Seth D. Temple

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sdtemple@uw.edu • Website • Google Scholar

EDUCATION

PhD/MS, **Statistics, University of Washington** 09/19 - Present

- Thesis Committee: Sharon Browning, Elizabeth Thompson, Amy Willis, Kelley Harris
- National Defense Science Engineering Graduate Fellowship
- NIH Predoctoral Trainee in Statistical Genetics
- Z.W. Birnbaum Awardee (link)
- Alzheimer's Disease Sequencing Project Follow-Up Study

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

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

RESEARCH & WORK

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

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

*Graduate Research Assistant, **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 Alzheimer's
- Extending FLARE method for local ancestry inference

*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)

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

- Built neural nets in Python to predict punctuation for audio recordings
- Trained *keras* models with graphical processing units

PAPERS

Temple, S.D., Waples, R.K., & Browing, S.R Modeling recent positive selection in Americans of European ancestry. *bioRxiv* (2023). https://www.biorxiv.org/content/10.1101/2023.11.13.566947v1

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. (2018). University of Oregon. https://scholarsbank.uoregon.edu/xmlui/handle/1794/29040

Horimoto, Andrea R. V. R., Lisa A. Boyken, Elizabeth E. Blue, Kelsey E. Grinde, Rafael A. Nafikov, Harkirat K. Sohi, Alejandro Q. Nato Jr, et al. 2023. Admixture Mapping Implicates 13q33.3 as Ancestry-of-Origin Locus for Alzheimer Disease in Hispanic and Latino Populations. HGG Advances 4 (3): 100207

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 SGGC Student Representative 01/23 – Present
Departmental PhD Admissions Reviewer '21, '22, '23
Pre-Application Review Service for PhD Admissions '21, '22
Type-run-error jogging club of (bio)statisticans 06/22 – Present
Queer Union for (Bio)statistician Inclusion and Community 03/22 – Present
UW STAT Social Committee Co-chair 06/20 – 06/22
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

- **Leadership award** for most outstanding club sports officer

Tutor at Looking Glass Community Services (Eugene) 04/17 – 06/17
d.a.i. Tübingen Rent an American Volunteer, Camp Counselor 04/15 – 08/15

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
Inter Mentor, Research Collaborator
Contact: matsen@fredhutch.org

CONFERENCES

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 + lecturer) 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

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)