

ANASTASIA LYULINA

✉ alyulina@stanford.edu

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
Exchange Student
Munich, Germany

RESEARCH EXPERIENCE

- Sep 2020 – present Stanford University
Graduate Student
Biology Department • **Supervisor: Dmitri A. Petrov**
As a rotation student, I am working on inferring mean fitness from lineage tracking experiments in barcoded yeast populations.
Stanford, CA, United States
- 2017 – 2020 Institute of Science and Technology Austria
Research Assistant
Evolutionary Genomics Group • **Supervisor: Fyodor A. Kondrashov**
I studied how changes in genotype affect phenotypes, and how genetic interactions shape evolutionary trajectories. My main project investigated the genetic variation in a nearly extinct bird species. I used mathematical modelling, machine learning, and extensive data analysis.
Klosterneuburg, Austria
- Feb – Jul 2019 Harvard University
Visiting Postgraduate Research Fellow
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 University of Calgary
Visiting Undergraduate Student
Centre for Molecular Simulation • **Supervisor: D. Peter Tieleman**
I studied how P-glycoprotein interacts with lipids and transports drug molecules across cell membrane with coarse-grained molecular dynamics simulations.
Calgary, AB, Canada
- 2016 – 2017,
2012 – 2014 Institute of Macromolecular Compounds of the Russian Academy of Sciences
Undergraduate Student
Laboratory of Theory and Simulation of Polymer Systems • **Supervisor: Andrey A. Gurtovenko**
I performed atomic-scale molecular dynamics simulations of polymer systems.
Saint Petersburg, Russia

TEACHING EXPERIENCE

- Aug 2018,
Aug 2016,
Aug 2015,
Aug 2014
- School of Molecular and Theoretical Biology
Supervised selected 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 on 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 students interested in out-of-school 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 a selected group of high school students (in Russian).
Leningrad Region, Russia
Sochi, Russia

GRANTS AND FELLOWSHIPS

- 2020
- Gruber Science Fellowship at Yale (declined)
- 2017
- Zimin Foundation Summer Research Fellowship
- 2015 – 2017
- Saint Petersburg Polytechnic University Academic Stipend
- 2015
- Russian Academic Excellence Project Travel Grant
- 2012 – 2013
- Siemens Academic Stipend

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
- EvoVienna Meeting
Population Genetics of the Spoon-billed Sandpiper
Nov 26, Vienna, Austria
- Harvard Quantitative Biology Symposium
Population Genetics of the Spoon-billed Sandpiper
May 23, Cambridge, MA, USA
- 2018
- The Graduate University for Advanced Studies
Predicting Effects of Amino Acid Substitutions
July 17, Hayama, Japan
- 2017
- Centre for Molecular Simulation at the University of Calgary
P-gp Drug-Uptake: A Coarse-Grained Molecular Dynamics Study
August 16, Calgary, AB, Canada
- 2014
- 8th International IUPAC Symposium Molecular Mobility and Order in Polymer Systems
Electroporation of Asymmetric Phospholipid Membranes: Insight from Atomic-Scale Molecular Dynamics Simulations. Gurtovenko A.A., Lyulina A.S. ISBN 978-5-98340-329-1
June 4–6, Saint Petersburg, Russia

PROFESSIONAL SERVICE

- 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 mentoring program;
 organized talks and lectures for members of the Alumni Association located in Saint Petersburg
 and run a biweekly journal club.

ADDITIONAL COURSES

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

HOBBIES

I do street photography, yoga, love hiking and occasionally playing music.

- 2013 – 2015 Saint Petersburg Union of Journalists Photography School
 Professional Diploma in Photojournalism
 Saint Petersburg, Russia

REFEREES

Fyodor Kondrashov

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 3400 Klosterneuburg, Austria
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Andrey Gurtovenko

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 Russian Academy of Sciences
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Peter Tieleman

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