Anca-Adriana PETCUȚ-LASC

Lista lucrărilor științifice publicate și a participărilor la conferințe

Actualizată: octombrie 2026

Total: peste 22 lucrări (2024-2026): 5 articole în reviste, 1 capitol de carte (Springer LNCS), 11 lucrări în volume de conferințe IEEE, 2 lucrări la conferințe internaționale (IIZS) și 3 lucrări în volume cu ISBN/ISSN.

A. ARTICOLE ÎN REVISTE

1. Barna, C., Petcuț, F.-M., & **Petcuț-Lasc, A.-A.** (2026). Reducing Image Classification Errors in Convolutional Neural Networks Through a Fuzzy–Possibilistic Abstention Mechanism. Applied Sciences, 16(21), 10568. https://doi.org/10.3390/app162110568
2. **Petcuț-Lasc, A.-A.**, & Petcuț, F.-M. (2026). Real-Time Photovoltaic Panel Emulator Under Variable Environmental Conditions Using dSPACE and Programmable Voltage Source. Journal of Intelligent Systems (De Gruyter), Online ISSN 2191-026X. https://doi.org/10.1515/jisys-2025-0385
3. Petcuț, F.-M., **Petcuț-Lasc, A.-A.**, & Bălaș, V. E. (2026). Embedded Real-Time Implementation of a Two-Diode Model Photovoltaic Emulator Using dSPACE for Hardware Validation. Electronics, 15(8), 1765. https://doi.org/10.3390/electronics15081765 (WOS:001749616700001)
4. **Petcuț-Lasc, A.-A.**, Petcuț, F.-M., & Bălaș, V. E. (2026). A Systematic Review of Solar Tracking Systems for Photovoltaic Installations: Electrical Performance, Control Strategies, and System Integration. Electricity, 7(2), 45. https://doi.org/10.3390/electricity7020045
5. Rotar, R., **Petcuț-Lasc, A.-A.**, Petcuț, F.-M., Oprițoiu, F., & Vlăduțiu, M. (2025). Failure Mode and Effects Analysis of a Microcontroller-Based Dual-Axis Solar Tracking System with Testing Capabilities. Applied System Innovation, 8(6), 159. https://doi.org/10.3390/asi8060159

B. CAPITOLE DE CARTE

1. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., & Petcuț, F.-M. (2026). Edge-AI-Driven Photovoltaic Energy Optimization Systems for Renewable Network Infrastructure. In Y. Koucheryavy et al. (Eds.), Internet of Things, Smart Spaces, and Next Generation Networks and Systems (NEW2AN 2025), Lecture Notes in Computer Science, vol. 16461. Springer, Cham. https://doi.org/10.1007/978-3-032-19978-2_15

C. LUCRĂRI ÎN VOLUME DE CONFERINȚE INTERNAȚIONALE IEEE

1. **Petcuț-Lasc, A.-A.**, Petcuț, F.-M., & Bălaș, V. E. (2026). Optimal Day-Ahead Dispatch of a Hybrid Floating-Photovoltaic and Hydropower Plant: A Comparative Study of Metaheuristic Algorithms. 2026 IEEE 24th International Symposium on Intelligent Systems and Informatics (SISY), Pula, Croatia, 23–25 Sept. 2026 (in press).
2. **Petcuț-Lasc, A.-A.**, Petcuț, F.-M., & Bălaș, V. E. (2026). Next-Generation Global MPPT under Partial Shading: A State-of-the-Art Review and a Conceptual Framework Based on the War Strategy Optimization Algorithm. IEEE 30th Jubilee International Conference on Intelligent Engineering Systems (INES 2026), Budapest, Hungary, pp. 375–382. https://doi.org/10.1109/INES69513.2026.11661250
3. **Petcuț-Lasc, A.-A.**, Petcuț, F.-M., & Bălaș, V. E. (2026). Adaptive Computational Cybernetics for Photovoltaic Energy Optimization Under Partial Shading Conditions. 2026 IEEE 13th International Joint Conference on Cybernetics and Computational Cybernetics, Cyber-Medical Systems (ICCC), Brisbane, Australia, pp. 329–334. https://doi.org/10.1109/ICCC68994.2026.11511642
4. **Petcuț-Lasc, A.-A.**, Petcuț, F.-M., & Bălaș, V. E. (2026). Design and Performance Assessment of a 10 kW East–West Oriented Photovoltaic System. 2026 IEEE 24th World Symposium on Applied Machine Intelligence and Informatics (SAMI), Stará Lesná, Slovakia, pp. 461–466. https://doi.org/10.1109/SAMI68106.2026.11420690
5. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., & Petcuț, F.-M. (2025). Performance Trends and Efficiency Limits of Photovoltaic Modules: An Analysis Based on NREL Champion Data. IEEE 25th International Symposium on Computational Intelligence and Informatics (CINTI 2025), Budapest, Hungary, pp. 773–778. https://doi.org/10.1109/CINTI67731.2025.11311722 — Best Paper Award
6. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., & Petcuț, F.-M. (2025). Optimizing Control of Electric Power Production via Photovoltaic Panels: A Survey on Fuzzy Technology, Neural Networks, and Hybrid Systems. 2025 IEEE 11th International Conference on Electrical Energy Systems (ICEES 2025), pp. 385–390. https://doi.org/10.1109/ICEES67011.2025.11213153
7. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., Petcuț, F.-M., & Barna, C. (2025). Modelling and Identification of Two Genetic Algorithms Used for Solar Cell Parameter. 2025 29th IEEE International Conference on Intelligent

Engineering Systems (INES), Palermo, Italy, pp. 21–26. https://doi.org/10.1109/INES67149.2025.11078181 (WOS:001554077100004)

8. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., & Petcuț, F.-M. (2025). A Survey of MPPT Techniques under Partial Shading Conditions: Evaluating the Firefly Algorithm's Performance. 2025 18th International Conference on Engineering of Modern Electric Systems (EMES), Oradea, Romania, pp. 1–6. https://doi.org/10.1109/EMES65692.2025.11045613
9. **Petcuț-Lasc, A.-A.**, & Petcuț, F.-M. (2025). MPPT Strategies for PV Systems under Partial Shading: A Survey with Emphasis on the Artificial Bee Colony Algorithm. 25th International Conference on Control Systems and Computer Science (CSCS25), Bucharest, Romania. https://doi.org/10.1109/CSCS66924.2025.00023
10. Barna, C., Petcuț, F.-M., & **Petcuț-Lasc, A.-A.** (2025). Similarity Measurement of Uncertainty in Artificial Neural Networks Classification. 2025 IEEE 19th International Symposium on Applied Computational Intelligence and Informatics (SACI), Timișoara, Romania, pp. 327–330. https://doi.org/10.1109/SACI66288.2025.11030144 (WOS:001539876700055)
11. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., Petcuț, F.-M., Rotar, R., & Alexuță, D. (2025). Performance Evaluation of a Residential Photovoltaic System in Matlab Simulink. 2025 IEEE 23rd World Symposium on Applied Machine Intelligence and Informatics (SAMI), pp. 435–440. https://doi.org/10.1109/SAMI63904.2025.10883312

D. LUCRĂRI ÎN VOLUME DE CONFERINȚE INTERNAȚIONALE (BDI)

1. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., & Petcuț, F.-M. (2025). Comparative Analysis of Residential Photovoltaic Systems: Impact of Shading and Orientation on Energy Production. Proceedings of the XV International Conference on Industrial Engineering and Environmental Protection (IIZS 2025), Zrenjanin, Serbia, pp. 175–179. https://doi.org/10.5937/IIZS25175P
2. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., & Petcuț, F.-M. (2024). Analysis of a Residential Photovoltaic System. Proceedings of the XIV International Conference on Industrial Engineering and Environmental Protection (IIZS 2024), Zrenjanin, Serbia, pp. 198–205. https://doi.org/10.46793/IIZS24.198PL

E. LUCRĂRI ÎN VOLUME CU ISBN/ISSN (REZUMATE, CONFERINȚE NAȚIONALE)

1. Petcuț, F.-M., **Petcuț-Lasc, A.-A.**, & Bălaș, V. E. (2026). Experimental Characterization and Stability of a Real-Time Photovoltaic Emulator Implemented on a dSPACE Platform. Târgoviște, România, 9–11 septembrie 2026, volumul de rezumate al conferinței, Print ISSN 2601-5102.
2. Petcuț, F.-M., **Petcuț-Lasc, A.-A.**, & Bălaș, V. E. (2026). Platformă de emulare în timp real a modulelor fotovoltaice bazată pe tehnici interpolative și achiziție dSPACE. Conferința Științifică de Primăvară a Academiei Oamenilor de Știință din România (AOSR), „Diplomația cunoașterii în era digitală", București, România, 29–30 mai 2026, volumul de rezumate al conferinței, Print ISSN 2601-5102.
3. **Petcuț-Lasc, A.-A.**, Bălaș, V. E., & Petcuț, F.-M. (2025). Importanța poziționării corecte a panourilor fotovoltaice. BACStud Engineering Innovation Contest & Expo (BACStud 2025), Băile Felix, România, p. 23. Editura UAO (Agora), ISBN 978-973-1807-63-8.