Dworska 23/8
30-314 Kraków
Poland
+48 503 902 656
vitaliyurbanevich@gmail.com
vitalii-urbanevych-470767184
VitaliiUr

Vitalii Urbanevych

Curriculum Vitae

Education

2018–2024 **Doctor of philosophy**, *Department of Theory of Nuclear Systems*, Jagiellonian University, Kraków
An application of Chiral forces to electromagnetic nuclear reactions.

2015–2017 **Master of Science**, *Physics of nucleus and high energies*, ONPU, Odesa
with honours
Study of a theoretical model of Traveling Wave Reactor. Looking for special stationary regimes of operation for such a reactor.

2011–2015 **Bachelor of Science**, *Physics*, ONPU, Odessa
with honours

Experience

2024 - present **Software Engineer - Automation and Augmentation Technologies**, *AON*, Kraków
Develop automation technologies for business data processing.

2021 - 2023 **Junior NLP Engineer**, *SAMSUNG POLAND R&D*, Kraków
Working in Automatic Speech Recognition team developing voice assistant.
- Development and maintaining voice recognition models(training Neural Networks on cluster, data preparation, fine-tuning);
- Writing Python and BASH scripts, code reviewing;
- Fixing defects in voice recognition models (regex, data analysis, debugging);
- Working in Scrum framework with JIRA tasks;
- Researching NLP methods and patents, analysis of publications;
- Operating with large language models (LLM): inference, fine-tuning;
- International work environment.

2019 - 23 **Scientific Researcher**, *SiFi-CC group - Jagiellonian University*, Kraków
part-time
Developing a method for online monitoring during proton therapy with Coded-mask approach.
- Investigation and optimisation of the geometry parameters;
- Simulations with Geant4 (development, optimisation and processing);
- Development of image reconstruction tools using MLEM algorithm(C++, Python, ROOT CERN);
- Experimental data analysis;
- International internship (Lübeck , Germany, 2021);
- Presenting results on scientific conference (iWoRiD2023, Oslo, Norway, 2023).

2019 - 2021 **Software Engineer**, *Instytut Fotonowy*, Kraków

part-time

- Writing software for automatic calibration of devices using machine learning(GNU Octave, Matlab);
- GUI for operation with the device;
- Natural Language Processing.

2018–2023 **Teaching Assistant**, *Jagiellonian University*, Kraków

- Laboratory classes for Biophysics students.
- Led practical classes of the course "Statistical Methods" for non-stationary students from "Applied informatics".
- Led practical classes of the course "Medical Statistics" for Biophysics students.
- Preparing statistical web applets for students' practice (in Javascript).

2017 **Junior Research Associate**, *ONPU*, Odesa

Languages

Ukrainian Native

English C1

Polish B2

Professional interests

Research Nuclear physics, Numerical simulations, mathematical analysis

Other AI, Machine learning, Data science

Interests

- Chess
- Climbing
- Guitar
- Books
- Mountaineering
- Volleyball

Selected Publications

[1] Jakub Hoscilowicz, Adam Wiacek, Jan Chojnacki, Adam Cieslak, Leszek Michon, Vitalii Urbanevych, and Artur Janicki. NL-ITI: Optimizing probing and intervention for improvement of ITI method. *arXiv preprint arXiv:2403.18680*, 2024.

[2] Ronja Hetzel, Vitalii Urbanevych, Andreas Bolke, Jonas Kasper, Monika Kercz, Magdalena Kołodziej, Andrzej Magiera, Florian Mueller, Sara Müller, Magdalena Rafecas, Katarzyna Rusiecka, David Schug, Volkmar Schulz, Achim Stahl, Bjoern Weissler, Ming-Liang Wong, and Aleksandra Wrońska. Near-field coded-mask technique and its potential for proton therapy monitoring. *Physics in Medicine & Biology*, 68(24):245028, dec 2023.

[3] V. Urbanevych, R. Skibiński, H. Witała, J. Golak, K. Topolnicki, A. Grassi, E. Epelbaum, and H. Krebs. Application of a momentum-space semi-locally regularized chiral potential to selected disintegration processes. *Phys. Rev. C*, 103:024003, Feb 2021.

[4] K. Rusiecka, R. Hetzel, J. Kasper, M. Kazemi Kozani, N. Kohlhase, M. Kołodziej, R. Lalik, A. Magiera, W. Migdał, M. Rafecas, A. Stahl, V. Urbanevych, M.L. Wong, and A. Wrońska. A systematic study of LYSO:ce, LuAG:ce and GAGG:ce scintillating fibers properties. *Journal of Instrumentation*, 16(11):P11006, nov 2021.

[5] H. Witała, J. Golak, R. Skibiński, K. Topolnicki, and V. Urbanevych. Investigation of the

interaction of circularly and linearly polarized photon beams with a polarized $^3\mathrm{He}$ target. *Phys. Rev. C*, 101:024003, Feb 2020.