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## **L I S T A**

### **scientific papers in the field of teaching disciplines**

**Doctoral thesis** : "Contributions to the automation of aquaponic systems", Oil and Gas University of Ploiesti, Scientific Supervisor Prof.univ.habil. dr.ing. VALENTINA EMILIA BALAS, in the field of Systems Engineering, held on 13.03.2026 at the "Politehnica" University of Timisoara.

#### ***I. Articles published in Clarivate Analytics Web of Science indexed journals:***

**A1: Daniel Alexuță**, Valentina E. Bălaș, Marius M. Bălaș, April 2025, *On the Three-Tank Aquaponic Configuration*, International Journal of Computers Communications & Control (IJCCC), Vol. 20, No. 2, Article 7032, DOI: 10.15837/ijccc.2025.2.7032, **WOS:001455084900004, (Q3, IF=1.9).**

**A2: Alexuță, D.** (2022). *Urban green areas using sustainable aquaponics*, Scientific Papers. Series B. Horticulture, Vol. 66, Issue 2, p. 349-356, **WOS:000914703800043, (Q4, IF=0.4).**

**A3: Mihaela Popa, Alexuță Daniel**, Valentina E. Bălaș, *Fuzzy-interpolative control of temperatures for the intelligent rooftop greenhouse*, Journal of Intelligent & Fuzzy Systems (JIFS), Vol. 43, Issue 2, June 2022, DOI: [10.3233/JIFS-219280](https://doi.org/10.3233/JIFS-219280), **WOS:000811435100012 (Q4, IF = 1).**

#### ***II. Articles published in the volumes of IEEE, SCOPUS indexed conferences***

**A4: Mihaela Popa, Daniel Alexuță**, Marius Mircea Balas, Valentina Emilia Balas, *Current Trends in Research on Temperature Control in Rooftop Greenhouse*, 2025, 18th International Conference on Engineering of Modern Systems (EMES), 29-30 May, 2025, Oradea, Romania, DOI: [10.1109/EMES65692.2025.11045579](https://doi.org/10.1109/EMES65692.2025.11045579), **Publisher IEEE, SCOPUS.**

**A5: Marius M. Bălaș, Mihaela Popa, Emanuela V. Muller, Daniel Alexuță**, *Intelligent Roof-Top Greenhouse Building*, International Workshop on Soft Computing Applications, September 13–15, 2018, Arad, Romania, Springer, [Advances in Intelligent Systems and Computing](https://doi.org/10.1007/978-3-030-52190-5_5) (AISC, volume 1222), DOI: [10.1007/978-3-030-52190-5\\_5](https://doi.org/10.1007/978-3-030-52190-5_5), **SCOPUS.**

**A6:** Petcuț-Lasc A. A., Valentina E. Bălaș, Florin M. Petcuț, R. Rotar, **Daniel Alexuță**, January 2025, *Performance Evaluation of a Residential Photovoltaic System in Matlab Simulink*, 2025 IEEE 23rd World Symposium on Applied Machine Intelligence and Informatics (SAMI), IEEE, pp. 435–440, DOI: [10.1109/SAMI63904.2025.10883312](https://doi.org/10.1109/SAMI63904.2025.10883312), Publisher IEEE, SCOPUS.

## ***II. Articles published in the volumes of the BDI indexed conferences***

**A7: Alexuță, D.**, Balas, V. E., Balas, M. M. "A Systematic Review of Aquaponics: Advances in Automation and Sustainable Agriculture", Volume 14 Number 25, pp. 27-44, 2nd International Conference on Computer Science, Information Technology & AI (CSITAI 2024), December 28~29, 2024, Dubai, UAE, DOI: <https://doi.org/10.5121/csit.2024.142503>, <https://airconline.com/csit/papers/vol14/csit142503.pdf> , **BDI**.

**A8: Daniel Alexuță**, Marius M. Bălaș, *The Study of Water Parameters in an Aquaponic System*, XIII International Conference on Industrial Engineering and Environmental Protection IIZS 2023, Technical Faculty "Mihajlo Pupin" Zrenjanin, pp. 468-474, October 05-06, 2023, Zrenjanin, Serbia, **BDI**.

<http://www.tfzr.uns.ac.rs/iizs/files/IIZS%202023%20Proceedings%20Final.pdf>

**A9: Daniel Alexuță**, Marius M. Bălaș, *Aquaponics as an innovative technology for sustainability and environmental protection: challenges and industrial solutions*, XIV International Conference on Industrial Engineering and Environmental Protection IIZS 2024, Technical Faculty "Mihajlo Pupin" Zrenjanin, October 03 – 04, 2024, p. 468-412, Zrenjanin, Serbia, **BDI**, <http://www.tfzr.uns.ac.rs/iizs/files/IIZS2%202024%20Proceedings.pdf>.

**A10: Alexuță, D.**, Balas, V. E., & Balas, M. M., *Recovery of electricity consumed in an aquaponic system, with the help of the buoyancy principle*, The 8th edition of International Symposium "Brainstorming in Agora Students' Scientific Circle" BACStud 2022, Agora University of Oradea, Baile Felix, Baile 1 Mai. **ISBN:978-973-1807-63-8**

**A11: Alexuță, D.**, Balas, V. E., & Balas, M. M, *Aquaponics, pH, and Other Parameters in Aquaponics: A Comprehensive Exploration*, The 9th edition of International Symposium "Brainstorming in Agora Students' Scientific Circle" BACStud 2023, Agora University Oradea, Baile Felix, Baile 1 Mai. **ISBN:978-973-1807-63-8**

**A12: Alexuță, D.,** Balas, V. E., & Balas, M. M, *Mathematical modification of parameters in an aquaponic greenhouse*, The 10th edition of International Symposium "Brainstorming in Agora Students' Scientific Circle" BACStud 2024, Agora University of Oradea, Baile Felix, Baile 1 Mai.  
**ISBN:978-973-1807-63-8**