Mykhaylo M Malakhov

mykmal.xyz | malak039@umn.edu | 530.840.6245

EDUCATION

UNIVERSITY OF MINNESOTA
PHD IN BIOSTATISTICS
Expected 2025 | Minneapolis, MN

ANDREWS UNIVERSITY
BS IN MATHEMATICS
May 2020 | Berrien Springs, MI
Minor in Computing

BUDAPEST SEMESTERS IN MATHEMATICS
STUDY ABROAD
Fall 2019 | Budapest, Hungary

LINKS

ORCiD:// 0000-0002-6856-3913
Google Scholar:// e5Q7sMQAAAAJ&hl
GitHub:// mykmal
LinkedIn:// mykmal
Facebook:// mykhaylo.malakhov
Instagram:// myk_mal

GRADUATE COURSES

COMPLETED
- MATH 5615H - Honors Analysis I
- MATH 5616H - Honors Analysis II
- STAT 8101 - Theory of Statistics I
- STAT 8102 - Theory of Statistics II
- PUBH 7405 - Biostatistics: Regression
- PUBH 7406 - Advanced Regression and Design
- PUBH 8494 - Seminar: Transethnic Association Studies

CURRENT
- PUBH 8401 - Linear Models
- PUBH 8403 - Research Skills in Biostatistics
- PUBH 8432 - Probability Models for Biostatistics
- PUBH 8445 - Statistics for Human Genetics and Molecular Biology
- PUBH 8494 - Seminar: Imaging Genetics

SKILLS

TECHNICAL
Languages
R • Python • LaTeX
Tools
plink • bcftools • GCTA

HUMAN LANGUAGES
English • Russian • Spanish

EXPERIENCE

UMN SCHOOL OF PUBLIC HEALTH | PREDOCTORAL TRAINEE
2020 - present | Minneapolis, MN
- Funded by a **National Institutes of Health** NHLBI T32 Training Grant through the **Interdisciplinary Biostatistics Training in Genetics and Genomics** program
- Developing improved tissue-specific gene expression prediction models for use in **transcriptome-wide association studies (TWAS)**
- Mentor: Wei Pan (University of Minnesota)

INSTITUTE FOR PURE & APPLIED MATHEMATICS | RESEARCHER
Summer 2019 | Los Angeles, CA
- Proposed novel **attractor reconstruction** and **model calibration** methods
- Inferred combustion reaction coefficients from incomplete data, thereby **computationally solving an experimentally infeasible problem**
- Mentors: Robert Martin and Daniel Eckhardt (Air Force Research Laboratory)

WILLIAMS COLLEGE | RESEARCH INTERN
Summer 2018 | Williamstown, MA
- Project 1: demonstrated how to improve management outcomes for **white-nose syndrome** in bats by considering metapopulation dynamics
- Project 2: established guidelines for **transboundary infectious disease management** when multiple administrative jurisdictions set different objectives
- Mentors: Julie C. Blackwood (Williams) and Katriona Shea (Penn State)

ANDREWS UNIVERSITY | UNDERGRADUATE RESEARCH FELLOW
Summer 2017 | Berrien Springs, MI
- Studied the **effects of climate change** on seabird populations
- Proved that egg cannibalism and egg-laying synchrony can yield backward bifurcations, which **allow gull colonies to survive** at higher sea temperatures
- Mentors: Shandelle M. Henson (Andrews) and J. M. Cushing (Arizona)

SELECTED AWARDS

National
- 2018 Barry M. Goldwater Scholarship ($15,000)

University of Minnesota School of Public Health
- 2020 Dean's PhD Scholars Award ($5,000)
- 2020 Jean Roberts Biostatistics Fellowship ($13,255)

Andrews University
- 2018 Harold T. Jones Scholarship for highest mathematical excellence ($2,250)
- 2018 Louis Ulloth Scholarship for most significant leadership ($2,250)
- 2016 Full tuition ACT/SAT Scholarship ($145,000)

PUBLICATIONS

1. Blackwood JC, **Malakhov MM**, Duan J, et al. Governance structure affects transboundary disease management under alternative objectives. BMC Public Health 2021;21:1782.
2. Duan J, **Malakhov MM**, Pellett JJ, Phadke IS, Barber J, and Blackwood JC. Management efficacy in a metapopulation model of white-nose syndrome. Natural Resource Modeling 2021;34:e12304.
3. **Malakhov MM**, Fitzpatrick BR, Lopez RA, and Shivkumar A. Attractor Reconstruction and Empirical Parameter Inference for Hydrogen-Oxygen Chemistry. Technical Report AD1098889. Air Force Research Laboratory, 2020.