

List of scientific papers – Lect. Ph.D eng. BOGDAN POPA

Ph.d Thesis

"High-performance algorithms for image and signal processing", University of Craiova, doctoral school "*Constantin Belea*", field: Systems Engineering, scientific leader: Prof. univ. dr. ing. Popescu Dan, public support on 05.10.2019, Doctor's degree: Series J, No. 0045974/ No. 24 of 16.02.2021, Order M.I. no. 5748/13.10.2020.

Studies published in specialized journals.

1. **Popa, Bogdan**, Dan Selişteanu, and Alexandra Elisabeta Lorincz. "*Possibilities of Use for Fractal Techniques as Parameters of Graphic Analysis.*" *Fractal and Fractional* 6.11 (2022): 686. – Q1, **WOS:000894706300001**

Articles presented at ISI indexed international conferences (ISI Proc.)

1. **Popa B.**, „*Iterative Function Systems for Natural Image Processing*”, Proc. of 2015, 16th Int. Carpathian Control Conf. (ICCC'2015), 27 May - 30 May 2015, Szilvásvárad, Hungary, pp. 46 - 49, DOI: 10.1109/CarpathianCC.2015.7145043, Publisher: IEEE, Electronic ISBN 978-1-4799-7369-9. **WOS:000380488000009**
2. **Popa B.**, „*Dijkstra algorithm in parallel- Case study*”, Proc. of 2015, 16th Int. Carpathian Control Conf. (ICCC'2015), 27 May - 30 May 2015, Szilvásvárad, Hungary, pp. 50 - 53, DOI: 10.1109/CarpathianCC.2015.7145044, Publisher: IEEE, Electronic ISBN 978-1-4799-7369-9. **WOS:000380488000010**
3. **Popa B.**, Popescu D., „*Analysis of Algorithms for Shortest Path Problem in Parallel*”, Proc. of 2016 17th Int. Carpathian Control Conf. (ICCC'2016), May 29 – June 1, 2016, Tatranská Lomnica, Slovakia, DOI: 10.1109/CarpathianCC.2016.7501169, Publisher: IEEE, Electronic ISBN: 978-1-4673-8606-7, ISBN: 978-1-4673-8605-0. **WOS:000389829000114**
4. **Popa B.**, Popescu M., „*The analysis parameters for the AC engine for actuating of a grinding wheat system*”, 2017, 18TH INTERNATIONAL CARPATHIAN CONTROL CONFERENCE (ICCC), p. 400-405, DOI: 10.1109/CarpathianCC.2017.7970433, Publisher: IEEE, ISBN:978-1-5090-4862-5, **WOS:000426954400074**

5. **Popa B.**, „*Study about the edge detection algorithm and its applications*”, 2017, 18th International Carpathian Control Conference (ICCC),p. 417-422, DOI: 10.1109/CarpathianCC.2017.7970436, Publisher: IEEE, ISBN:978-1-5090-4862-5. **WOS:000426954400077**
6. **Popa B.**, Popescu I.M., Popescu D., Bobasu. E., „*Real-time monitoring system of a closed oven*”, 2018, 19th International Carpathian Control Conference (ICCC), p. 27-32, DOI: 10.1109/CarpathianCC.2018.8399597, Publisher: IEEE, ISBN:978-1-5386-4762-2. **WOS:000439260500010**
7. Selişteanu D., Roman M., Şendrescu D., Petre E., **Popa B.** „*A Distributed Control System for Processes in Food Industry: Architecture and Implementation*”, 2018, 19th International Carpathian Control Conference (ICCC),p. 128-133, DOI: 10.1109/CarpathianCC.2018.8399615, Publisher: IEEE, ISBN:978-1-5386-4762-2. **WOS:000439260500028**
8. Popescu I.M., **Popa B.**, Prejbeanu R., Ionete C., „*Evaluation of Parallel and Real-Time Processing Performance for Some Vibration Signals Using FPGA Technology*”, 2018, 19th International Carpathian Control Conference (ICCC),p. 365-370, DOI: 10.1109/CarpathianCC.2018.8399657, Publisher: IEEE, ISBN:978-1-5386-4762-2. **WOS:000439260500069**
9. Constantinov C., Mocanu M., Poteraş C., **Popa B.**, „*Using a Graph Database for Evaluating and Enhancing a Social Reputation Engine*”, 2018, 19th International Carpathian Control Conference (ICCC),p. 518-523, DOI: 10.1109/CarpathianCC.2018.8399685, Publisher: IEEE, ISBN:978-1-5386-4762-2. **WOS:000439260500096**
10. **Popa B.**, Roman M., Constantinescu R.L. „*Fast Fourier processing and real-time transformation system for a dynamic vibration signal*”, 2019, 20th International Carpathian Control Conference (ICCC), Kraków - Wieliczka, Poland, May 26-29, 2019, DOI: 10.1109/CarpathianCC.2019.8766039, ISBN: 978-1-7281-0703-5, Publisher: IEEE. **WOS:000490570500112**
11. **Popa B.**, Popescu D., Roman M., Constantinescu R.L. „*Optimizing algorithms for low CPU usage in different scenarios*”, 2019, 20th International Carpathian Control Conference (ICCC), Kraków - Wieliczka, Poland, May 26-29, 2019, DOI: 10.1109/CarpathianCC.2019.8765938, ISBN: 978-1-7281-0703-5, Publisher: IEEE. **WOS:000490570500113**

12. Constantinescu R.L., Roman M., **Popa B.**, Selișteanu D. „*An Improved Numerical Method for the Simulation of Nonlinear Systems*”, 2019, 20th International Carpathian Control Conference (ICCC), Kraków - Wieliczka, Poland, May 26-29, 2019, DOI: 10.1109/CarpathianCC.2019.8765939, ISBN: 978-1-7281-0703-5, Publisher: IEEE. **WOS:000490570500149**
13. I. M. Popescu, D. Popescu, I. Voinea, **B. Popa** and R. Prejbeanu, "*A DFT Computation Method for the Real-Time Processing of Vibration Signals at FPGA Circuit Level*" 2020 21th International Carpathian Control Conference (ICCC), 2020, pp. 1-6, doi: 10.1109/ICCC49264.2020.9257281.
14. **B. Popa**, M. Roman, E. Petre, S. Cosmulescu and A. -M. Stoenescu, "*Software Tools to Manage and Simulate Information from the Natural Environment*," 2020 21th International Carpathian Control Conference (ICCC), 2020, pp. 1-6, doi: 10.1109/ICCC49264.2020.9257299.
15. Lörincz, A. E., Selișteanu, D., **Popa, B.**, & Șerban, T. T. (2022, May). Implementation of the CommaA_v. 3.0 system on AUTOSAR architecture using V2X communication. In 2022 8th International Conference on Control, Decision and Information Technologies (CoDIT) (Vol. 1, pp. 367-372). IEEE. **WOS:000846862800061**
16. **Popa, Bogdan**, et al. "*Optimization possibilities for the shortest-path algorithms in the context of large volumes of information.*" 2022 8th International Conference on Control, Decision and Information Technologies (CoDIT). Vol. 1. IEEE, 2022. **WOS:000846862800060**
17. **Popa, Bogdan**, et al. "*Real-time Processing of Signals using Parallel Development Technology.*" 2022 23rd International Carpathian Control Conference (ICCC). IEEE, 2022. **WOS:000925203600014**
18. **Popa, Bogdan**, et al. "*Possibilities for fast Generation of Fractal Images and Various Fields of Applicability.*" 2022 23rd International Carpathian Control Conference (ICCC). IEEE, 2022. **WOS:000894706300001**
19. Constantinescu, Radu-Lucian, **Bogdan Popa**, and Ion-Marian Popescu. "Current State and Development Context for a Product Model Based on Digitization and Document Management at Enterprise Level." 2023 24th International Carpathian Control Conference (ICCC). IEEE, 2023.
20. Popescu, I. M., **Popa, B.**, Constantinescu, R. L., & Ionică, D. V. (2023, June). Information management, from Client applications, through TCP/IP Communication

on interrupts, in a Multiclient-Server application. In 2023 24th International Carpathian Control Conference (ICCC) (pp. 347-352). IEEE.

21. **Popa B.**, “*Algorithms for Lossless Compression in Image Processing Systems*”, 2016, 20th Panhellenic Conference on Informatics (PCI). Patra, Greece, **ACM Digital Library**, Conference Proceedings Series (ICPS), ISBN: 978-1-4503-4789-1
22. **Popa B.**, “*Innovative Computing Systems in Volume Rendering for the Medical Images*”, 2016, 20th Panhellenic Conference on Informatics (PCI). Patra, Greece, **ACM Digital Library**, Conference Proceedings Series (ICPS), ISBN: 978-1-4503-4789-1
23. I. M. Popescu, B. Popa, D. V. Ionică and R. L. Constantinescu, "Automatic Control Application Using MQTT for the Management of Communication with Smart Transducers and Actuators," 2025 26th International Carpathian Control Conference (ICCC), Starý Smokovec, High Tatras, Slovakia, 2025, pp. 1-6, doi: 10.1109/ICCC65605.2025.11022886.
24. B. Popa, Ș. Dorin, G. -T. Ureche, I. -M. Popescu and A. Albita, "Analysis of Fractal Techniques using Python Technologies and Integration of Artificial Intelligence," 2025 26th International Carpathian Control Conference (ICCC), Starý Smokovec, High Tatras, Slovakia, 2025, pp. 1-6, doi: 10.1109/ICCC65605.2025.11022799.
25. B. Popa, I. -M. Popescu, R. L. Constantinescu, A. Albita and G. -T. Ureche, "Proposed Architecture and Visualization Part for a Web Application at the Faculty Level," 2025 26th International Carpathian Control Conference (ICCC), Starý Smokovec, High Tatras, Slovakia, 2025, pp. 1-6, doi: 10.1109/ICCC65605.2025.11022894.

B and B+ scientific journals

1. **Popa B.**, Popescu D. “*Lossless Compression in Image Processing Technologies and Applications*”, 2014, Annals of the University of Craiova, 2014 Volume 11 no. 2, p. 13-18, ISSN 1841-0626.
2. **Popa B.**, Popescu D. “*Improving of the Backtracking Algorithm using different strategy for solving the 2-d problems*”, 2015, Annals of the University of Craiova, 2015 Volume 12 no. 1, p. 29-33, ISSN 1841-0626

Non-indexed journals

1. **Popa B.** “*Visual Study About the Fractals and New Means of Viewing*”, 2016, International Journal of Scientific Research, October 2016, Volume 5, Issue 10, p 383-386, ISSN No 2277 – 8179.
2. I.M. Popescu, **B. Popa**, R. Prejbeanu, “*Technology based on FPGA circuits and simultaneous processing of signals with great dynamic over time*”, 2017, Annals of the University of Craiova, Volume 14 no. 1, p. 25-30, ISSN 1841-0626
3. **Popa B.**, Popescu D. “*Summary of bread production and review of new methods for estimating process parameters*”, 2017, Annals of the University of Craiova, Volume 14 no. 2, p. 26-33, ISSN 1841-0626
4. Sendrescu D., Selisteanu D., **B. Popa**, “*Modelling of biotechnological systems using parallel computing*”, 2016, Proc. 4th Int. Conf. on Advanced Technology & Sciences (ICAT'2016), Rome, Italy, 6 p., 2016, <https://www.icatsconf.org/ITALY2016>

Articles presented at non-indexed international conferences.

1. **Popa B.** “*The influence of the ICT and IoT in the teaching systems*”, 2017, New innovative approaches in teaching, 6-7 May 2017, Vidin ,Bulgaria, p. 155-160, ISBN: 978-954-9399-47-9
2. **Popa B.**, Radulescu V., Poenaru M.L., “*International system for connecting high-school graduate study databases*”, New innovative approaches in teaching, 6-7 May 2017, Vidin, Bulgaria, Erasmus+ project 2015-1BG01-KA219-014218-“Opening up education through the school projects and ICT”. ISBN: 978-954-9399-47-9

Chapters in books published in international publishing.

1. Dan Selişteanu, Ion Marian Popescu, Emil Petre, Monica Roman, Dorin Şendrescu, **Bogdan Popa**, „*Distributed Control Systems for a Wastewater Treatment Plant: Architectures and Advanced Control Solutions*”, *Wastewater and Water Quality*, IntechOpen, DOI: 10.5772/intechopen.74827
2. **Popa, B.**, Selişteanu, D., Popescu, I.M. (2023). Real-Time Parallel Processing of Vibration Signals Using FPGA Technology. In: Arai, K. (eds) Intelligent Systems and Applications. IntelliSys 2022. Lecture Notes in Networks and Systems, vol 542. Springer, Cham. https://doi.org/10.1007/978-3-031-16072-1_18

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