

ANASTASIA LYULINA

✉ alyulina@stanford.edu
pronouns: *she/her*

EDUCATION

- 2020 – present Stanford University
Ph.D. Student in Ecology and Evolution
Stanford, CA, United States
- 2013 – 2017 Saint Petersburg Polytechnic University
B.Sc. in Physics
Saint Petersburg, Russia
- 2016 Technical University of Munich
Munich, Germany

RESEARCH EXPERIENCE

- Sep 2020 – present Graduate Student at Stanford University
Biology Department • **Supervisors: Benjamin H. Good and Dmitri A. Petrov**
I am interested in ecological and evolutionary dynamics, and I am using both theory and experiments to study these processes in microbial populations. My current work focuses on the patterns of genetic diversity that arise during selective sweeps.
Stanford, CA, United States
- 2017 – 2020 Research Assistant at the Institute of Science and Technology
Evolutionary Genomics Group • **Supervisor: Fyodor A. Kondrashov**
My main project investigated the genetic variation in a nearly extinct bird species. I used mathematical modeling, simulations, and data analysis.
Klosterneuburg, Austria
- Feb – Jul 2019 Visiting Postgraduate Research Fellow at Harvard University
Department of Systems Biology • **Supervisor: Johan Paulsson**
I worked on improving fluorescent proteins by designing and screening mutant libraries. I did cloning, mutagenesis, and microfluidics.
Cambridge, MA, United States
- Jul – Aug 2017 Visiting Undergraduate Student at the University of Calgary
Centre for Molecular Simulation • **Supervisor: D. Peter Tieleman**
I studied how membrane transporters interact with lipids and drug molecules using coarse-grained molecular dynamics simulations.
Calgary, AB, Canada
- 2016 – 2017 Undergraduate Student at the Institute of Macromolecular Compounds
of the Russian Academy of Sciences
Laboratory of Theory and Simulations of Polymer Systems • **Supervisor: Andrey A. Gurtovenko**
I performed atomic-scale molecular dynamics simulations of peptides and lipid bilayers.
Saint Petersburg, Russia

FELLOWSHIPS, GRANTS, AND AWARDS

- 2020 Gruber Science Fellowship at Yale University (declined)
Awarded to the most highly ranked applicants to Yale Ph.D. programs in life sciences, cosmology, and astrophysics.
- 2017 Zimin Foundation Summer Research Fellowship
Funded summer research at the University of Calgary.

- 2015 – 2017 Saint Petersburg Polytechnic University Academic Stipend
Awarded in recognition of academic performance.
- 2015 Russian Academic Excellence Project Academic Mobility Grant
Partially funded semester abroad at the Technical University of Munich.

PUBLICATIONS

- 2014 Gurtovenko A. A., Lyulina A. S. *Electroporation of asymmetric phospholipid membranes. Journal of Physical Chemistry B* 118 (33): 9909–9918, 2014; doi: 10.1021/jp5028355.

SELECTED PRESENTATIONS AND INVITED TALKS

- 2019 *Population Genetics of the Spoon-billed Sandpiper*
EvolVienna Meeting, Nov 26, Vienna, Austria
- 2019 *Population Genetics of the Spoon-billed Sandpiper*
Harvard Quantitative Biology Symposium, May 23, Cambridge, MA, United States
- 2018 *Predicting Effects of Amino Acid Substitutions*
The Graduate University for Advanced Studies, Jul 17, Hayama, Japan
- 2017 *P-gp Drug Uptake: A Coarse-Grained Molecular Dynamics Study*
Centre for Molecular Simulation at the University of Calgary, Aug 16, Calgary, AB, Canada

ADDITIONAL COURSES

- Jul – Aug 2018 Okinawa Institute of Science and Technology Computational Neuroscience Course
Okinawa, Japan

TEACHING EXPERIENCE

- 2022 (expected) Stanford University
Teaching assistant for Bio 113/244: Fundamentals of Molecular Evolution taught by Dmitri Petrov.
Stanford, CA, United States
- Aug 2018,
Aug 2016,
Aug 2015,
Aug 2014 School of Molecular and Theoretical Biology
Supervised high school students working on research projects in biological physics, molecular evolution, and evolutionary genomics. In 2018, developed and taught a two-week-long course in data visualization (in English).
Adam Mickiewicz University, Poznań, Poland;
Centre for Genomic Regulation, Barcelona, Spain;
Institute of Protein Research, Pushchino, Russia
- 2016 – 2017 Private math and physics tutor to high school students
Worked one-on-one with high school students interested in advanced mathematics and physics.
Saint Petersburg, Russia
- Jul – Aug 2015,
Jul – Aug 2014,
Jul – Aug 2013 Physics Olympiad Summer Training Program
Assisted with and later taught three-week-long courses in classical mechanics and calculus for high school students.
Leningrad Region, Russia;
Sochi, Russia

PROFESSIONAL SERVICE

- 2021 – present Stanford Biology Mentorship Committee member
Coordinating the mentorship program for first-year Ph.D. students in the Biology Department.
- 2021 Mentor through the Stanford Undergraduate Research Association
- 2021 Stanford Biology Ph.D. Program Admissions Planning Committee member
Organized and coordinated activities for prospective Biology Ph.D. students.

- 2020, 2021 **Volunteer for the Stanford Biology Ph.D. Preview Program**
Helped prospective students from diverse backgrounds draft personal statements and practice interviews for graduate school applications.
- 2018, 2019 **Reviewer for *the Journal of Theoretical Biology***
- 2015 – 2017 **Board member of the School of Molecular and Theoretical Biology Alumni Association**
Participated in writing a constitution for the Alumni Association;
mentored younger students through the Alumni Association mentorship program;
organized talks and lectures for members of the Alumni Association located in Saint Petersburg
and ran a biweekly journal club.