LAUREN CAPPIELLO

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EDUCATION

Ph.D., Applied Statistics — University of California, Riverside
B.S., Statistics, *summa cum laude* — University of California, Riverside

TEACHING

California State University, Sacramento
Assistant Professor, Department of Mathematics and Statistics   Aug 2020 - ongoing
Courses taught:
· Stat 1   Introduction to Statistics
· Stat 115A   Introduction to Probability Theory
· Stat 115B   Introduction to Mathematical Statistics
· Stat 128   Statistical Computing
· Stat 199   Independent Study
· Math 26A   Calculus I for the Social and Life Sciences
· Math 107A   Fundamental Mathematical Concepts
Courses proposed and developed:
· Stat 196L*   Linear Models
· Stat 196M*   Statistical Learning

University of California, Riverside
Instructor of Record, Department of Statistics   Jul 2018 - Dec 2019
· Stat 100A   Introduction to Statistics I
· Stat 100B   Introduction to Statistics II

* with Clark Fitzgerald and Jasdeep Pannu

PUBLICATIONS

Green E., Wilkinson T., Howman J., Bayliss J., **Cappiello L.** *Clinical education data management: current landscape in entry-level physical therapist education.* In review.

Flores A., **Cappiello L.**, Quintanilla Salinas I. *Challenges and successes of emergency online teaching in statistics courses.* (Brief Communication). In review. doi.org/10.48550/arXiv.2302.01476

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 Xinping Cui)

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

† undergraduate student mentee

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 colloquium 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 NC-SES/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

Undergraduate Research
Feini Pek, CSUS Mathematics Major   Fall 2021 - ongoing
· Data analysis for Dr. Andrew Ream's lab in the Sac State 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

OTHER STATISTICAL CONSULTING AND APPLIED STATISTICS PROJECTS

California State Controller's Office - Division of Audits
Principal Investigator   July 2022 - July 2025
· Statistical consulting contract for applied statistics and to provide training on audit sampling.

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.*
CSUS/CSUN Team Member (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, seminars, and instructional labs: *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, California Lottery, CSUS faculty and students

GRANTS

California State University, Sacramento
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

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
· *Inclusive STEM Teaching*   Spring/Fall 2023
· *Designing Student Centered Courses: Math Group*   Spring/Fall 2022
· *Flexible Fundamentals Workshop*   Summer 2021
· *Designing for Student Success: Building Inclusive Practices by Interrogating Power and Privilege*   2020 - 2021
· *Teach ON!-Line Summer Camp*   Aug 2020

OTHER PRESENTATIONS AND WORKSHOPS

Discussion leader, *MAA Golden Section Project NExT Meeting*   August 3, 2022
MathFest   Philadelphia, PA

Panelist, *Balancing Teaching/Research/Service & Professional and Personal Life*   May 12, 2022
UC Riverside Career Mentoring of Underrepresented STEM Students for the Professoriate   Remote

Panelist, *Alumni Speakers*   Jan 10, 2022
CSUS Summer Grant Program   Remote

Discussion leader (with Dr. Analisa Flores, UC Riverside)
Challenges and Successes of Emergency Online Teaching: Where Do We Go From Here?   Aug 2, 2021
Birds of a Feather Discussion at the Joint Statistical Meeting   Remote

Panelist, *The Transition from Student to the Professoriate*   May 13, 2021
UC Riverside Career Mentoring of Underrepresented STEM Students for the Professoriate   Remote

Panelist, *Getting Hired: CSUs and Community Colleges*   May 6, 2021
UC Riverside Teaching Careers Week   Remote

Panelist, *Meeting With Alumni*   Jan 15, 2021
National Institute of Statistical Sciences Graduate Student Network   Remote

SERVICE TO COMMUNITY

NorCal DataFest
Co-Organizer   2022 - ongoing
· NorCal DataFest is a collaboration between Sacramento State and Chico State to host the American Statistical Association DataFest event.
· We anticipate hosting at Sac State biannually, starting in Spring 2023.

Math Literacy Project
Faculty Mentor   2023 - ongoing
· MLP provides hands-on math lessons for middle and high school students.

Sacramento Statistical Association
Secretary   February 2022 - ongoing

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

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

The Consortium for the Advancement of Undergraduate Statistics Education with the American Statistical Association
Judge, Undergraduate Research Project category, *Undergraduate Statistics Project Competition*   Jan 2022

California State University
· Northern California Data Science Alliance   2021 - ongoing

Gage by 500 Women Scientists
Resource, *Request a Woman Scientist*   2018 - ongoing

Reviewer
· Journal of Statistical Theory and Practice

SERVICE TO UNIVERSITY

California State University, Sacramento
Statistics Group, CSUS Department of Mathematics and Statistics
· Proposed a BS in Statistics. This program proposal is currently (as of Fall 2022) awaiting approval at the CSU system level.

Faculty Senate Committees
· General Education Course Review Subcommittee   2021 - 2024
  · Committee Chair   2022 - 2023

Committees Served, Department of Mathematics and Statistics
· Scholarship   2022 - 2023
· Curriculum   2020 - 2021; 2022 - 2023
· Search   2021 - 2023
· Social   2021 - 2023
  · Committee Chair   2022 - 2023
· Core Curriculum   2021 - 2022
· Calculus   2020 - 2021

Editor, Cummings J. *Proofs, A Long-Form Mathematics Textbook.*   2021

University of California, Riverside
· President and co-founder, Statistics Graduate Student Association   2019 - 2020
· Graduate Student Ambassador, Statistics Department   2019 - 2020
· President, Mu Sigma Rho   2018 - 2020
· Secretary, Mu Sigma Rho   2017 - 2018

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/`

ONLINE PUBLICATIONS AND EDUCATIONAL BLOG POSTS

Educational RShiny Apps (available at `lgpcappiello.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 `lgpcappiello.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 `lgpcappiello.github.io/lovestatistics/`.