

Lista lucrărilor științifice publicate 2019-2026

Nume și prenume: PAVEL MARIUS SORIN

- 10 lucrări în WOS (2 reviste + 8 conferințe)
- 8 lucrări în BDI (2 reviste + 6 conferințe BDI (IEEE))
- 1 lucrare premiată la un salon de invenție

Reviste WOS

- J1. Sorin Marius Pavel, Simona Moldovanu, and Dorel Aiordachioaie, "**On classification of the human emotions from facial thermal images: a case study based on machine learning**", Mach. Learn. Knowl. Extr. **2025**, 7, 27. <https://doi.org/10.3390/make7020027>.
- J2. Miron, M.; Moldovanu, S.; Ștefănescu, B.I.; Culea, M.; Pavel, S.M.; Culea-Florescu, A.L. "**A New Approach in Detectability of Microcalcifications in the Placenta during Pregnancy Using Textural Features and K-Nearest Neighbors Algorithm**". *Journal of Imaging* **2022**, 8(3), 81. <https://doi.org/10.3390/jimaging8030081>, IF = 2.81, eISSN: 2313-433X, WOS:000774886200001.

Reviste BDI

- J3. S. M. Pavel and D. Aiordachioaie, "**Building a Database with Thermal Images for the Classification of Emotional States**", Bulletin of the Polytechnic Institute of Iași. Electrical Engineering, Power Engineering, Electronics Section (BIPI), Volume 69 (2023): Issue 3 (September 2023), pp. 9-37, doi: <https://doi.org/10.2478/bipie-2023-0013>.
- J4. S.M. Pavel and Dorel Aiordachioaie, "**A comparative analysis of the emotion classification in facial thermal images**", Bulletin of the Polytechnic Institute of Iași (Journal of Electrical Engineering. Power Engineering. Electronics 2024). (Acceptat, in press)

Conferințe WOS

- C1. D. Aiordăchioaie and S. M. Pavel, "**Qualitative Analysis of the Time-Frequency Images of Vibrations in Faulty Bearings**", 2019 11th International Conference on Electronics, Computers and Artificial Intelligence (ECAI), Pitesti, Romania, 2019, pp. 1-6, doi: 10.1109/ECAI46879.2019.9042124, WOS:000569985400137.
- C2. D. Aiordachioaie, A. Culea-Florescu and S. M. Pavel, "**On Human Faces Thermal Image Processing for Classification Purposes**", 2019 6th International Symposium on Electrical and Electronics Engineering (ISEEE), Galati, Romania, 2019, pp. 1-6, doi: 10.1109/ISEEE48094.2019.9136103, WOS:000614815800004.
- C3. D. Aiordăchioaie, T. D. Popescu and S. M. Pavel, "**On Change Detection in the Complexity of Time Series**", 2020 12th International Conference on Electronics, Computers and Artificial Intelligence (ECAI), Bucharest, Romania, 2020, pp. 1-6, doi: 10.1109/ECAI50035.2020.9223207, WOS:000627393500083.

- C4. D. Aiordachioaie, T. D. Popescu and S. M. Pavel, "**On Change Detection in the Complexity of the Time Series with Multiscale Renyi Entropy Processing**," *2020 24th International Conference on System Theory, Control and Computing (ICSTCC)*, Sinaia, Romania, 2020, pp. 927-932, doi: 10.1109/ICSTCC50638.2020.9259753, [WOS:000646582900153](#).
- C5. D. Aiordachioaie and S. M. Pavel, "**Change Detection in the Complexity of Time Series with Information-based Criteria**," *2020 IEEE 26th International Symposium for Design and Technology in Electronic Packaging (SIITME)*, Pitesti, Romania, 2020, pp. 57-62, doi: 10.1109/SIITME50350.2020.9292304, [WOS:000651085100009](#).
- C6. S. M. Pavel, D. Aiordachioaie, and L. Frangu, "**Automated Thermal Images Processing System for Change Detection and Diagnosis**," *2019 IEEE 25th International Symposium for Design and Technology in Electronic Packaging (SIITME)*, Cluj-Napoca, Romania, 2019, pp. 316-321, doi: 10.1109/SIITME47687.2019.8990719.
- C7. S. M. Pavel, S. Moldovanu and D. Aiordachioaie, "On the use of the Ensemble Learning Method for the Classification of the Human Emotions," *2024 28th International Conference on System Theory, Control and Computing (ICSTCC)*, Sinaia, Romania, 2024, pp. 402-407, doi: 10.1109/ICSTCC62912.2024.10744752.
- C8. L. M. Baicu, M. Andrei, G. Ifrim and S. M. Pavel, "**IoT solution for controlling and monitoring temperature in bioreactor**," *2024 28th International Conference on System Theory, Control and Computing (ICSTCC)*, Sinaia, Romania, 2024, pp. 391-396, doi: 10.1109/ICSTCC62912.2024.10744721.

Conferinte BDI (IEEE)

- C9. S. M. Pavel and D. Aiordachioaie, "**On Change Detection in the State of the Human Faces by Thermal Images and Renyi Information Measures**," *2021 International Symposium on Signals, Circuits and Systems (ISSCS)*, Iasi, Romania, 2021, pp. 1-4, doi: 10.1109/ISSCS52333.2021.9497373.
- C10. S. M. Pavel and R. Popa, "**An algorithm for pseudocoloring images in FPGA**," *2021 7th International Symposium on Electrical and Electronics Engineering (ISEEE)*, Galati, Romania, 2021, pp. 1-4, doi: 10.1109/ISEEE53383.2021.9628810.
- C11. S. M. Pavel, S. Moldovanu and D. Aiordachioaie, "**Emotion Recognition in Human Thermal Images with Artificial Intelligence Technology**," *2023 IEEE 28th International Conference on Emerging Technologies and Factory Automation (ETFA)*, Sinaia, Romania, 2023, pp. 1-5, doi: 10.1109/ETFA54631.2023.10275377.
- C12. S. Moldovanu, S. M. Pavel and D. Aiordachioaie, "**First Order Features Extraction from Thermal Images for Human State Recognition**," *2023 8th International Symposium on Electrical and Electronics Engineering (ISEEE)*, Galati, Romania, 2023, pp. 116-119, doi: 10.1109/ISEEE58596.2023.10310370.
- C13. S. M. Pavel, G. Sirbu and D. Aiordachioaie, "**Selection of Region of Interest in Thermal Images for the Classification of the Human Emotions**," *2024 7th International Conference on Development and Application Systems (DAS)*, Suceava, Romania, 2024, pp. 156-159, doi: 10.1109/DAS61944.2024.10541207.

- C14. S. M. Pavel, D. Aiordachioaie and G. Sirbu, "**Comparative Analysis of Full-Face and ROI-Based Thermal Images with Noise for Binary Emotion Classification**," 2025 9th International Symposium on Electrical and Electronics Engineering (ISEEE), Galati, Romania, 2025, pp. 1-7, doi: 10.1109/ISEEE67817.2025.11304828.

Evenimente de transfer tehnologic și inventică

- B1. Marius Sorin Pavel, Gabriel Sîrbu, Dorel Aiordăchioaie, **Sistem automat pentru detectarea și recunoașterea persoanelor în condiții de mediu dificile**, Medalia de aur UGALINVENT 2023, 9-10 noiembrie 2023, URL: <https://invent.ugal.ro/2023/Premii-acordate-UGAL-INVENT-2023-20.11.pdf>