

LAUREN PERRY

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EMPLOYMENT

California State University, Sacramento

Assistant Professor, Department of Mathematics and Statistics

Aug 2020 - ongoing

EDUCATION

Ph.D., Applied Statistics, University of California, Riverside

B.S., Statistics, *summa cum laude*, University of California, Riverside

COURSES TAUGHT

California State University, Sacramento

Aug 2020 - ongoing

- Math 26A Calculus I for the Social and Life Sciences
- Math 107A Fundamental Mathematical Concepts
- Stat 1 Introduction to Statistics
- Stat 10A Introductory Statistics with Developmental Mathematics
- Stat 115A Introduction to Probability Theory
- Stat 115B Introduction to Mathematical Statistics
- Stat 128 Statistical Computing
- Stat 140A Linear Models
- Stat 140B Statistical Learning
- Stat 199 Special Problems (Independent Study for Undergraduate Students)
- Stat 299 Special Problems (Independent Study for Graduate Students)

University of California, Riverside

Jul 2019 - Dec 2019

- Stat 100A Introduction to Statistics I
- Stat 100B Introduction to Statistics II

PUBLICATIONS

Shanbrom C., **Perry L.** (2025) *The dosing effect of Peer Assisted Learning in undergraduate organic chemistry*. Journal of Chemical Education. doi.org/10.1021/acs.jchemed.5c00485

Mountain J., **Perry L.**, Ghanbarian B., Temizel C., Cetin C. (2025) *Characterizing pore-throat size distributions in Mesaverde tight gas sandstones using generalized normal distribution*. Transport in Porous Media. doi.org/10.1007/s11242-025-02206-z

Green E.M., Wilkinson T., Howman J., Bayliss J., **Perry L.** (2024) *Clinical education data management: Current landscape in entry-level physical therapist education*. Journal of Allied Health. PMID: 38834346.

Flores A., **Cappiello* L.**, Quintanilla Salinas I. (2023) *Challenges and successes of emergency online teaching in statistics courses*. Journal of Statistics and Data Science Education. doi.org/10.1080/26939169.2023.2231036

Herrmann J., Koprowska A., Winters T.J., Villanueva N., Nikityuk V., Pek F.[†], Reis E.M., Dominguez C., Davis D.E., McPherson E., Rocco S.R., Recendez C., Difuntorum S., Faeth K., Lopez M.D., Awwad H., Ghobashy R.A., **Cappiello L.**, Neidle E.L., Quiones-Soto S., Reams A.B. (2023). *Gene amplification mutations originate prior to selective stress in Acinetobacter baylyi*. G3 Genes|Genomes|Genetics. doi.org/10.1093/g3journal/jkac327

Cappiello L., Zhang Z., Shenn C., Butala N., Cui X., Yeh R. (2021). *Adjusting for population differences using machine learning methods*. J R Stat Soc Series C. doi.org/10.1111/rssc.12486

Cappiello L. (2020). *Adjusting for population differences using applied machine learning methods*. Doctoral dissertation, UC Riverside. escholarship.org/uc/item/5ng9c2bn (Advisors: Zhiwei Zhang and Xinpeng Cui)

*I have published under both Perry and Cappiello.

[†]Undergraduate student mentee.

Perry L. (2016). *A novel estimation technique for a five-parameter bivariate beta distribution*. Undergraduate honors capstone project, UC Riverside. (Advisor: James Flegal)

STATISTICAL CONSULTING AND APPLIED STATISTICS PROJECTS

ECS Peer Assisted Learning (PAL) at Sac State

Fall 2025 - ongoing

- Analysis of grades for PAL versus non-PAL students across all current PAL course offerings.

NSM Peer Assisted Learning (PAL) at Sac State

Spring 2024 - ongoing

- Analysis of dosing effects from taking multiple PAL courses in sequence.
- Analysis of dosing effects from taking (some number of) previous PAL courses.
- Analysis of grades in BIO 25 and 26 for PAL versus non-PAL students.

California State Controller's Office - Division of Audits

Principal Investigator

July 2022 - ongoing

- Statistical consulting contract for applied statistics and to provide training on audit sampling.

CSU Mathematics Council

2024 - 2025

- Statistical review of California AB1705 reports and implementation.

UNCF Institute for Capacity Building - Excelencia - Coleridge Initiative

Co-PI, CSUS Team (Gamma Cohort), *Leveraging Big Data to Achieve Equity*

Aug 2022 - Jan 2023

- Worked with data from the National Center for Science and Engineering Statistics to write research report, *Inequities in the pathway toward the professoriate*.

Member, CSUS/CSUN Team (Beta Cohort), *Leveraging Big Data to Achieve Equity*

Jan 2022 - Jun 2022

- Worked with data from the National Center for Science and Engineering Statistics to write research report, *Factors mediating time to doctorate degree and female academic career pathways*.

University of California, Riverside

Lead Consultant, Graduate Quantitative Methods Center

Jul 2018 - Jun 2019

- Provided statistical and computational consultations to graduate students and postdoctoral researchers.
- Developed and taught workshops: *Introduction to Statistical Inference*; *Introduction to ANOVA*; *Introduction to Programming*; *Introduction to Multilevel Modeling*; *Introduction to SAS*; *Introduction to R*; *Intermediate Topics in R*; *Overview of Causal Inference*; *Improving Research Credibility*; *Writing Articles in LaTeX*; *The UCR LaTeX Dissertation Template*; and *Experimental Design*

Brief ad hoc consulting

Various

- California Department of Justice, Earthshot Labs, Micro Systems Engineering, California Lottery, CSUS faculty and students

RESEARCH PRESENTATIONS

Where are all the professors of color? Lightning talk (with Jasdeep Pannu). Alliance of Hispanic Serving Institution Educators (AHSIE) Best Practices Conference. (March 14, 2023). San Francisco, CA.

Challenges and successes of emergency online teaching. Invited talk. Chico State Math Colloquium. (October 28, 2022). Chico, CA.

Factors mediating time to doctorate degree and female academic career pathways. UNCF Institute for Capacity Building - Excelencia - Coleridge Initiative, *Leveraging Big Data to Achieve Equity*. Presentation given to NCSES/NSF stakeholders. (June 3, 2022). Remote due to COVID-19.

Applied machine learning methods in adjusting for population differences. Invited talk. Orange County Biostatistics Symposium. (November 6, 2020). Remote due to COVID-19.

A novel estimation technique for a five-parameter bivariate beta distribution. Poster presentation. International Biometric Society Eastern North American Region Meeting. (March 6, 2016). Austin, Texas.

MENTORING

Graduate Research

Benjamin Matta, CSUS Mathematics Graduate Student Winter 2026 - ongoing

- Data analysis for NSM PAL examining dosing effects from taking (some number of) previous PAL courses.

Professors for the Future at UC Davis

- Fellowship program for developing leadership skills in PhD students and post docs.
- Our mentees put on a workshop series on supporting neurodivergent students in academia. 2024 - 2025
- This year's mentees are working on a panel series on women in academia. 2025 - 2026

Undergraduate Research

Feini Pek, CSUS Mathematics Major Fall 2021 - Spring 2023

- Data analysis for Dr. Andrew Ream's lab in the CSUS Biology Department.
- Independent research project: *A comparative simulation study on various equality of variance tests*.
 - Fei gave a talk on this work at the Student Research & Creative Activity Spring Symposium. (March 6, 2023)

Sacramento State U-Mentor Program

Mentor 2022

ATHENA by Women in STEM

Mentor, The Talaria Summer Institute 2020, 2022

GRANTS

California State University, Sacramento

STEM4Equity and Center for Teaching and Learning Spring 2025

- Three units of course release to work on an analysis of BIO 25/26 PAL data.

Exceptional Levels of Service to Students Assigned Time Award Spring 2024

- Three units of course release to work on an analysis of PAL data.

STEM4Equity Mini Grant: Statistics Course Redesign Fall 2023

- Three units of course release to further the Stat 1 redesign as part of the STEM4Equity project funded by a STEM HSI grant from the U.S. Department of Education.

Curriculum Redesign Grant: Achieving Equitable Outcomes in Undergraduate Programs Spring 2022

- Stat 1: Introduction to Statistics redesign (with Sayonita Ghosh Hajra, Jasdeep Pannu, and Topaz Wiscons). Funded for \$40,000.

Curriculum Redesign Grant: Achieving Equitable Outcomes in Undergraduate Programs Fall 2021

- Math 10: Essentials of Algebra redesign (with Sayonita Ghosh Hajra, Jasdeep Pannu, and Topaz Wiscons). Funded for \$39,654.

Summer Online Course Design Grant Spring 2021

- Redesigned Stat 1, Introduction to Statistics, to be a six-week, fully online course that could be taken asynchronously. This course was offered in Summer 2021.

PROFESSIONAL DEVELOPMENT

ESCALA Educational Services

Minicourse: *Culturally Responsive Teaching in STEM in Hispanic Serving Institutions* Summer 2023

The Association of College and University Educators (ACUE)

Microcredential: *Designing Student-Centered Courses* Spring 2022

Mathematical Association of America

Fellow, *Project NExT (New Experiences in Teaching)* 2021 - 2022

California State University, Sacramento

Faculty and Professional Learning Communities

- *Math Teaching Tools and Open Educational Resources* Spring/Fall 2026
- *Designing Student Centered Courses: Math Group* Spring/Fall 2022
- *Flexible Fundamentals Workshop* Summer 2021

- *Designing for Student Success: Building Inclusive Practices* 2020 - 2021
- *Teach ON!-Line Summer Camp* Aug 2020

OTHER PRESENTATIONS AND WORKSHOPS

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| Discussion leader, <i>MAA Golden Section Project NExT Meeting</i> MathFest | August 3, 2022 Philadelphia, PA |
| Panelist, <i>Balancing Teaching/Research/Service & Professional and Personal Life</i> UC Riverside Career Mentoring of Underrepresented STEM Students for the Professoriate | May 12, 2022 Remote |
| Panelist, <i>Alumni Speakers</i> CSUS Summer Grant Program | Jan 10, 2022 Remote |
| Discussion leader (with Analisa Flores, UC Riverside) <i>Challenges and Successes of Emergency Online Teaching: Where Do We Go From Here?</i> Birds of a Feather Discussion at the Joint Statistical Meeting | Aug 2, 2021 Remote |
| Panelist, <i>The Transition from Student to the Professoriate</i> UC Riverside Career Mentoring of Underrepresented STEM Students for the Professoriate | May 13, 2021 Remote |
| Panelist, <i>Getting Hired: CSUs and Community Colleges</i> UC Riverside Teaching Careers Week | May 6, 2021 Remote |
| Panelist, <i>Meeting With Alumni</i> National Institute of Statistical Sciences Graduate Student Network | Jan 15, 2021 Remote |

SERVICE TO UNIVERSITY

California State University, Sacramento

Statistics Group, Department of Mathematics and Statistics

- Proposed and developed a new BS in Statistics Program launched Fall 2024
- Courses proposed and developed (with Clark Fitzgerald and Jasdeep Pannu)
 - Linear Models (Stat 140A / 196L) Course first offered Spring 2023
 - Statistical Learning (Stat 140B / 196M) Course first offered Spring 2024
 - Community Service Learning in Statistics (Stat 191) Course first offered Fall 2025
 - Statistics Capstone (Stat 192) Course first offered Spring 2026

Faculty Senate

- General Education / Graduation Requirements Course Review Subcommittee 2021 - 2027
 - Committee Chair (one year terms) 2022 - 2025
- General Education / Graduation Requirements Policy Committee 2025 - 2028
 - Liaison to the General Education / Graduation Requirements Course Review Subcommittee 2025 - 2026
- Alternate Senator, Department of Mathematics and Statistics 2022 - 2025

College of Natural Sciences and Mathematics

- Academic Council 2024 - 2027
 - Executive Committee Chair 2025 - 2026

Committees Served, Department of Mathematics and Statistics

- Advising 2023 - 2026
- Calculus 2020 - 2021
- Curriculum 2020 - 2021; 2022 - 2023
- MAA MathFest (*ad hoc* committee for the Sacramento conference) 2024 - 2025
- Mathematics Core Curriculum 2021 - 2022; 2023 - 2024
- Scholarship 2022 - 2023
- Screening 2023 - 2024
- Search 2021 - 2024
- Social 2021 - 2026
 - Committee Chair 2022 - 2024
- Statistics Core Curriculum 2024 - 2026

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| · Committee Chair | 2024 - 2025 |
| Faculty Advisor, Student Organizations | |
| · Women in STEM Club | 2023 - ongoing |
| Judge, Spring Student Research and Creative Activity Symposium | 2025 |
| Outside Member, Strategic Research Analyst Search Committee, Student Success Office | 2023 |
| Editor, Cummings J. <i>Proofs, A Long-Form Mathematics Textbook</i> . | 2021 |
| University of California, Riverside | |
| Statistics Graduate Student Association | |
| · President and co-founder | 2019 - 2020 |
| Department of Statistics | |
| · Graduate Student Ambassador | 2019 - 2020 |
| Mu Sigma Rho | |
| · President | 2018 - 2020 |
| · Secretary | 2017 - 2018 |

SERVICE TO COMMUNITY

NorCal DataFest

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| Co-Organizer | 2022 - 2023; 2024 - 2025 |
| · NorCal DataFest is a collaboration between CSU Sacramento and CSU Chico to host the American Statistical Association DataFest event. | |
| · ASA DataFest is hosted at Sacramento State biannually in April. | |

Undergraduate Statistics Project Competition

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| Consortium for the Advancement of Undergraduate Statistics Education with the American Statistical Association | |
| · Judge, Research Project Category | Summer 2025 |
| · Judge, Class Project (Intermediate) Category | Winter 2025 |
| · Judge, Class Project (Intermediate) Category | Winter 2024 |
| · Judge, Research Project Category | Winter 2022 |

Math Literacy Project

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| Faculty Mentor | Spring 2023 |
| · MLP provides hands-on math lessons for middle and high school students. | |

Sacramento Statistical Association

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| Secretary | 2022 - 2023 |
| · SSA hosted the short course, <i>An introduction to second-generation p-values and their use in statistical practice</i> by Drs. Jeffrey Blume and Megan Murray (September 1, 2022). | |

Mathematical Association of America

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| Co-Coordinator - Gold '21 Cohort, <i>Project NExT (New Experiences in Teaching)</i> | |
| · Organized six Project NExT Sessions for MathFest in Philadelphia, PA. | Summer 2022 |
| · <i>Maximizing In-Person Student Engagement After Online Learning</i> | |
| · <i>Drowning in Homework: Making Grading More Efficient</i> | |
| · <i>Navigating Student Mental Health Issues</i> | |
| · <i>So You Want to Build a New Course: Curriculum Development</i> | |
| · <i>Project NExT Made Us Do It: Successes, Failures, and What We Wished We Had Known Before</i> | |
| · <i>Supporting a Co-Curricular Math Community</i> | |
| · Coordinated six Project NExT Sessions for the Joint Mathematical Meeting (remote). | Winter/Spring 2022 |
| · <i>Mastery-Based Grading</i> | |
| · <i>Undergraduate Research</i> | |
| · <i>De-Westernizing the History of Mathematics</i> | |
| · <i>Establishing Interdisciplinary Collaborations</i> | |
| · <i>Advocating for Students of Color</i> | |

- *Project-Based Learning*

Gage by 500 Women Scientists

Resource, *Request a Woman Scientist*

2018 - ongoing

Reviewer

- Journal of Statistical Theory and Practice
- Journal of Teaching Statistics

ONLINE PUBLICATIONS

Introduction to Statistics

First published 2021; last modified 2025

- Open source textbook available at lgpperry.github.io/IntroStats/
- Accompanying slides available at lgpperry.github.io/teaching/stat1/

Educational RShiny Apps (available at lgpperry.github.io/teaching/shinyapps/):

- *Simulating the Central Limit Theorem* 2022
- *The Normal Approximation to the Binomial Distribution* 2022
- *Normal Distribution Calculator* 2022

Educational Blog Posts (available at lgpperry.github.io/blog/year-archive/):

- *Using LaTeX Equations in Github Pages* 2022
- *Character Stats* (Discusses simulation and order statistics.) 2022
- *Rolling with Advantage and Disadvantage* (Covers some basic rules of probability.) 2022
- *A Gentle Introduction to Probability Using Dice* 2021
- *Dungeons and Dragons Character Generator, an RShiny App* 2020

Untitled. (Accepted 2019) Union of Concerned Scientists blog.

Learning to Love Statistics. (2018) University of California, Riverside Graduate Student Resource Center blog. Republished on my website lgpperry.github.io/lovestatistics/.

MEDIA

Interviewed for *Excited to go back: Sac State students weigh in on fall 2021 teaching modalities.* (2021) The State Hornet. statehornet.com/2021/04/sac-state-students-fall-2021-in-person-opinions/