andra-Maria Stoica, Adrian Nicolae Branga, Ioan Popa, *An inequality for the intermediate point in Lagrange's theorem, using quadrature formulas*, European Journal of Theoretical and Applied Sciences, ISSN 2786-7447, vol. 1, no. 6, pp 269-274, 2023. (IDB: Google Scholar, Zenodo, OpenAIRE, ISSUU, Academia.edu, Scribd, Europub, Scilit, Semantic Scholar, Dimensions, Lens.org, Core, WorldCat, Base - Bielefeld University Library, Hollis - Harvard Library)
14. Eugen Constantinescu, Adrian Nicolae Branga, *Applications of the improved Fejer's sum*, General Mathematics, ISSN 1221-5023, vol. 20, no. 5, pp 31-36, 2012. (IDB: Zentralblatt Math)
15. Ion Marian Olaru, Adrian Nicolae Branga, Anca Oprea, *Common fixed point results in b-cone metric spaces over topological vector spaces*, General Mathematics, ISSN 1221-5023, vol. 20, no. 1, pp 57-67, 2012. (IDB: Zentralblatt Math)
16. Ion Marian Olaru, Adrian Nicolae Branga, *Common fixed point results in b-K-metric spaces*, General Mathematics, ISSN 1221-5023, vol. 19, no. 4, pp 51-59, 2011. (IDB: Zentralblatt Math)
17. Adrian Nicolae Branga, *A generalization of some classical quadrature formulas*, General Mathematics, ISSN 1221- 5023, vol. 18, no. 1, pp 19-23, 2010. (IDB: Zentralblatt Math)
18. Mugur Acu, Adrian Nicolae Branga, Daniel Breaz, Nicoleta Breaz, Eugen Constantinescu, Alina Totoi, *On some integral operators on analytic functions*, General Mathematics, ISSN 1221-5023, vol. 17, no. 4, pp 205-210, 2009. (IDB: Zentralblatt Math)
19. Adrian Nicolae Branga, *A structural theorem of the generalized spline functions*, General Mathematics, ISSN 1221- 5023, vol. 17, no. 2, pp 135-143, 2009. (IDB: Zentralblatt Math)
20. Adrian Nicolae Branga, *A best approximation property of the generalized spline functions*, General Mathematics, ISSN 1221-5023, vol. 16, no. 4, pp 25-33, 2008. (IDB: Zentralblatt Math)
21. Adrian Nicolae Branga, *Development in series of orthogonal polynomials with applications in*

- optimization*, General Mathematics, ISSN 1221-5023, vol. 15, no. 1, pp 101-110, 2007. (IDB: Zentralblatt Math)
22. Adrian Nicolae Branga, *Spline functions with applications to optimal approximation*, General Mathematics, ISSN 1221-5023, vol. 14, no. 4, pp 135-146, 2006. (IDB: Zentralblatt Math)
23. Adrian Nicolae Branga, *Optimal approximation of linear functionals using natural splines of Hermite type*, Buletinul Științific al Universității Politehnica din Timișoara, seria Matematică- Fizică, ISSN 1224-6069, pp. 23-30, 1999. (IDB: Zentralblatt Math)
24. Adrian Nicolae Branga, *On Hermite interpolation formula*, General Mathematics, ISSN 1221-5023, vol. 6, pp 11-15, 1998. (IDB: Zentralblatt Math)
25. Adrian Nicolae Branga, *A fundamental property of B-splines*, General Mathematics, ISSN 1221-5023, vol. 4, pp 33- 39, 1996. (IDB: Zentralblatt Math)
26. Adrian Nicolae Branga, *A property of divided differences with multiple nodes*, General Mathematics, ISSN 1221- 5023, vol. 4, pp 21-32, 1996. (IDB: Zentralblatt Math)
27. Adrian Nicolae Branga, *Some properties of interpolating polynomials*, General Mathematics, ISSN 1221-5023, vol. 3, no. 1-2, pp 29-40, 1995. (IDB: Zentralblatt Math)
28. Adrian Nicoale Branga, *A sufficient condition for univalence*, General Mathematics, ISSN 1221-5023, vol. 2, no. 3, pp 145-150, 1994. (IDB: Zentralblatt Math)

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1. Eugen Constantinescu, Adrian Nicolae Branga, *Solving a certain extremal problem with polynomials*, Proceedings of „The Thirteenth International Conference on Mathematics and its Applications – ICMA 2012” (Eds: I. Cuculescu, J. Jarić, P. Găvruta, I. Goleț, L. Cădariu), Politehnica University Publishing House, Timișoara, ISSN 1224-6069, pp 77-82, 2013.
2. Adrian Nicolae Branga, *A necessary and sufficient condition for characterization of spline functions*, Proceedings of „The Fifth International Conference on Dynamical Systems and Applications”, Ovidius University Publishing House, Constanța, ISSN 1584-5990, pp 231-236, 2009.
3. Adrian Nicolae Branga, *An inequality for generalized spline functions*, Proceedings of „The Fifth International Symposium on Mathematical Inequalities” (Eds: E. C. Popa, D. Acu, A. M. Acu, F. Sofonea), Lucian Blaga University Publishing House, Sibiu, ISBN 978-973-739-740-9, pp 33-39, 2008.
4. Adrian Nicolae Branga, *A new property of B-spline functions*, Mathematical Analysis and Approximation Theory, Proceedings of „The Fifth Romanian-German Seminar on Approximation Theory and its Applications” (Eds: Al. Lupaș, H. Gonska, L. Lupaș), Burg Publishing House, Sibiu, ISBN 973-85647-4-3, pp 45-50, 2002.

5. Adrian Nicolae Branga, *Natural splines and optimal approximation*, Schriftenreihe des Fachbereichs Mathematik der Gerhard-Mercator Universität, Proceedings of „The Fourth Romanian-German Seminar on Approximation Theory and its Applications” (Eds: H. Gonska, D. Kacsó, L. Beutel), Gerhard-Mercator University Publishing House, Duisburg, SM-DU- 485, pp 26-33, 2000.
6. Adrian Nicolae Branga, *An optimal property of the Chebyshev polynomials*, Proceedings of „The Seventh Symposium of Mathematics and its Applications” (Eds: N. Boja), Politehnica University Publishing House, Timișoara, ISSN 1224- 6069, pp 61-66, 1997.

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