

# Vitalii Urbanevych

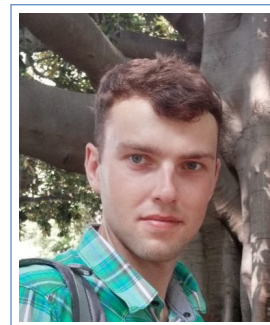
## Curriculum Vitae

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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 special stationary regimes of operation for such a 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*

Developing a method for online 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 software for automatic calibration of the device applying machine learning techniques.
- Writing 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.