

ULYANA PITERBARG
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EDUCATION

Ph.D., Computer Science (GPA 3.9/4.0) <i>Courant Institute of Mathematical Sciences, New York University</i> Advisors: Prof. Rob Fergus, Prof. Lerrel Pinto	2021 - 2026
B.S., Mathematics with Computer Science (GPA 4.9/5.0) <i>Massachusetts Institute of Technology</i> Advisors: Prof. Joshua Tenenbaum, Prof. Jörn Dunkel	2017 - 2021

HONORS & AWARDS

National Science Foundation Graduate Research Fellowship	2022-2025
Google DeepMind Ph.D. Scholarship	2021-2022
NYU Henry M. MacCracken Doctoral Fellowship	2021-2026
MIT Quest for Intelligence Undergraduate Research and Innovation Scholarship	2020-2021
EPFL School of Life Sciences Summer Research Program Fellowship	2018
National Merit Scholarship	2017

EMPLOYMENT

Ph.D. Research Intern, Applied Science, <i>Google LLC</i>	2021
Researcher, Ocean Processes, <i>Climate Modeling Alliance</i>	2020-2021
Investment Associate Intern, <i>Bridgewater Associates LP</i>	2020
Software Engineering Intern, Machine Learning Operations, <i>Spell</i>	2019
Technical Assistant, Space Systems and Technology Division, <i>MIT Lincoln Laboratory</i>	2017-2018
Exhibitions Design Intern, <i>American Museum of Natural History</i>	2017

PUBLICATIONS

Allen, K. R., Smith, K., **Piterbarg, U.**, Chen, R., & Tenenbaum, JB. (In Preparation). Rapid multi-task learning with relational program policies.

Piterbarg, U., Pinto, L., & Fergus, R. (2023). NetHack is hard to hack. *37th Conference on Neural Information Processing Systems (NeurIPS)*.

Ramadhan, A., Marshall, J., Souza, A., Lee, XK., **Piterbarg, U.**, Hillier, A., LeClaire Wagner, G., & Rackauckas, C. (2023). Capturing missing physics in climate model parameterizations using neural differential equations. *arXiv preprint arXiv:2010.12559 (In Submission to JAMES)*.

Allen, K. R., Smith, K., **Piterbarg, U.**, Chen, R., & Tenenbaum, JB. (2020). Abstract strategy learning underlies flexible transfer in physical problem solving. In *CogSci*.

INVITED TALKS

Structured Losses for Neural Simulators of Turbulent Flows, <i>Google Applied Science</i>	2021
Flexible Transfer in Physical Problem Solving, <i>Google Brain</i>	2021

TEACHING

Lecturer & Teaching Assistant, <i>Introduction to Robot Intelligence (CSCI-UA 480-072)</i> <i>New York University</i> Department of Computer Science	2023
Teaching Assistant, <i>Seminar in Analysis (18.104)</i> <i>Massachusetts Institute of Technology</i> Department of Mathematics	2021
Teaching Assistant, <i>Computational Cognitive Science (6.804/9.66/9.660)</i> <i>Massachusetts Institute of Technology</i> Department of Computer Science, Department of Brain and Cognitive Sciences	2019

ADVISING

Carla Garcia Medina (now Research Engineer at <i>Google LLC</i>)	2022-2023
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SKILLS & EXPERTISE

Training and Fine-tuning Foundation Models (Microsoft DeepSpeed, HuggingFace)
Machine Learning Workflows (PyTorch, Tensorflow, JAX, SciKitLearn)
Distributed Reinforcement Learning (moolib, Impala, RLlib)
Physical Simulators (MuJoCo, PyBullet)
Differentiable Programming (Julia, JAX, Taichi)

PROGRAMMING LANGUAGES

Python	Advanced Proficiency
GoLang	Intermediate Proficiency
JavaScript/CSS/HTML	Intermediate Proficiency
Julia	Intermediate Proficiency
MATLAB	Intermediate Proficiency
C/C++	Intermediate Proficiency

SPOKEN & WRITTEN LANGUAGES

English	Native Proficiency
French	Working Proficiency (DELF B2)
Ukrainian	Limited Working Proficiency

PROFESSIONAL SERVICE

Representative, <i>MIT Council for Math Majors</i>	2020-2021
Mentor, <i>MIT Undergraduate Society of Women in Math</i>	2019-2021
Mentor, <i>MIT Society of Women Engineers</i>	2019-2021
Volunteer, <i>Rolnick Observatory</i>	2015-2017
Volunteer & Member, <i>Westport Astronomical Society</i>	2015-2017
Contributor, <i>International Occultation Timing Association</i>	2015-2017