

**LISTA LUCRĂRILOR ȘTIINȚIFICE PUBLICATE ÎN JURNALE INDEXATE
ISI/BDI ȘI COMUNICATE LA CONFERINȚE
INTERNAȚIONALE/NAȚIONALE**

Prof. dr. ing. Cătălina Mercedes BURLACU

A. LUCRĂRI PUBLICATE ISI

Indexate sau/și cotate in Clarivate Analytics – Web of Science Core Collection™ (Wos) și Scopus

1. **Burlacu, C.M.**; Burlacu, A.C.; Praisler, M.; Paraschiv C. Harnessing Deep Convolutional Neural Networks Detecting Synthetic Cannabinoids: A Hybrid Learning Strategy for Handling Class Imbalances in Limited Datasets. *Inventions* **2023**, 8, 129. DOI: 10.3390/inventions8050129. WOS:001089546600001. **ISI Impact Factor: 3.4 (2023)**. <https://www.mdpi.com/2411-5134/8/5/129>.

Lucrare citată în:

- a) Annaki I.; Rahmoune M.; Bourhaleb M. Overview of Data Augmentation Techniques in Time Series Analysis. *International Journal of Advanced Computer Science and Applications* 2024, 15-1,1201-1211. **ISI Impact Factor: 0.9 (2022)**.

https://thesai.org/Downloads/Volume15No1/Paper_118Overview_of_Data_Augmentation_Techniques.pdf.

- b) Rezaee K., Machine learning and facial recognition for down syndrome detection: A comprehensive review, *Computers in Human Behavior Reports*, 17 (2025) art. no. 100600. DOI: 10.1016/j.chbr.2025.100600. **ISI Impact Factor: 4.9 (2023)** <https://www.sciencedirect.com/science/article/pii/S2451958825000156>

2. **Burlacu, C.M.**; Burlacu, A.C.; Praisler, M. Sensitivity analysis of Artificial Neural Networks identifying JWH synthetic cannabinoids built with alternative training strategies and methods. *Inventions* **2022**, 7, 82. DOI: 10.3390/inventions7030082. WOS:000858596600001. **ISI Impact Factor: 3.4 (2022)** <https://www.mdpi.com/2411-5134/7/3/82>.

Lucrare citată în:

- a) Karimi, N.; Salavati, E.; Assa, H.; Adibi, H. Sensitivity Analysis of Optimal Commodity Decision Making with Neural Networks: A Case for COVID-19. *Mathematics* **2023**, 11,1202. WOS: 000947070800001. **ISI Impact Factor: 2.4 (2022)**. <https://doi.org/10.3390/math11051202>.

- b) Muljono W.S.A. et al. Breaking Boundaries in Diagnosis: Non-Invasive Anemia Detection Empowered by AI. *IEEE Access* 2024, 12, 9292-9307. DOI: 10.1109/ACCESS.2024.3353788. **ISI Impact Factor: 0.89 (2022).** <https://researchr.org/publication/MuljonoWANPZ24>.
- c) Darie, I-F.; Anton, S.R.; Praisler, M. Machine Learning Systems Detecting Illicit Drugs Based on Their ATR-FTIR Spectra. *Inventions* 8 2023, 56. WOS:000978413800001. **ISI Impact Factor: 3.4 (2022).** <https://doi.org/10.3390/inventions8020056>.
- d) Šubarić, D., Rastija, V., Karnaš Babić, M., Agić, D., Majić, I., Structural Features of Coumarin-1,2,4-Triazole Hybrids Important for Insecticidal Effects Against *Drosophila melanogaster* and *Orius laevigatus* (Fieber). *Molecules* 30 (2025) 1662. DOI: 10.3390/molecules30081662 **ISI Impact Factor: 4.2 (2023)** <https://www.mdpi.com/1420-3049/30/8/1662>
- e) Vasudha, P., Banu Vamsi, S., Reshwanth T., Innovative AI-based techniques for non-invasive anemia screening and diagnosis, *International Journal of Engineering Technology Research & Management* 9 – 5 (2025) 5-25. **ISI Impact Factor: 8.232 (2023)** <https://ijetrm.com/issues/files/May-2025-01-1746074349-MAY02.pdf>

3. **Burlacu, C.M.;** Praisler, M.; Burlacu, A.C. Computerized Detection of JWH Synthetic Cannabinoids Class Membership Based on Machine Learning Algorithms and Molecular Descriptors. *2022 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR)*, May 19-21, **2022**, IEEE, Cluj - Napoca, Romania. DOI: 10.1109/AQTR55203.2022.9801971. WOS:000890261900007. Electronic ISBN:978-1-6654-7933-2. USB ISBN:978-1-6654-7932-5. ISBN:978-1-6654-7934-9. <http://www.aqtr.ro/>; <https://ieeexplore.ieee.org/abstract/document/9801971/authors#authors>.

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- a) Gambacorta, N.; Ciriaco, F.; Amoroso, N.; Altomare, C.D.; Bajorath, J.; Nicolotti, O. CIRCE: Web-Based Platform for the Prediction of Cannabinoid Receptor Ligands Using Explainable Machine Learning. *J Chem Inf Model* 2023, 63-18, 5916–5926.

ISI Impact Factor: 5.6 (2022). <https://doi.org/10.1021/acs.jcim.3c00914>.

- b) Fraile, P.A. Neural Designer in scientific research. *Neural Designer* 2023. <https://www.neuraldesigner.com/blog/neural-designer-in-scientific-research/#Articulo2>

4. **Burlacu, C.M.;** Gosav, S.; Burlacu, B.A; Praisler M. Convolutional Neural Network detecting synthetic cannabinoids. *2021 International Conference on E-Health and Bioengineering (EHB 2021), 9th Edition, 2021*, IEEE, pp. 1-4. DOI: 10.1109/EHB52898.2021.9657725. **WOS: 000802227900185.** ISBN: 978-1-6654-4000-4. ISSN: 2575-5137. eISSN: 2575-5145.

<http://www.ehbconference.ro/>;

<https://ieeexplore.ieee.org/abstract/document/9657725>.

Lucrare citată în:

Shi, S. W. et al., From 2015 to 2023: How Machine Learning Aids Natural Product Analysis, Chemistry Africa, December 2024. DOI: 10.1007/s42250-024-01154-3 **ISI Impact Factor: 0.39 (2023)**

<https://m.x-mol.net/paper/detail/1820881246288412672>

5. Paraschiv, C.; Gosav, S.; **Burlacu, C.M.**; Praisler, M. Exploring the Inhibitory Efficacy of Resokaempferol and Tectochrysin on PI3K α Protein by Combining DFT and Molecular Docking Against Wild-Type and H1047R Mutant Forms. *Inventions* **2024**, *9*, 96. DOI:10.3390/inventions9050096 **ISI. Impact Factor: 2.1 (2023)**. <https://www.mdpi.com/2411-5134/9/5/96>.

6. **Burlacu, C.M.**; Gosav, S.; Burlacu, B.A.; Praisler, M.; Artificial Neural Networks screening for JWH synthetic cannabinoids: a comparative analysis regarding their specificity and accuracy. *2022 International Conference on E-Health and Bioengineering (EHB 2022), 10th Edition*, 2022, IEEE, pp. 1-4. DOI: 10.1109/EHB55594.2022.9991354. Electronic ISBN:978-1-6654-8557-9. ISBN:978-1-6654-8558-6. Electronic ISSN: 2575-5145. ISSN: 2575-5137.

<http://www.ehbconference.ro/>;

<https://ieeexplore.ieee.org/abstract/document/9991354>.

B. LUCRĂRI PUBLICATE ÎN REVISTE BDI

1. **Burlacu, C.M.**; Burlacu, A.C.; Praisler, M. Physico-chemical analysis, systematic benchmarking and toxicological aspects of the JWH aminoalkylindole class-derived synthetic JWH cannabinoids. *Annals of "Dunarea de Jos" University of Galati, Mathematics, Physics, Theoretical Mechanics, Fascicle II*, Year XIII (XLIV) 2021, No. 1, p. 34-45. DOI: 10.35219/ann-ugal-math-phys-mec.2021.1.06.

<https://gup.ugal.ro/ugaljournals/index.php/math/article/view/4924>.

2. Ion, A.; Praisler, M.; **Burlacu, C.M.**; Stanica, N.C. Automatic identification of NBOMe illicit psychoactive substances based on combined molecular descriptors. *MATEC Web Conf* 2021, 342, 05008. <https://doi.org/10.1051/mateconf/202134205008>.

C. LUCRĂRI COMUNICATE LA CONFERINȚE INTERNAȚIONALE

1. **Burlacu, C.M.**; Praisler, M.; Burlacu, A.C. Computerized Detection of JWH Synthetic Cannabinoids Class Membership Based on Machine Learning Algorithms and Molecular Descriptors. *2022 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR)*, May 19-21, 2022, IEEE, Cluj - Napoca, Romania. DOI: 10.1109/AQTR55203.2022.9801971. WOS:000890261900007. Electronic ISBN:978-1-6654-7933-2. USB ISBN:978-1-6654-7932-5. ISBN:978-1-6654-7934-9.

<http://www.agtr.ro/>;

<https://ieeexplore.ieee.org/abstract/document/9801971/authors#authors>.

2. **Burlacu, C.M.;** Gosav, S.; Burlacu, B.A.; Praisler, M. Artificial Neural Networks screening for JWH synthetic cannabinoids: a comparative analysis regarding their specificity and accuracy. *2022 International Conference on E-Health and Bioengineering (EHB 2022), 10th Edition*, 2022, IEEE , pp. 1-4. DOI: 10.1109/EHB55594.2022.9991354. Electronic ISBN:978-1-6654-8557-9. ISBN:978-1-6654-8558-6. Electronic ISSN: 2575-5145. ISSN: 2575-5137.

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3. **Burlacu, C. M.;** Gosav, S.; Burlacu, B. A; Praisler M. Convolutional Neural Network detecting synthetic cannabinoids. *2021 International Conference on E-Health and Bioengineering (EHB 2021), 9th Edition*, 2021, IEEE, pp. 1-4. DOI: 10.1109/EHB52898.2021.9657725. WOS: 000802227900185. ISBN: 978-1-6654-4000-4. ISSN: 2575-5137. eISSN: 2575-5145.

<http://www.ehbconference.ro/>;

<https://ieeexplore.ieee.org/abstract/document/9657725>.

4. Ion, A.; Praisler, M.; **Burlacu, C.M.;** Stanica, N.C. Automatic identification of NBOMe illicit psychoactive substances based on combined molecular descriptors. *International Multidisciplinary Symposium "UNIVERSITARIA SIMPRO"*, Petroșani, Romania, 27 – 28 May 2021.

<https://www.upet.ro/simpro/2021/>.

D. LUCRĂRI COMUNICATE LA CONFERINȚE NAȚIONALE

1. **Burlacu, C.M.;** Burlacu, C.A.; Gosav, S.; Praisler, M. Computer-aided detection of synthetic cannabinoids. *Book of abstracts SCDS-UDJG 2023*, 9th Edition, 8 - 9 June 2023, Galati, Romania. <http://www.cssd-udjg.ugal.ro/>.
2. **Burlacu, C.M.;** Burlacu, B.A.; Praisler, M. ANN detecting synthetic cannabinoids based on Quantitative Structure Activity Relationship (QSAR). *Book of abstracts SCDS-UDJG 2023*, 9th Edition, 8 - 9 June 2023, Galati, Romania. <http://www.cssd-udjg.ugal.ro/>.
3. **Burlacu, C.M.;** Gosav, S.; Burlacu, B.A.; Praisler, M. Artificial Neural Networks screening for JWH synthetic cannabinoids: a comparative specificity and accuracy analysis. *Book of abstracts SCDS-UDJG 2022*, 9th Edition, 9 - 10 June 2022, Galati, Romania. <http://www.cssd-udjg.ugal.ro/>.
4. **Burlacu, C.M.;** Burlacu, A.C.; Praisler, M. Output sensitivity analysis of an ANN identifying JWH synthetic cannabinoids based on alternative training strategies and

methods. *Book of abstracts SCDS-UDJG 2022*, 9th Edition, 9 - 10 June 2022, Galati, Romania. <http://www.cssd-udig.ugal.ro/>.

5. **Burlacu, C.M.;** Gosav, S.; Burlacu, B.A.; Praisler, M. Artificial intelligence methods applicable for the recognition of JWH cannabinoids. *Book of abstracts SCDS-UDJG 2021*, 9th Edition, 10 - 11 June 2021, Galati, Romania. <http://www.cssd-udig.ugal.ro/>.
6. **Burlacu, C.M.;** Praisler, M.; Burlacu, A.C. Physico-chemical analysis, systematic benchmarking and toxicological aspects of the JWH aminoalkylindole class-derived synthetic JWH cannabinoids. *Book of abstracts SCDS-UDJG 2021*, 9th Edition, 10 - 11 June 2021, Galati, Romania. <http://www.cssd-udig.ugal.ro/>.

DATA:

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