

Vitalii Urbanevych

Curriculum Vitae

Obozowa 36/47
30-383 Kraków
Poland

+48 503 902 656
✉ vitaliyurbanevich@gmail.com
in [vitalii-urbanevych-470767184](#)

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Education

- 2018–present **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, Odessa.
with honours
Study of a theoretical model of Traveling Wave Reactor. Looking for a special stationary regimes of operation for such an reactor.
- 2011–2015 **Bachelor of Science**, *Physics*, ONPU, Odessa.
with honours

Selected courses

- Introduction to Data Science
- Advanced Statistics: Bayesian analysis and other selected topics (*With practice on Python*)
- Python programming in physics and biophysics
- Relativistic heavy ion collisions

Experience

- 2019 - present **Scientific Researcher**, *SiFi-CC group - Jagiellonian University*, Kraków.
part-time
Development a method for on-line monitoring of a cancer treatment called proton therapy.
 - Monte-Carlo simulations with Geant4
 - Geometry set-up optimization
- 2019 - 2021 **Software Engineer**, *Instytut Fotonowy*, Kraków.
part-time
 - Writing a software for automatic calibration of the device applying machine learning techniques.
 - Writing a GUI for operation with the device.
 - Natural Language Processing(NLP).
 - Text database processing
 - Word-to-vector
 - Text classification
- Feb. 2017 - **Junior Research Associate**, *ONPU*, Odessa.
Aug. 2017

Miscellaneous

- 2018–2021 **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).
- 2017–2018 **Private tutor**, Odessa.
- I helped students of the secondary school to understand Physics and Mathematics

Languages

Russian	Native	English	B2
Ukrainian	Native	Polish	A2-B1

Skills

Python	numpy, pandas, scipy, sklearn etc.	Git	Github, Gitlab
Programming languages	C++, Fortran, Javascript(basics)	Linux	vim, ssh, etc.
Data processing	Matlab/Octave, matplotlib+numpy, Gnuplot		
Other	Wolfram Mathematica, \LaTeX , Geant4, ROOT CERN		
	Strong mathematics and statistics background		

Professional interests

Research	Nuclear physics, numerical simulations, mathematical analysis
Other	AI, machine learning, data science, problem solving

Interests

- Chess
- Climbing
- Guitar
- Books
- Mountaineering

Online-courses

- 2020 **Python: basics and application**, Stepic(in Russian).
with honours
- 2020 **Introduction to Deep Learning**, Coursera.
with honours
- 2020 **"Python", "Pandas", "Intro to Machine Learning", "Data Visualization"**, Kaggle.