

Pavlo Radiuk

Associate Professor · Ph.D. in Computer Science

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🏠 Department profile

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🏠 Google Scholar

📄 Scopus 57216894492

🔗 Web of Science AAA-9727-2021

📄 ResearchGate

🌐 LinkedIn

🐙 github.com/radiukpavlo

📍 Khmelnytskyi, Ukraine

I work on explainable artificial intelligence: methods that map what a deep network has learned onto the features clinicians and engineers already use, so that its decisions can be checked and audited. I apply them in medical imaging, UAV inspection of energy infrastructure and urban traffic control, and I am a Researcher in the Horizon Europe project U_CAN.

📁 Positions

- 2025 – present **Associate Professor**, Khmelnytskyi National University
- 2024 – present **Researcher**, Horizon Europe project U_CAN, Khmelnytskyi National University
- 2022 – 2025 **Senior Lecturer**, Khmelnytskyi National University
- 2022 – present **Data Scientist (advisory)**, Nolt Technologies

🎓 Education

- 2025 – 2027 **D.Sc. (habilitation level)**, Information Technologies, Khmelnytskyi National University, in progress
- 2022 **Ph.D.**, Computer Science, Khmelnytskyi National University
- 2017 **M.Sc.**, Mathematical and Computer Modelling, Khmelnytskyi National University, with distinction

🏢 Research projects

- 2024 – 2028 **Ukraine towards Carbon Neutrality (U_CAN)**, Researcher; technical lead, Khmelnytskyi traffic pilot Horizon Europe, EU Mission for Climate-Neutral and Smart Cities, grant agreement 101148374



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- 2024 – 2026 **Intelligent System for Recognising Defects of Green-Energy Objects Using UAVs**, Researcher (executor) Ministry of Education and Science of Ukraine, No. 0124U004665

📄 Selected publications

76 works: 38 journal articles, 34 conference papers, 2 book chapters and 2 preprints. Google Scholar h-index 17 (1,158 citations) · Scopus h-index 10 · Web of Science h-index 7 (as of Oct 2026). Own name in bold; [†] marks a mentored junior researcher.

- 2026 **CARDIA-X: Global Semantic Transition and Rough-Set Rules for Auditable Post Hoc Electrocardiographic Explainability**
P. Radiuk, O. Barmak, L. Klymenko, I. Krak. *AI* 7(9):376. doi:10.3390/ai7090376
- 2026 **Equivariant Transition Matrices for Explainable Deep Learning: A Lie Group Linearization Approach**
P. Radiuk, O. Barmak, L. Bedratyuk, I. Krak. *Machine Learning and Knowledge Extraction* 8(4):92. doi:10.3390/make8040092
- 2025 **Criticality Assessment of Wind Turbine Defects via Multispectral UAV Fusion and Fuzzy Logic**
P. Radiuk, B. Rusyn, O. Melnychenko, T. Perzynski, A. Sachenko, S. Svystun[†], O. Savenko. *Energies* 18(17):4523. doi:10.3390/en18174523
- 2025 **Hierarchical Deep Learning Model for Identifying Similar Targets in UAV Imagery**
D. Borovyk[†], O. Barmak, P. Radiuk, I. Krak. *Drones* 9(11):743. doi:10.3390/drones9110743
- 2024 **Intelligent Integrated System for Fruit Detection Using Multi-UAV Imaging and Deep Learning**
O. Melnychenko, L. Scislo, O. Savenko, A. Sachenko, P. Radiuk. *Sensors* 24(6):1913. doi:10.3390/s24061913
- 2017 **Impact of Training Set Batch Size on the Performance of Convolutional Neural Networks for Diverse Datasets**
P. Radiuk. *Information Technology and Management Science* 20(1). doi:10.1515/itms-2017-0003

👤 Service and recognition

- PC member DEXA 2024–2026 · WISE 2024, 2026 · MobiWis 2026
- Editorial Guest Editor, Sustainability (MDPI), 2024–2026; Volume Editor, CEUR Workshop Proceedings, Vol. 4141 (ExplAI-2025), 2025; Editorial Board Member and Handling Editor, Journal of Intelligent & Fuzzy Systems, 2023–2024.
- Organising Organising Committee member, ExplAI workshop, 2025–2026; Lead organiser, U_CAN international conference on climate-neutral cities, 2026.
- Peer review 450+ reviews for journals and conferences.
- Awards Scholarship of the Cabinet of Ministers of Ukraine for Young Scientists, 2022–2024; Best Paper Award for Ukrainian authors, IDAACS-2023, 2023.
- Teaching 8 current courses at bachelor's, master's and Ph.D. level, one taught in English.

🤝 Collaboration

- Partners Open to Horizon Europe, MSCA and EuroHPC consortia as XAI methods lead, Medical AI partner, Energy & UAV inspection and Ukrainian pilot site (PIC 964860456). Partner kit: [radiukpavlo.github.io/partner-kit](https://github.com/radiukpavlo/partner-kit).