
ALEKSEI LUCHINSKII

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PROFILE

Ph.D. in Data Science with a strong background in mathematics, statistics, data analysis, and programming. Seeking a professional opportunity in data science where I can apply advanced analytical methods and computational skills to solve real-world problems.

WORK HISTORY:

PostDoc Research Associate	Department of Statistics Virginia Tech University	2026—2027
	Working in Dr. Gel's group	
Data Analyst	SSAT Bowling Green State University	2023—2025
	Collecting, analyzing, predicting, presenting BGSU students' data	
Adjunct Instructor	Bowling Green State University	2022—2023
	Teaching physics and statistics classes	
Software Development	Senico Corp Bowling Green, OH	2021
	Creating web application dashboard, visualizing hotel business KPIs	
Adjunct Instructor	Bowling Green State University	2019—2020
	Teaching business calculus, discrete math, calculus courses	
Theoretical Physics	Institute for High Energy Physics	2001-2015
	Elementary Particle Physics	

TEACHING EXPERIENCE:

Spring 2023	BA2120	Business Statistics
Fall 2022	PHYS 2010	College Physics I
Spring 2020	BA 1600	Business Mathematics and Computational calculus
Fall 2019	Calc 1340	Calculus and Analytic Geometry
Fall 2019	Math 2220	Discrete Mathematics,

EDUCATION:

PhD in Data Science	Bowling Green State University	2025
MS in Data Science	Bowling Green State University	2021
PhD in Physics	Institute for High Energy Physics	2007
MS in Physics	Moscow Institute for Physics and Technology	2001

SUMMARY OF QUALIFICATIONS:

Programming Languages:	C++, R, Python, Wolfram Mathematica
Web development:	AWS, Java Script, React, Python Dash, R Shiny
Mathematics:	Analysis, Statistics, Topology
Data Analysis:	Data Mining, Time Series, Neural Networks, <i>numpy</i> , <i>pandas</i> , <i>sklearn</i> , <i>PyTorch</i> , etc.
Presentations:	<i>Power BI</i> , <i>PowerPoint</i> , <i>LaTeX</i> , <i>Beamer</i>
GPA	4.0

PUBLICATIONS:

1. Kit C Chan, Umar Islambekov, Alexey Luchinsky, Rebecca Sanders, "A Computationally Efficient Framework for Vector Representation of Persistence Diagrams", *Journal of Machine Learning Research* 23.268 (2022): 1-33
2. Umar Islambekov, Alexey Luchinsky, Hasani Pathirana, "TDavec: Vector Summaries of Persistence Diagrams", <https://cran.r-project.org/web/packages/TDavec/index.html>
3. Aleksei Luchinskii, Umar Islambekov, <https://github.com/ALuchinsky/tdavec>
4. Aleksei Luchinskii, Umar Islambekov, "TDavec: Computing Vector Summaries of Persistence Diagrams for Topological Data Analysis in R and Python", arXiv:2411.17340 [math.AT]
5. Kit C Chan, Umar Islambekov, Alexey Luchinsky, Rebecca Sanders, "A data-driven way to compute vector summaries of persistence diagrams using functional data analysis", ready for submission.

(see website and Research Statement for more details)

VOLUNTEER

Volunteered in BGSU Science Olympiad organization: 2022, 2023, 2024
Developed a web site for BGSU ArtsX 2023 event
<https://artsx-2023-456.web.app/>
Developed a web Applications for BGSU, Discrete Math course
<https://bgsu-gol.web.app/>

RELEVANT SKILLS AND ACHIEVEMENTS:

Analysis and Programming Skills:

- Data collection, analysis. Currently I am working on collecting, analyzing, and predicting data regarding BGSU students;
- Proficiency in programming languages. My current work at SSAT requires good knowledge of Python and R
- Experience with web development and creating publicly accessible websites
 - <https://dfin-app.web.app/>
 - <https://artsx-2023-456.web.app/>
- Visualization and dashboard creation for data analysis
- Simulation programming for scientific research (e.g., elementary particle collisions)

Communication Skills:

- Teaching and instruction (as evidenced by adjunct instructor role)
- Numerous group projects in BGSU classes
- Organizational skills demonstrated through assisting in the assessment of scientific olympiads
- Experience in making numerous presentations in academic and scientific conferences

AWARDS AND GRANTS

I received several grants and awards during my work in physics, e.g.

- RFBR grant #14-02-00096, “Doubly Heavy Hadrons Production and Decays on Contemporary Colliders”,
- Kurchatov’s Award (2012, 2013)
- RFCC grant (2012)
- RFBR grant #12-02-31249, 2012-2014

(See website and Research Statement for more details)