

Lista de lucrări

1. D. Constantin, C. Bălcău, *ECA110-Pooling: A Comparative Analysis of Pooling Strategies in Convolutional Neural Networks*, Big Data and Cognitive Computing (Q1/IF 4.4), 9(12), 306, ISSN: 2504-2289, <https://doi.org/10.3390/bdcc9120306>, 2025.
2. D. Constantin, C. Bălcău, *A Cellular Automata-Based Crossover Operator for Binary Chromosome Population Genetic Algorithms*, Applied Sciences (Switzerland) (Q2/ IF 2.5), ISSN: 2076-3417, Special Issue [Applications of Genetic and Evolutionary Computation](https://doi.org/10.3390/app15158750), <https://doi.org/10.3390/app15158750>, 2025.
3. D. Constantin, C. Bălcău, *Principal Directions-Based Data Classification Optimized by Genetic Algorithms and K-Nearest Neighbors*, Multi-disciplinary Trends in Artificial Intelligence: 18th International Conference, MIWAI 2025, Ho Chi Minh City, Vietnam, December 3-5, 2025, Proceedings, Part I, Lecture Notes in Computer Science, https://doi.org/10.1007/978-981-95-4957-3_1, 2025.
4. D. Constantin, C. Bălcău, *An Evolutionary PCA-KNN Framework for Phishing Detection*, Universitatea din Pitești, Buletin Științific ser. Matematică și Informatică, nr. 30, 2024.
5. C. Bălcău, D. Constantin, *Counting binary search trees of given height*, Universitatea din Pitești, Buletin Științific seria Matematică și Informatică, nr. 30, 2024.
6. D. Constantin, C. Bălcău, *Classification of Image Classes based on the PCA Algorithm optimized by the KNN algorithm improved by Genetic Algorithms*, 6th International Conference on Information Communication and Signal Processing (ICICSP 2023), Ei Compendex, Scopus, September 23-25, Xi'an, China, [10.1109/ICICSP59554.2023.10390821](https://doi.org/10.1109/ICICSP59554.2023.10390821), 2023.
7. D. Constantin, C. Bălcău, D.A. Popescu, *ICA model estimation using a mixed learning rule based on genetic algorithms and neural network*, IEEE International Conference on Data Mining (ICDM), 3rd Evolutionary Data Mining and Machine Learning (EDMML), IEEE Computer Society Press, [10.1109/ICDMW60847.2023.00052](https://doi.org/10.1109/ICDMW60847.2023.00052), 2023.
8. D. Constantin, C. Bălcău, *An improved PCA Algorithm based on the KNN algorithm and Genetic Algorithms*, AI & It's Applications, indexată Scopus, DOAJ și Crossref, 2023.
9. D.A. Popescu, D. Constantin, N. Bold, *Generating assessment tests using image-based items*, IEEE International Conference on Data Mining (ICDM), 3rd Evolutionary Data Mining and Machine Learning (EDMML), IEEE Computer Society Press, [10.1109/ICDMW60847.2023.00054](https://doi.org/10.1109/ICDMW60847.2023.00054), 2023.
10. C. Bălcău, D. Constantin, *Interval weighted cumulative residual entropy for generalized Pareto distributions*, Universitatea din Pitești, Buletin Științific seria Matematică și Informatică, nr. 28, 2022.
11. D. Constantin, C. Bălcău, *Comparative study for KNN and Kmeans classification algorithms*, Universitatea din Pitești, Buletin Științific ser. Matematică și Informatică, nr. 28, 2022.
12. Predel, E.-L., Stănescu, N.-D., Constantin, D., *On the chaos in a cutting process*, Proceedings of the International Congress on Sound and Vibration, 2022.
13. D.A. Popescu, D. Constantin, *Algoritmii fill și aplicații*, MATINF, ISSN: 2601-9426, ISSN-L: 2601-8829, nr. 9-10, anul V, Editura Universității Pitești, 2022.
14. A. Ștefan, D. Constantin, I. Dincă, *Image processing applications using filtering techniques in the frequency domain*, Universitatea din Pitești, Buletin Științific ser. Matematică și Informatică, nr. 27, 2021.
15. D. Constantin, C. Bălcău, *Applications of generalized Shannon entropies in image processing*, Universitatea din Pitești, Buletin Științific, ser. Matematică și Informatică, nr. 27, 2021.
16. D. Constantin, C. Bălcău, *Mixed images classification based on adaptive principal directions*, Universitatea din Pitești, Buletin Științific ser. Matematică și Informatică, nr. 26, 2020.
17. Doru Constantin, *Interpretarea formulelor logice*, MATINF, an 3, nr 6, ISBN/ISSN: 2601-8829, 2020.
18. D. Constantin, C. Bălcău, *The applications regarding the classification of data with Gaussian distribution*, Universitatea din Pitești, Buletin Științific, seria Matematică și Informatică, nr. 25, 2019.
19. C. Bălcău, D. Constantin, *On the weighted cumulative paired interval entropy*, Universitatea din Pitești, Buletin Științific seria Matematică și Informatică, nr. 25, 2019.
20. D.A. Popescu, C. Bălcău, D. Constantin, *Prezentarea Concursului de Informatică "Programming Day for High School"*, Ediția a III-a, Pitești, 18 mai 2018, MATINF, ISSN: 2601-8829, an 2, nr 3, septembrie 2019.
21. D.A. Popescu, C. Bălcău, D. Constantin, *Prezentarea Concursului de Informatică "Programming Day for High School"*, Ediția I, Pitești, 27 mai 2017, MATINF, ISSN: 2601-8829, an 1, nr 1, pp. 10-20, 2018.
22. S.C. Andronescu, C. Bălcău, D. Constantin, D.A. Popescu, *Determinarea ultimei cifre nenule pentru produse de numere naturale*, MATINF, an 1, nr 2, ISSN: 2601-8829, 2018.

23. C. Bălcău, D. Constantin, *Some examples for bivariate weighted cumulative entropies*, Universitatea din Pitești, Buletin Științific, seria Matematică și Informatică, nr. 24, 8 pg., 2018.
24. D.A. Popescu, C. Bălcău, D. Constantin, *Prezentarea Concursului de Informatică "Programming Day for High School", Ediția a II-a, Pitești, 12 mai 2018*, MATINF, ISSN: 2601-8829, an 1, nr 2, decembrie 2018.
25. D. Constantin, C. Bălcău, *An analysis regarding the optimal reduction of the data representation space in image processing applications*, Universitatea din Pitești, Buletin Științific, seria Matematică și Informatică, nr. 24, 2018, Zbl.
26. Doru Constantin, E. Clipici, *An improved algorithm based on the neural architectures for estimating the risk of bankruptcy of the bulgarian insurance companies*, 17th International Multidisciplinary Scientific GeoConference SGEM 2017, SGEM2017 Conference Proceedings, ISBN 978-619-7408-01-0 / ISSN 1314-2704, 29 June - 5 July, 2017, Vol. 17, Issue 21, 85-94 pp, DOI: 10.5593/sgem2017/21/S07.012.
27. Costel Bălcău, Doru Constantin, *An Algorithm for Estimating the ICA Model Based on the Halley's Method*, The 3rd International Conference on Intelligent Computing, Communication & Devices (ICCD 2017), 9-10 decembrie, 2017, Shenzhen, China.
28. D. Constantin, A.F. Ștefan, *"A comparative study for ICA multiunit algorithms"*, The 3rd International Conference on Artificial Intelligence and Applications (AI 2017), 30-31 decembrie, Chennai, India, 2017.
29. C. Bălcău, D. Constantin, A. Ștefan, *One temperature homogenization case with thermal interfacial barrier*, Universitatea din Pitești, Buletin Științific, seria Matematică și Informatică, nr. 23, Zbl, 2017.
30. V. Preda, C. Bălcău, D. Constantin, I.I. Panait, *Cumulative entropies: a survey*, Review of the Air Force Academy, nr. 2 (34), pp. 103-112 (comunicat la a 20-a Conferință a S.P.S.R., Brașov 2017), Copernicus, 2017.
31. C. Bălcău, D. Constantin, I.I. Panait, *Some bounds for the weighted cumulative paired interval entropy*, International Journal of Risk Theory, vol. 7, nr. 2, pp. 1-8, septembrie 2017.
32. Doru Constantin, Alina Florentina Ștefan, *"Logică computațională – fundamente algoritmice și matematice"*, Editura Tiparg, Pitești, 2016.
33. Doru Constantin, Costel Bălcău, *ICA algorithms for fingerprint recognition*, Scientific Bulletin of University of Pitesti, Mathematics-Informatics series, No. 22 (2016), ISSN 1453 - 116x, indexed to Zentralblatt MATH, 2016.
34. C. Bălcău, D. Constantin, I.I. Panait, *Some examples for interval weighted cumulative entropies*, Universitatea din Pitești, Buletin Științific ser. Matematică și Informatică, nr. 21, 8 pg., Zbl, 2016.
35. Doru Constantin, E. Clipici, *"A new model for estimating the risk of bankruptcy of the insurance companies based on the artificial neural networks"*, Proc. of the 16th edition of the SGEM International GeoConferences (International Multidisciplinary Scientific GeoConferences), ISSN 1314-2704, 28 June - 7 July, 2016, Albena, Bulgaria. (<http://www.sgem.org/index.php/sgem-topic/sgem-topics-gis/sgem-topics-gis-2>)
36. Doru Constantin, E. Clipici, *"Backpropagation neural scheme for estimating the risk of bankruptcy of the Romanian insurance and reinsurance companies"*, Proceedings of the 15th International Conference on INFORMATICS in ECONOMY (IE 2016), Education, Research & Business Technologies, ISSN 2284-7472, ISSN-L 2247-1480, pg 415-421, Bucharest University of Economic Studies Press, June 02 - 05, 2016, Cluj-Napoca, Romania.
37. Doru Constantin, *IC's estimation performance by multi-unit algorithms based on negentropy function*, Scientific Bulletin of University of Pitesti, Mathematics-Informatics series, No. 21, ISSN 1453-116x, indexed to Zentralblatt MATH, 2015.
38. Ioana Ileana Panait, Costel Bălcău, Doru Constantin, *Interval weighted cumulative entropies for Pareto distribution*, Univ. din Pitești, Buletin Științific, seria Matematică și Informatică, nr. 21, 8 pg., Zbl, 2015.
39. Doru Constantin, *"ICA and PCA to extract the features data"*, Scientific Bulletin of University of Pitesti, Mathematics-Informatics series, No. 20, pg. 125-136, ISSN 1453 - 116x, 2014, Zentralblatt MATH.
40. Doru Constantin, Nicoleta Samarescu, *"Tehnici moderne de utilizarea calculatorului"*, Editura Tiparg, Pitesti, 2009. (http://uefiscdi.gov.ro/userfiles/file/IC6_2010/Edituri_cnscis_2009_328.pdf)
41. Luminița State, Cătălina Cocianu, Doru Constantin, Săraru Corina, *"PCA Supervised and Unsupervised Classifiers in Signal Processing"*, PRIS 2009, 9th International Workshop on Pattern Recognition in Information Systems (PRIS 2009) mai 2009, Milano, Italia. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=GeneralSearch&qid=5&SID=R2UwwkHkyMxurxdmEj&page=1&doc=1)
42. Luminița State, Cătălina Cocianu, Doru Constantin, Săraru Corina, Vlamos Panayiotis, *"TOWARD A SEMI-SUPERVISED APPROACH IN CLASSIFICATION BASED ON PRINCIPAL DIRECTIONS"*, SIGMAP 2009: Proceedings of the international conference on signal processing and multimedia applications, pages 68-73, Milano, Italia. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=MarkedList&qid=26&SID=R2UwwkHkyMxurxdmEj&page=1&doc=2&colName=WOS)
43. Doru Constantin, *"Cebysev Coefficients - Based Algorithm for Estimating the ICA Model"*, Conference Information: 8th International Conference on Independent Component Analysis and Signal Separation, Source: INDEPENDENT COMPONENT ANALYSIS AND SIGNAL SEPARATION, Book Series: LECTURE NOTES IN COMPUTER SCIENCE, Volume: 5441, Pag: 219-226, SPRINGER-VERLAG BERLIN, HEIDELBERGER PLATZ 3, D-14197 BERLIN, GERMANY, ISSN: 0302-9743 Paraty, BRAZILIA, martie 15-

- 18, 2009. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=General_Search&qid=39&SID=R2UwwkHkyMxurxdmEj&page=1&doc=9)
44. Luminița State, Doru Constantin, Săraru Corina, "PCA Approach on Morphological Classification of Galaxies", 16th Int. Workshop on Systems Signals and Image Processing, IEEE eXpress, ISBN: 978-1-4244-4530-1, 18-20 iunie 2009, Chalkida, Greece. (<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?Arnumber=5367700&refinements=4222919509&refinements=4225555964&searchWithin=%22Authors%22::QT.D.%20Constantin.QT.>)
45. Cătălina Cocianu, Luminița State, Doru Constantin, Corina Săraru, "Partially Supervised Approach in Signal Recognition", Informatica Economica Vol. XIII/No. 3/2009, pp. 153-164, ISSN 1453-1305. (<http://revistaie.ase.ro/content/51/106%20-%20Cocianu,%20State,%20Constantin,%20Sararu.2.pdf>)
46. Doru Constantin - teza de doctorat în Domeniul Informatică, domeniul fundamental Științe Exacte, cu titlul "Metode numerice pentru analiza in componente independente", coordonator științific Prof.univ.dr. Luminița STATE, 27 octombrie 2008.
47. Doru Constantin, Luminița State, "A Version of the FastICA Algorithm Based on the Secant Method combined with Simple Iterations Method", Proceedings of the 3rd International Conference on Image and Signal Processing (ICISP 2008), Image and Signal Processing, Book Series: LECTURE NOTES IN COMPUTER, Springer Berlin/Heidelberg, ISSN 0302-9743 (Print) 1611-3349 (Online), Volume 5099/2008, ISBN 978-3-540-69904-0, pg. 312-320. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=GeneralSearch&qid=14&SID=R2UwwkHkyMxurxdmEj&page=1&doc=6)
48. Doru Constantin, Luminița State, "An Improved Algorithm for Estimating the ICA Model Concerning the Convergence Rate", Proceedings of the 5th Conference on Articulated Motion and Deformable Objects (AMDO 2008), Articulated Motion and Deformable Objects, Book Series: LECTURE NOTES IN COMPUTER, Springer Berlin / Heidelberg, ISSN 0302-9743 (Print) 1611-3349 (Online), Volume 5098/2008, ISBN 978-3-540-70516-1, pg. 400-408. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=MarkedList&qid=55&SID=R2UwwkHkyMxurxdmEj&page=1&doc=5&colName=WOS)
49. Doru Constantin, Luminița State, "A Comparative Analysis on a Class of Numerical Methods for Estimating the ICA Model", International Journal of Computers, Communications & Control, ISSN 1841-9836, E-ISSN 1841-9844, Vol. III (2008), Suppl. issue: Proceedings of ICCCC 2008, pg. 218-222, Băile Felix, Oradea, Romania, 15-17 Mai, 2008. Impact Factor: 0.746. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=GeneralSearch&qid=14&SID=R2UwwkHkyMxurxdmEj&page=1&doc=6)
50. Doru Constantin, "Principal Directions for Local Independent Components Analysis", ADVANCED TOPICS ON NEURAL NETWORKS, Proceedings of the 9th WSEAS International Conference on NEURAL NETWORKS (NN'08), Artificial Intelligence Series, WSEAS Press, ISBN: 978-960-6766-56-5, ISSN: 1790-5109, pg. 127-130, Sofia, Bulgaria, 2-4 Mai, 2008. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=MarkedList&qid=19&SID=R2UwwkHkyMxurxdmEj&page=1&doc=8&colName=WOS)
51. Luminița State, Cătălina-Lucia Cocianu, Vlamos Panayiotis, Doru Constantin, "Neural Approaches to Image Compression/ Decompression Using PCA Based Algorithm", The 8th International Workshop on Pattern Recognition in Information Systems (PRIS 2008), 12-13 Iunie, Barcelona, Spania, în conjuncție cu The 10th International Conference on Enterprise Information Systems (ICEIS 2008), 2008. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=MarkedList&qid=21&SID=R2UwwkHkyMxurxdmEj&page=1&doc=7&colName=WOS)
52. Luminița State, Cătălina Cocianu, Doru Constantin, Vlamos Panayiotis, "Decorrelation techniques in image restoration", SIGMAP 2008: PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING AND MULTIMEDIA APPLICATIONS Pages:193-196, Milano, Italia. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=MarkedList&qid=30&SID=R2UwwkHkyMxurxdmEj&page=1&doc=9&colName=WOS)
53. Doru Constantin, Luminița State, "The FastICA Algorithm Based on Successive Approximations with Superior Convergence Rate", Proceedings of the 4th International Conference on Intelligent Information Hiding and Multimedia Signal Processing (IIHMSP 2008), ISBN: 978-0-7695-3278-3, pp. 909-912, IEEE Press, Harbin, China, 17 august, 2008. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=MarkedList&qid=32&SID=R2UwwkHkyMxurxdmEj&page=1&doc=3&colName=WOS)
54. Doru Constantin, Luminița State, "SUCCESSIVE APPROXIMATIONS - BASED ALGORITHM FOR INDEPENDENT COMPONENT ANALYSIS", Proceedings of the Third International Conference on Digital Telecommunications (ICDT 2008), ISBN: 978-0-7695-3188-5, pp. 82-87, IEEE Computer Society Press, București, Romania, 29 Iunie - 5 Iulie, 2008. (<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=4561290&filter%3DAND%28pISNumber%3A4561266%29>)
55. Doru Constantin, Luminița State, "An Algorithm for Estimating the ICA Model Based on the Chebyshev Coefficients", Proceedings of the The Second International Conference on Sensor Technologies and Applications (SENSORCOMM 2008), ISBN: 978-0-7695-3330-8, pp. 450-455, IEEE Computer Society Press, Cap Esterel, Franța, 25 august, 2008. (<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=4622702&refinements=4222919509&refinements=4225555964&searchWithin=%22Authors%22::QT.D.%20Constantin.QT.>)

56. Doru Constantin, Luminița State, "*Independent Directions - Based Algorithm for Classification Targets*", Proceedings of the Second International Conference on Advanced Engineering Computing and Applications in Sciences (ADVCOMP 2008), ISBN: 978-0-7695-3369-8, pp. 147-151, IEEE Computer Society Press, Valencia, Spania, 29 septembrie, 2008, INSPEC Accession Number: 10367807. (<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=4641009&refinements=4222919509&refinements=4225555964&searchWithin=%22Authors%22:QT.D.%20Constantin.QT.>)
57. Doru Constantin, "*The Independent Component Analysis of Clusterized Data on Principal Directions - Basis*", Proceedings of the 3rd Annual South East European Doctoral Student Conference, Thessaloniki, Grecia, 26-27 Iunie, 2008.
58. Luminița State, Cătălina-Lucia Cocianu, Vlamos Panayiotis, Doru Constantin, "*PRINCIPAL DIRECTIONS - BASED ALGORITHM FOR CLASSIFICATION TASKS*", Proceedings of the ninth International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2007), 26-29 Septembrie, Timișoara, România, IEEE Computer Society Press, 2007. (http://apps.webofknowledge.com/full_record.do?product=UA&search_mode=Markedist&qid=34&SID=R2UwwkHkyMxurxdmEj&page=1&doc=10&colName=WOS)
59. Doru Constantin, V. Păun, "*Maximum Likelihood Estimation for the ICA Model*", Proceedings of the 2nd edition of the International Conference Electronics, Computers and Artificial Intelligence, ISSN – 1843 – 2115, pg. 54, Pitești, 2007.
60. Doru Constantin, C. Bălcău, P. Radovici-Mărculescu, "*The versions of the FastICA algorithm for noisy data by using kurtosis and negentropy*", Buletin Științific, Seria Matematică și Informatică, Nr. 13, Zbl, 2007.
61. Laurențiu Deaconu, Doru Constantin, „*Source Separation using the Fixed-Point Algorithm Based on Combined Method*”, Buletin Științific, Seria Matematică și Informatică, Nr. 13, indexed Zbl MATH, 2007.
62. Doru Constantin, "*The estimation of the ICA Model using Entropy Function*", Buletin Științific, Seria Matematică și Informatică, Pitești, Nr.12, pg. 41-48, indexed Zentralblatt MATH, 2006.
63. Doru Constantin, "*ICA by minimization of Mutual Information*", CAIM 2005, ROMAI Journal, Vol. 2, Nr. 2, Pitești, 2006, Zentralblatt MATH, Google Scholar.
64. Doru Constantin, "*Funcții obiectiv și algoritmi pentru analiza în componente independente*", Buletin Științific, Seria Matematică și Informatică, Pitești, Nr. 11, pg. 53-60, indexed Zentralblatt MATH, 2005.
65. E. Sofron, Gh. Gavrioloaia, V. Păun, Doru Constantin, "*Reprezentarea cunoașterii în sistemele expert folosind un model relațional*", Sesiunea internațională de comunicări Științifice, Universitatea din Pitești, 2005.
66. Doru Constantin, „*Introducere în analiza în componente independente*”, CAIM 2004, Pitești, Buletin Științific, Seria Matematică și Informatică, Pitești, Nr. 10, indexed Zentralblatt MATH.
67. Corneliu Stelian Andronescu, Doru Constantin, "*Introducere în corpul numerelor p-adice*", Revista de consiliere psiho-pedagogică și metodică, Nr. 2, Pitești, 2002.