Seth D. Temple

Padelford Hall B-222, Seattle, WA 98195
sdtemple@uw.edu • Website • Google Scholar

EDUCATION

PhD/MS, **Statistics, University of Washington** 09/19 – 08/24

- Thesis Committee: Sharon Browning, Elizabeth Thompson, Amy Willis, Kelley Harris
- National Defense Science Engineering Graduate Fellowship (NDSEG)
- NIH Predoctoral Trainee in Statistical Genetics
- Z.W. Birnbaum Awardee (link)

Post-doctoral Fellowship, **University of Michigan** Starting 09/24

- Advised by Jonathan Terhorst and Gideon Bradburd
- Schmidt AI for Science Fellow (link)

BS, **Mathematics, University of Oregon** 09/14 – 06/18

- Honors Thesis Committee: Chris Sinclair, Peter Ralph, Samantha Hopkins
- *Summa cum laude*, Phi Beta Kappa, Honors College, Presidential Scholar

RESEARCH & WORK

Graduate Student Researcher, University of Washington 09/20 – Present

- Developing methods to study recent evolution in human populations
- Examining patterns of identity-by-descent in families affected by dementia
- Extending work on local ancestry inference

*Graduate Student Researcher, **Fred Hutchinson** Cancer Research Center* 06/23 – 12/23

- Developed two new methods for anomaly detection and time series clustering with respect to the evolutionary dynamics of SARS-CoV-2

*Graduate Student Researcher, **Los Alamos National Laboratory*** 06/20 – 09/20

- Constructed spatiotemporal occupancy models for vector epidemiology
- Applied maximum entropy modeling for mosquito species distribution mapping

*Actuarial Assistant & Intern, **Liberty Mutual Insurance*** 1.5 years

- Performed reserving analyses for the leading global surety
- Data visualization of how spatial effects influence premiums
- Passed actuarial exams (MAS I, P, and FM)

Undergraduate Research Assistant, University of Oregon 02/18 – 06/18

- Built neural nets in Python to predict punctuation for audio recordings

PAPERS

Temple, S.D., Waples, R.K., & Browning, S.R. Modeling recent positive selection in Americans of European ancestry. *bioRxiv* (2023). https://www.biorxiv.org/content/10.1101/2023.11.13.566947v2

Temple, S.D., & Thompson E.A. Identity-by-descent in large samples. *bioRxiv* (2024). https://www.biorxiv.org/content/10.1101/2024.06.05.597656v1

Temple, S.D., Manore, C.A. & Kaufeld, K.A. Bayesian time-varying occupancy model for West Nile virus in Ontario, Canada. *Stoch Environ Res Risk Assess* (2022). https://doi.org/10.1007/s00477-022-02257-4

Gorris, M.E., Bartlow, A.W., **Temple, S.D.,** et al. Updated distribution maps of predominant Culex mosquitoes across the Americas. *Parasites & Vectors* 14, 547 (2021). https://doi.org/10.1186/s13071-021-05051-3

Temple, S.D. The Tweedie Index Parameter and Its Estimator: An Introduction with Applications to Actuarial Ratemaking. University of Oregon (2018). https://scholarsbank.uoregon.edu/xmlui/handle/1794/29040

TEACHING

***Instructor of Record**, University of Washington*

- BIOST 550 (Sp22): Statistical Genetics I: Mendelian Traits
- BIOST 581 (W23): Statistical Genetics Journal Club

Teaching Assistant, University of Washington

- Module 15 of SISG (Su22): Association Mapping: GWAS and Sequencing Data
- CSE/STAT 416 (Sp20): Introduction to Machine Learning
- STAT 423/504 (W20): Applied Regression and Analysis of Variance
- STAT 421 (F19): Applied Statistics and Experimental Design

Directed Reading Program, University of Washington 09/20 – 04/22

- Mentor to 4 students, member of organizing and admissions committees

Teaching Assistant, University of Oregon

- MATH 467 (W18): Stochastic Processes
- MATH 315 (Sp17): Fundamentals of Analysis
- MATH 105 (F16, W18): University Mathematics I

Math Tutor, University of Oregon 09/14 – 06/17

SERVICE

American Statistical Association SSGG Student Representative 01/23 – Present
Departmental PhD Admissions Reviewer '21, '22, '23
Pre-Application Review Service for PhD Admissions '21, '22
Queer Union for (Bio)statistician Inclusion and Community 03/22 – Present
UW STAT Book Club Organizer Summer '20, '21
Tutor at Seattle Public Library 09/18 – 06/19
Pride@Liberty West Zone 02/19 – 08/19
UO Club Soccer President and Treasurer 06/16 – 06/18

SKILLS

Research: stochastic processes, computational biology, Bayesian analysis, generalized linear models

Technical: Python + snakemake, R, Unix, high performance computing, LaTeX, Excel, git, C++

Language: English (first), German (moderate proficiency)

REFERENCES

Sharon R. Browning, PhD
UW Research Professor (Biostatistics)
Dissertation Advisor
Contact: sguy@uw.edu

Kimberly A. Kaufeld, PhD
Los Alamos Statistical Scientist
Intern Mentor, Co-author
Contact: kkaufeld@lanl.gov

Elizabeth A. Thompson, PhD
UW Professor (Statistics; Biostatics; Genome Sciences)
Committee Member, Research Collaborator
Contact: eathomp@uw.edu

Frederick "Erick" Matsen, PhD
Fred Hutchinson Professor
Intern Mentor, Research Collaborator
Contact: matsen@fredhutch.org

CONFERENCES

Probabilistic Modeling in Genomics (poster)	04/24
UW Computational Biology Annual Meeting (speaker)	09/23
NDSEG Fellows Conference (speaker, poster)	08/23
IBS WNAR Annual Meeting (speaker)	06/23
- Runner-up: Student Oral Presentation	
25th - 28th Summer Institute in Statistical Genetics (attendee + teacher)	07/20-23
Workshop of Statistical Network Analysis and Beyond (poster)	06/23
Evolutionary Biologists of Washington, Idaho, British Columbia, Oregon (poster)	04/23
Probabilistic Modeling in Genomics (poster)	03/23
UW Computational Biology Annual Meeting (poster)	01/23
20th Anniversary of UW Genome Sciences Department	11/22
International Genetic Epidemiology Society Annual Meeting (poster)	09/22
American Association of Anthropological Genetics Workshop on Computational Genetics	07/22
2021 Joint Statistical Meetings (virtual; project highlighted by mentor)	08/21
SAMSI Undergraduate Modeling Workshop	05/18
University of Oregon Undergraduate Research Symposium (speaker)	05/18
University of Oregon Undergraduate Research Symposium (speaker)	05/17
SAMSI Astrophysics Undergraduate Outreach	10/16

COURSEWORK

University of Washington

- Advanced Regression Methods I-II
- Advanced Theory of Statistical Inference I-III
- Statistical Consulting (1 term); Applied Consulting Project (1 term)
- Statistical Inference I-II
- Stochastic Modelling of Scientific Data I-II
- Theory of Linear Models
- Measure Theory
- Statistical Genetics I-II: Mendelian Inheritance and Quantitative Traits
- Introduction to Computational Biology
- Molecular Population Genetics and Evolution
- Mathematics of Evolution
- Statistical Genetics Seminar (13 quarter terms)
- Statistics Student Seminar

University of Oregon

- Electives: Mathematical Statistics I-II; Regression Analysis; Stochastic Processes; Topology; Cryptography
- Core Courses: Linear Algebra I-II; Real Analysis; Multivariable Calculus; Differential Equations
- Minor: Introduction to Computer Science I-III; Algorithms and Data Structures; Data Science