Oleksandr Tomalak, Ph.D.

Theoretical and Computational Physics
Nuclear and Particle Physics

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in *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/author/profile/O.Tomalak.1
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