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

COURSES TAUGHT

California State University, Sacramento
Assistant Professor   Aug 2020 - ongoing
 · Stat 1   Introduction to Statistics
 · Stat 115A   Introduction to Probability Theory
 · Stat 115B   Introduction to Mathematical Statistics
 · Stat 128   Statistical Computing
 · Math 26A   Calculus I for the Social and Life Sciences

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

COURSES PROPOSED AND DEVELOPED

California State University, Sacramento
 · Stat 196L: Linear Models (with Jasdeep Pannu and Clark Fitzgerald)   Fall 2022

MENTORING

Undergraduate Research Projects
Feini Pek, CSUS Mathematics Major   Fall 2021 - ongoing

Sacramento State U-Mentor Program
Mentor   Spring 2022

ATHENA by Women in STEM
Mentor, The Talaria Summer Institute   2020, 2022

PUBLICATIONS

Green, E. Wilkinson, T. Howman, J. Bayliss, J. **Cappiello, L.** *The current landscape of clinical education data management in physical therapy education: A cross-sectional survey study of physical therapist academic institutions.* In review.

Herrmann, J. Koprowska A., W inters 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. *Gene amplification mutations originate prior to selective stress in Acinetobacter baylyi.* (2022). BioRxiv preprint: doi.org/10.1101/2022.08.23.504990

Flores, A., **Cappiello, L.**, Quintanilla Salinas, I. *Challenges and successes of emergency online teaching.* (Brief Communication). In revision as of 2022.

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. (Advisors: Zhiwei Zhang and Xinping Cui)

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

† undergraduate student mentee

PRESENTATIONS

Applied machine learning methods in adjusting for population differences. Invited talk. Orange County Biostatistics Symposium. (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. (2016). Austin, Texas.

OTHER STATISTICAL CONSULTING AND APPLIED STATISTICS PROJECTS

Industry and Government
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.

California State University, Sacramento
Erin Green, CSUS Assistant Professor of Physical Therapy   Summer 2021
· Data cleaning, analysis, and write up for an American Council of Academic Physical Therapy survey.

Consultations for CSUS faculty and students   2020 - ongoing
· Topics have included beta regression for longitudinal data; time series analysis; and propensity score matched data in structural equation modeling.

UNCF Institute for Capacity Building - Excelencia - Coleridge Initiative
CSUS/CSUN Team Member (Beta Cohort), *Leveraging Big Data to Achieve Equity*   Aug 2022 - Jan 2023
· Expanding the work completed during the Beta Cohort into a more robust research paper.
CSUS Co-PI (Gamma 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 from across campus.
· 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*

GRANTS

Received

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

California State University, Sacramento
· *Designing Student Centered Courses: Math Group.* Professional Learning Community   2022
· *Flexible Fundamentals Workshop.* Faculty Learning Community   Summer 2021
· *Designing for Student Success: Building Inclusive Practices by Interrogating Power and Privilege.*
  Professional Learning Community   2020 - 2021
· *Teach ON!-Line Summer Camp*   Aug 2020

OTHER PRESENTATIONS AND WORKSHOPS

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 UNIVERSITY

California State University, Sacramento
University
· General Education Course Review Subcommittee   2021 - ongoing
   · Subcommittee Chair   2022 - ongoing
· Alternate Math Department Representative, Faculty Senate   2022 - 2023

Committees Served, CSUS Department of Mathematics and Statistics   2020 - ongoing
· Scholarship Committee
· Curriculum Committee
· Search Committee
· Social Committee
· Core Curriculum Committee
· Calculus Committee

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

SERVICE TO COMMUNITY

Mathematical Association of America
Co-Coordinator - Gold '21 Cohort, *Project NExT*
· Coordinated six Project NExT Sessions for the Joint Mathematical Meeting.   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*
· Discussion leader, MAA Golden Section small group meeting at MathFest.   Summer 2022

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

**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

PROFESSIONAL ORGANIZATIONS

American Statistical Association   2019 - ongoing
· Section on Statistics and Data Science Education
· Section on Teaching of Statistics in the Health Sciences
· Section on Nonparametric Statistics

- Sacramento Statistical Association
- Justice, Equity, Diversity, and Inclusion Outreach Group

Mathematical Association of America   2021 - 2022

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/`.

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/`