Seth D. Temple

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EDUCATION

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

- Dissertation Committee: Sharon Browning, Elizabeth Thompson, Amy Willis, Kelley Harris
- MS degree in Statistics (concurrent; Autumn 2022)
- NDSEG Fellow, NIH Predoctoral Trainee in Statistical Genetics
- Alzheimer's Disease Sequencing Project Follow-Up Study

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

- *Summa cum laude*, Phi Beta Kappa, Departmental Honors, Presidential Scholar
- Thesis Committee: Chris Sinclair, Peter Ralph, Samantha Hopkins
- Exchange semester at Universität Tübingen

RESEARCH & WORK

*Research Technician II, **Fred Hutchinson Cancer Research Center*** 06/23 – 09/23

- Collaborative project with Matsen group using SARS-CoV-2 viral sequences
- Proposed methodology for change point detection in mutations over time

Graduate Research Assistant, University of Washington 09/20 – Present

- Developing methods to study recent evolution in human populations
- Studying patterns of identity-by-descent in families affected by Alzheimer's
- Extending FLARE method for local ancestry inference

*Graduate Research Assistant, **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, **Liberty Mutual Insurance*** 07/18 – 08/19

- Performed reserving analyses for the leading global surety
- Developed SQL/SAS code to query claims database
- 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

Actuarial Intern, Liberty Mutual Insurance 06/17 – 09/17

- Created choropleth maps with R to visualize effects of a spatial smoothing algorithm

PAPERS

- **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
- 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.
- **Temple, S.D.** PhD Preliminary Exam Report on "Pair-based likelihood approximations for stochastic epidemic models". (2021). https://github.com/sdtemple/pblas
- **Temple, S.D.** The Tweedie Index Parameter and Its Estimator. (2018). https://math.uoregon.edu/wp-content/uploads/2018/07/TempleStempleTweedieThesis.pdf

TEACHING

Instructor of Record, University of Washington

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

Directed Reading Program, University of Washington

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

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

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

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

Homework Helper at Seattle Public Library 09/18 – 06/19

Pride@Liberty West Zone 02/19 – 08/19

Club Soccer President and Treasurer 06/16 – 06/18

- Managed administration, finances, and social media for traveling team
- Leadership award for most outstanding club sports officer

Tutor at Looking Glass Community Services 04/17 – 06/17

d.a.i. Tübingen Rent an American Volunteer 04/15 – 08/15

SKILLS

Software: (experienced) Python, R, Unix, multiple computing cluster environments, git, bioinformatics tools, Excel; (intermediate) C++, Java, SQL, SAS

Languages: English (first), German (moderate fluency), Spanish (limited 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 Blue, PhD
UW Associate Professor (Medical Genetics)
Applied Consulting Project Client
Contact: em27@uw.edu

Christopher Sinclair, PhD
UO Associate Professor (Mathematics)
Undergraduate Thesis Advisor
Contact: csinclai@uoregon.edu

CONFERENCES

NDSEG Fellows Conference (poster)	08/23
Statistical Genetics Symposium (poster)	07/23
IBS WNAR Annual Meeting (presenter; oral presentation awardee)	06/23
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 (presenter)	09/22
American Association of Anthropological Genetics Workshop on Computational Genetics	07/22
International Society of Bayesian Analysis (abstract accepted)	06/22
2021 Joint Statistical Meetings	08/21
25th, 26th, 27th Summer Institute in Statistical Genetics	07/20,21,22
AAAS 2020 Annual Meeting	02/20
SAMSI Undergraduate Modeling Workshop	05/18
University of Oregon Undergraduate Research Symposium (presenter)	05/18
University of Oregon Undergraduate Research Symposium (presenter)	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 (12 quarter terms)
- Statistics Student Seminar
- Reading Groups: Phylogenetics, Theoretical Evolutionary Biology, Survival Analysis
    - Organizer for lab journal club on phasing, IBD segment detection, population genetics

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