

LISTA

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

A1. S.M. Bibic, *Undine armonice. Undine Shannon. Aplicații* (Română), teza de doctorat, 2012, Universitatea POLITEHNICA din București.

B. Cărți și capitole în cărți publicate în ultimii 10 ani

B-1. S.M. Bibic, *Lecții de Analiza Matematică. Calcul Diferențial și Integral*, Editura Politehnica Press, București (în curs de apariție)

B-2. S.M. Bibic, *Capitole de Matematici Speciale. Teorie și aplicații*, Editura Politehnica Press, București (în curs de apariție)

B-3. S.M. Bibic, A.M. Borș, *Cercetări Operaționale: Tehnici de Optimizare și Implementări Algoritmice*, Editura Politehnica Press, București (în curs de apariție)

B-4. S.M. Bibic, E.C. Cipu et al., *Îndrumar LaTeX*, Editura Politehnica Press, București, ISBN [978-606-515-992-1](#).

B-5. S.M. Bibic, *An adapted NSA related to the security of swarm systems*, volum *Recent Advances in Nonlinear Analysis and Optimization with Applications*, 51-63, Cambridge Scholars Publishing, ISBN 1-5275-5954-7, 30 Septembrie 2020.

B-6. S.M. Bibic, *Analiză Matematică* (Română), suport de curs și seminar, anul I, FIE, online, platforma Moodle UPB, <https://curs.upb.ro/2024-2025>, 2024.

B-7. S.M. Bibic, *Complemente de Matematică* (Română), suport de curs și seminar, master I, EPA1, SEA1, FIE, online, platforma Moodle UPB, <https://curs.upb.ro/2024-2025>, 2024.

B-8. S.M. Bibic, *Matematici Speciale* (Română), suport de curs și seminar, anul I, FIE, platforma Moodle UPB, <https://curs.upb.ro/2024-2025>, 2025.

B-9. S.M. Bibic, *Cercetări Operaționale și Proiect Cercetări Operațional* (Română), suport de curs și laborator, anul III, FSA, platforma Moodle UPB, <https://curs.upb.ro/2024-2025>, 2025.

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

B-1. A. Toma, D. Mozyrska, O. Postavaru, M. Rebenciuc, S.M. Bibic, *Application of Fractional Calculus as an Interdisciplinary Modeling Framework*, *Fractal and Fractional*, 9(10), 663, MDPI, 2025, DOI:10.3390/fractalfract9100663.

B-2. O. Postavaru, S.M. Bibic, A. Toma, *Kernel families of fractional derivatives*, *Journal of Computational and Applied Mathematics*, 476:117097, Elsevier, 2025, DOI: 10.1016/j.cam.2025.117097.

- B-3.** M. Agaoglou, S.M. Bibic, E.C. Cipu, Z. Palya, A. Toma, M.J. Vázquez-Gallo, *Inclusiveness In STEM Education: WOME(S)N Project Case*, 28th International Conference on Interactive Collaborative Learning (ICL2025), 01-03 October 2025, Budapest, Hungary, 1-8, Springer.
- B-4.** S.M. Bibic, A.M. Borș, *Adaptive Intelligence in Education: a New Era for STE(A)M E-learning Platforms*, 28th International Conference on Interactive Collaborative Learning (ICL2025), 01-03 October 2025, Budapest, Hungary, 1-8, Springer.
- B-5.** S.M. Bibic, A.D. Ciocoiu, R.A. Păunescu, C.A. Dîrvă, *An AI-Enhanced Framework for Learning through Visualisation, Narrative Context, and Information Literacy*, 28th International Conference on Interactive Collaborative Learning (ICL2025), 01-03 October 2025, Budapest, Hungary, 1-8, Springer.
- B-6.** S.M. Bibic, I.C. Bogdan, M.G. Gheorghiu, A.M. Marin, *Learning Error Evolution Matrix (LEEM)*, 28th International Conference on Interactive Collaborative Learning (ICL2025), 01-03 October 2025, Budapest, Hungary, 1-8, Springer.
- B-7.** A.M. Borș, S.M. Bibic, *SmartEnvi: Improving the Quality of Life Through Innovative Technologies*, 22nd International Conference on Smart Technologies & Education (STE2025), 09–11 April 2025, Santiago, Chile, 1-8, Springer.
- B-8.** M.G. Gheorghiu, S.M. Bibic, I.C. Bogdan, *Augmented Reality and AI Integration in Truth Detection Apps*, 22nd International Conference on Smart Technologies & Education (STE2025), 09–11 April 2025, Santiago, Chile, 1-8, Springer.
- B-9.** I.C. Bogdan, H.A. Modran, S.M. Bibic, E. Simion, *Futureproofing Engineering Education for Global Responsibility (ICL 2024)*, Lecture Notes in Networks and Systems, 1281, 577-588, Springer, 2025, DOI: 10.1007/978-3-031-83520-9_53.
- B-10.** S. Treanță, A.O. Bibic, S.M. Bibic, *Efficiency Criteria for Multicost Variational Models Driven by H-Type I Functionals*, Journal of Multi-Criteria Decision Analysis, 31(5-6), 1-8, Wiley, 2024, DOI: doi.org/10.1002/mcda.70004.
- B-11.** M. Rebenciuc, S.M. Bibic, A. Toma, *Assessment of Structural Monitoring by Analyzing Some Modal Parameters: An Extended Inventory of Methods and Developments*, Archives of Computational Methods in Engineering, Springer, 28(3), 1575-1590, 2021, DOI: 10.1007/s11831-020-09433-1.
- B-12.** V.A. Mielu, S.M. Bibic, *Increasing the efficiency for transport problems in a pandemic context*, Proceedings of the 38th International Business Information Management Association (IBIMA), 2232-2238, 23-24 November 2021 Seville, Spain, ISBN: 978-0-9998551-7-1, ISSN: 2767-9640.
- B-13.** E.C. Cipu, S.M. Bibic, A. Toma, *Some applications of mathematical modeling of risk assessment*, UPB Sci. Bull., Ser. A, Appl. Math. Phys., 82 (4), 69-82, 2020.
- B-14.** M. Rebenciuc, S.M. Bibic, *Assessment of structural health monitoring by analyzing some modal parameters (I) (an inventory of methods and some developments)*, Electronic Notes in Discrete Mathematics, 67, 5-10, Elsevier, 2018, DOI: 10.1016/j.endm.2018.05.002.
- B-15.** S.V. Pușcașu, S.M. Bibic, M. Rebenciuc, A. Toma; D.Șt. Nicolescu, *Aspects of Fractional Calculus in RLC Circuits*, 2018 International Symposium on Fundamentals of Electrical Engineering (ISFEE), IEEE, 2018, DOI: 10.1109/isfee.2018.8742421.

B-16. M. Rebenciuc, S.M. Bibic, *Generalized rough sets applied to graphs related on urban problems*, International Journal of Mathematical and Computational Sciences, 11(9), 411-416, 2017.

B-17. S.M. Bibic, E.C. Cipu, C. Buiu, *A bioinspired mathematical model for a robotic swarm to discriminate between self and nonself robots*, 2015 19th International Conference on System Theory, Control and Computing (ICSTCC), 279-284, IEEE, 2015, DOI: 10.1109/ICSTCC.2015.7321306.

B-18. S.M. Bibic, E.C. Cipu, *Geometrical applications in assessing the behavior of a robotic swarm*, Applied Sciences, 17(1), 24-39, Balkan Society of Geometers, EID: 2-s2.0-84938525730.

D. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți (neindexate)

D-1. A. Milosteanu, A.M. Borș, S.M. Bibic, *Evaluating the Performance of SVD and KNN Algorithms in Recommender Systems*, The 32nd International Conference on Applied and Industrial Mathematics CAIM 2025, Bucharest, September 18-21, ISSN: 2537-2688.

D-2. M.I. Stănilă, R.C. Guriencu, S.M. Bibic, *Artificial atmospheric purification by vortex-type urban wind systems*, 4th International Student Scientific Symposium ELStudIS 2025, 09-11 October 2025, Iași, Romania, ISSN: 3061-4384.

D-3. M. Ioan, A.M. Teodorescu, S.M. Bibic, *Mathematical Modeling of Airflow Stability in Enclosed Spaces*, 2nd Conference for Student Research in Electrical Engineering (StuFoTech 2025), 30 September – 02 October 2025, Kiel, Germany.

D-4. P.C. Grănescu, M. Muntenășu, S.M. Bibic, *Autonomous Mapping in Turbid Waters Using EKF-SLAM*, 2nd Conference for Student Research in Electrical Engineering (StuFoTech 2025), 30 September – 02 October 2025, Kiel, Germany.

D-5. I.N.A Berechet, A.V. Nae, E.M. Stiop, S.M. Bibic, *Differential Wrapper Hierarchical QPSK for CubeSat Communications*, 2nd Conference for Student Research in Electrical Engineering (StuFoTech 2025), 30 September – 02 October 2025, Kiel, Germany.

D-6. A.M. Borș, G. Crețu, S.M. Bibic, *Driving the Future: An Evolutionary Game Theory Approach to Smart and Innovative Technologies and Strategies*, StudMath-IT International Students Conference 2024, 21-22 November 2024, Arad, “Aurel Vlaicu” University of Arad, Romania.

D-7. R.M. Oriță, A.M. Marin, C.T. Topan, S.M. Bibic, *Advanced Targeting Optics Automated Trajectory Adjustments for Optimal Target Accuracy*, StudMath-IT International Students Conference 2024, 21-22 November 2024, Arad, “Aurel Vlaicu” University of Arad, Romania.

D-8. A.M. Marin, A.I. Marinescu, S.M. Bibic, *The applicability of neural networks in the automotive industry*, 3rd International Student Scientific Symposium ELStudIS 2024, 17-19 October 2025, Iași, Romania, ISSN: 3061-4384.

- D-9.** M.G. Gheorghiu, R.M. Oriță, E.C. Georgescu, I.C. Turculeț, S.M. Bibic, *Indoormap: Smart solutions for transforming building navigation*, 3rd International Student Scientific Symposium ELStudIS 2024, 17-19 October 2025, Iași, Romania, ISSN: 3061-4384.
- D-10.** A.M. Borș, A.R. Coman, V. Constantin, G. Crețu, S.M. Bibic, *Eco-Vigilant: Advanced systems for traffic control and air quality monitoring in Smart City*, 3rd International Student Scientific Symposium ELStudIS 2024, 17-19 October 2025, Iași, Romania, ISSN: 3061-4384.
- D-11.** A.I. Marinescu, M.E. Tălmăcel, L.A. Zaharia, S.M. Bibic, *Markov chain approach for IoT plant watering system using sensors*, 1st Conference for Student Research in Electrical Engineering (StuFoTech 2024), 29 September – 01 October 2024, Kiel, Germany.
- D-12.** G. Crețu, A.M. Marin, V. Constantin, S.M. Bibic, *Assesing aspects related to the social implications of electrical engineering technologies*, 1st Conference for Student Research in Electrical Engineering (StuFoTech 2024), 29 September – 01 October 2024, Kiel, Germany.
- D-13.** M.G. Gheorghiu, I.C. Turculeț, E.C. Georgescu, R.M. Oriță, S.M. Bibic, *AI-driven authenticity detection via facial dynamics analysis*, 1st Conference for Student Research in Electrical Engineering (StuFoTech 2024), 29 September – 01 October 2024, Kiel, Germany.
- D-14.** M.G. Gheorghiu, I.C. Turculeț, E.C. Georgescu, R.M. Oriță, S.M. Bibic, *Campus Compass: Interactive map that improves accessibility and efficiency of campus navigation*, 1st Conference for Student Research in Electrical Engineering (StuFoTech 2024), 29 September – 01 October 2024, Kiel, Germany.
- D-15.** G. Crețu, V. Constantin, A.M. Marin, S.M. Bibic, *Burnout and academic performance: causes, impact and management strategies*, 3rd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-28 June 2024, Bucharest, Romania.
- D-16.** M.G. Gheorghiu, I.C. Turculeț, E.C. Georgescu, R.M. Oriță, S.M. Bibic, I.C. Bogdan, *INDOORPATH: Interactive map that improves accessibility and efficiency of any building*, 3rd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-28 June 2024, Bucharest, Romania.
- D-17.** A.M. Borș, A.R. Coman, S.M. Bibic, *Game of Green: Strategies for sustainability in the battle between electric and diesel cars*, 3rd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-28 June 2024, Bucharest, Romania.
- D-18.** G. Crețu, S.M. Bibic, *Fraud detection system for online transactions*, 3rd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-28 June 2024, Bucharest, Romania.
- D-19.** M.E. Tălmăcel, L.A. Zaharia, A.I. Marinescu, S.M. Bibic, *Markov chain approach for IoT plant watering system*, 3rd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-28 June 2024, Bucharest, Romania.
- D-20.** M.G. Gheorghiu, I.C. Turculeț, E.C. Georgescu, R.M. Oriță, S.M. Bibic, I.C. Bogdan, *IntegrityInsightAI: Authenticity Detection Application based on Facial Movements Using*

Artificial Intelligence, 3rd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-28 June 2024, Bucharest, Romania.

D-21. A.M. Marin, G. Crețu, S.M. Bibic, V. Constantin, *Burnout and academic performance: causes, impact and management strategies*, XGEN 2024 - International Conference on Science Communications, 20–24 May 2024, Baia Mare, Technical University of Cluj-Napoca, Romania.

D-22. A.I. Marinescu, S.M. Bibic, L.A. Zaharia, M.E. Tălmăcel, A.M. Dumitrescu, *Smart Irrigation Systems: IoT evaluations based on Markov Chain models*, XGEN 2024 - International Conference on Science Communications, 20–24 May 2024, Baia Mare, Technical University of Cluj-Napoca, Romania.

D-23. E.C. Georgescu, M.G. Gheorghiu, S.M. Bibic, I.C. Turculeț, *Polygraph test using facial recognition algorithms*, XGEN 2024 - International Conference on Science Communications, 20–24 May 2024, Baia Mare, Technical University of Cluj-Napoca, Romania.

D-24. Șt.C. Petrescu, S.M. Bibic, *Advanced Optimization Techniques for Unbalanced Allocation Problems using the Modified Hungarian Algorithm*, 2nd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 28-30 June 2023, Bucharest, Romania, ISSN-L 2821 – 8779.

D-25. M.R. Laza, S.M. Bibic, *Secure Wireless Power Transfer*, 2nd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 28-30 June 2023, Bucharest, Romania, ISSN-L 2821 – 8779.

D-26. A.A. Bunea, A.D. Georgescu, S.M. Bibic, *The study of the evolution in time of a species using the game theory*, 2nd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 28-30 June 2023, Bucharest, Romania, ISSN-L 2821 – 8779.

D-27. M. Constantinescu, S.M. Bibic, *Solving optimization problems through duality*, 2nd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 28-30 June 2023, Bucharest, Romania, ISSN-L 2821 – 8779.

D-28. M.C. Strimțoreanu, M.V. Manea, M.M. Stănescu, S.M. Bibic, *Mathematical Approaches for Biosignals and Applications*, 2nd Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 28-30 June 2023, Bucharest, Romania, ISSN-L 2821 – 8779.

D-29. V.A. Mielu, S.M. Bibic, *Optimal job scheduling using bipartite graph*, 1st Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-29 June 2022, Bucharest, Romania, ISSN: 2821 – 8779.

D-30. A.C. Chițu, S.M. Bibic, *Minimax algorithm for optimal job assignment*, 1st Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-29 June 2022, Bucharest, Romania, ISSN: 2821 – 8779.

D-31. D.L. Zanfir, E. Beu, S.M. Bibic, *A hybrid algorithm based on the optimal path with applications in navigation systems*, 1st Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-29 June 2022, Bucharest, Romania, ISSN: 2821 – 8779.

- D-32.** C.C. Georgescu, E. Beu, S.M. Bibic, *Duffing-Van der Pol oscillator under fractional-order delayed feedback and external forces*, 1st Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-29 June 2022, Bucharest, Romania, ISSN: 2821 – 8779.
- D-33.** A.C. Chițu, S.M. Bibic, *A comparative study on the contractive operators*, 1st Edition – International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, 26-29 June 2022, Bucharest, Romania, ISSN: 2821 – 8779.
- D-34.** V.A. Mielu, S.M. Bibic, *Applying graph theory to network data models*, CERC-2022, 12-13 May 2022, Bucharest, Romania, ISSN 2601-7989.
- D-35.** A.G. Androne, E.V. Movilă, S.M. Bibic, *Making more Efficient the Transport in the Context of the Pandemic Conditions*, CERC-2021, 22-24 April 2021, Bucharest, Romania, ISSN: 2601-7989.
- D-36.** V.A. Andronescu, E.C. Cipu, S.M. Bibic, *Modelling the Temperature Effect on Hybrid Systems*, CERC-2021, 22-24 April 2021, Bucharest, Romania, ISSN: 2601-7989.
- D-37.** Șt. Nuță, A.N. Snacov, M.C. Nica, A.E. Roșca, S.M. Bibic, *Using MATLAB to Measure the Diameter of an Object within an Image*, CERC-2021, 22-24 April 2021, Bucharest, Romania, ISSN: 2601-7989.
- D-38.** Șt. Nuță, A.N. Snacov, M.C. Nica, A.E. Roșca, S.M. Bibic, *Genetic Algorithms for Optimal Route Planning*, CERC-2021, 22-24 April 2021, Bucharest, Romania, ISSN: 2601-7989.
- D-39.** Șt. Talica, S.M. Bibic, *Analysis of Audio Signals using the Gabor Transform*, CERC-2021, 22-24 April 2021, Bucharest, Romania, ISSN: 2601-7989.
- D-40.** V.A. Mielu, S.M. Bibic, *Applying graph theory to transportation network models*, WITDC-21, 25-26 November 2021, Bucharest, Romania.
- D-41.** V.A. Andronescu, E.C. Cipu, S.M. Bibic, *Hybrid Systems for Alternative Energy Production*, WITDC-20, 19-20 November 2020, Bucharest, Romania.
- D-42.** A. Toma, M. Rebenciuc, E. Simion, S.M. Bibic, M. Pricop-Jeckstadt, E.C. Cipu, *Mathematical Approaches in Health Security*, WITDC-20, 19-20 November 2020, Bucharest, Romania.
- D-43.** I. Lixandru, S.M. Bibic, *Building Management System*, WITDC-20, 19-20 November 2020, Bucharest, Romania.
- D-44.** F.A. Soare, H.A. Alecu, S.M. Bibic, *Applications of fractional-order Butterworth filter in radar display technology*, WITD&C-2020: Workshop on Innovative Techniques, Diversity & Connectivity, 21 May 2020, Bucharest, Romania.
- D-45.** S.M. Bibic, *An adapted NSA related to the security of swarm systems*, WITDC-19: Workshop on Innovative Techniques, Diversity & Connectivity, 14-15 November 2019, Bucharest, Romania.
- D-46.** M. Rebenciuc, S.M. Bibic, *Assessment of structural health monitoring by analyzing some modal parameters (I) (an inventory of methods and some developments)*, Proc. Of International

Conference on Recent Trends in Pure and Applied Mathematics (TREPAM 2017), 79, 31 July – 4 August, Alba Iulia, Romania, 2017.

D-47. M. Rebenciuc, S.M. Bibic, *Generalized rough sets applied to graphs related on urban problems*, Proc. Of 19th International Conference on Applied and Engineering Mathematics (ICAEM 2017), 76-80, 4-5 September, Prague, Czechia, 2017.