

Oleksandr Tomalak, Ph.D.

Theoretical and Computational Physics
Nuclear and Particle Physics

☎ (+49) 155 60735486
✉ sashatomalak@icloud.com
📁 tomalak7.github.io
🌐 Oleksandr Tomalak

Experience

Research in Particle, Hadron, Nuclear, and Neutrino Physics, Analytical Computations, Problem Solving, Programming, Data Analysis.

- Advanced Research in Neutrino, Hadron, and Nuclear Physics resulting in collaborative grants, mentoring and communication skills as

2021–2024 **Director's Postdoctoral Fellow**, Los Alamos National Laboratory, NM, USA.

- Bringing Radiative Corrections and Modern Nucleon Structure to Neutrino Physics, mentoring and communication skills as

2018–2021 **Postdoctoral researcher**, University of Kentucky, Lexington, KY, USA and Fermilab, Batavia, IL, USA.

- Theory of Atomic Physics and Lepton Scattering, mentoring skills as

2016–2018 **Postdoctoral researcher**, Johannes Gutenberg-Universität Mainz, Mainz, Germany.

- Precise Nucleon Structure, teaching and communication skills as

2012–2016 **Ph.D. student**, Johannes Gutenberg-Universität Mainz, Mainz, Germany.

- Analytical and Numerical Calculations in Early Universe Cosmology as

2012–2015 **Ph.D. student**, Taras Shevchenko National University, Kyiv, Ukraine.

- Programming and advanced communication skills as

2015–2017 **Guest scientist**, Department of Physics, University of Pavia, Pavia, Italy.

- Data analysis, detector monitoring, and data taking as

2010–2011 **Member of D0 Collaboration**, D0 Experiment, Fermilab, Batavia, IL, USA.

- Calibration of detectors in high-energy physics experiment as

2009–2010 **Bachelor student**, ZEUS Experiment, DESY, Hamburg, Germany.

Computer Skills

- Wolfram Mathematica	- LaTeX	- C, C++	- Bash
- Maple	- Origin	- Fortran	- Batch
- Mathcad	- DataGraph	- Python, R	- Root
- Windows	- Linux	- OS X	- JaxoDraw
- HTML, CSS	- SQL	- JavaScript	- Jinja
- Flask, Django	- office software	- video conferencing software	

Languages

English	Fluent	C1 level (JGU Mainz, 2018)
German	Upper intermediate	C1 level (JGU Mainz, 2018)
Russian	Fluent	
Ukrainian	Fluent	

Education

- 2012–2016 **Ph.D. in Theoretical Physics**, Johannes Gutenberg-Universität Mainz, Mainz, Germany, *Summa Cum Laude*.
- 2010–2012 **MS in Theoretical Physics**, Taras Shevchenko National University, Kyiv, Ukraine, *Red Diploma*.
Speciality: Nuclear and Particle Physics, Quantum Field Theory
- 2006–2010 **BS in Physics**, Taras Shevchenko National University, Kyiv, Ukraine, *Red Diploma*.
Speciality: Nuclear and Particle Physics, Quantum Field Theory

Professional Activities

Organized 7 Meetings and Conferences
Refereed for 16 Journals
Mentored 6 Students
Wrote 9 Collaborative Research Proposals: 6 Proposals funded
Support from 6 Research Fellowships

68 Peer-Reviewed Journal Articles

The up-to-date publication and citation information can be found on the web page:
<https://inspirehep.net/authors/1077543>
ORCID: 0000-0002-4827-5842

160 Professional Presentations

47 Invited Talks
102 Contributed Talks
11 Posters at International Conferences

Selected Awards and Honors

- 2020–2021 Universities Research Association (URA) Salary Support, Fermilab, USA
- 2019 Universities Research Association (URA) Visiting Scholars Program, Fermilab, USA
- 2017 Prize for Outstanding Doctoral Research, Faculty 08: Physics, Mathematics and Computer Science, Johannes Gutenberg-Universität Mainz, Mainz, Germany
- 2012 Alumnus of the Year, Taras Shevchenko National University, Kyiv, Ukraine
- 2008 3rd degree diploma, member of the Faculty Team, Ukrainian Physicists' Tournament for University Students, Kyiv, Ukraine
- 2007 2nd degree diploma, member of the Faculty Team, Ukrainian Physicists' Tournament for University Students, Kyiv, Ukraine
- 2007 Absolute Winner of Ukrainian Students Olympiad in Theoretical Physics, Kharkiv, Ukraine
- 2006 3rd degree diploma, member of the Faculty Team, Ukrainian Physicists' Tournament for University Students, Kyiv, Ukraine
- 2006 Silver Medal, 37th International Physics Olympiad, Singapore



May 31, 2025