

ANASTASIA LYULINA

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EDUCATION

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

RESEARCH EXPERIENCE

- 2020 – present Stanford University, Stanford, CA, United States
Rotation Student in Dmitri Petrov's lab
I am working on inferring mean fitness from lineage tracking experiments in barcoded yeast populations.
- 2017 – 2020 Institute of Science and Technology Austria, Klosterneuburg, Austria
Research Assistant in Fyodor Kondrashov's lab
My main project investigated the genetic variation in a nearly extinct bird species.
I used mathematical modelling, machine learning, and extensive data analysis.
- 2019 Harvard University, Cambridge, MA, United States
Visiting Postgraduate Research Fellow in Johan Paulsson's lab
I worked on improving fluorescent proteins by designing and screening mutant libraries.
I did cloning, mutagenesis, and microfluidics.
- 2017 University of Calgary, Calgary, AB, Canada
Visiting Undergraduate Student in Peter Tieleman's lab
I studied how P-glycoprotein interacts with lipids and transports drug molecules across cell membrane with coarse-grained molecular dynamics simulations.

FELLOWSHIPS, GRANTS, AND AWARDS

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

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

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

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, USA
- 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

PUBLICATIONS

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