

LAUREN CAPPIELLO

Assistant Professor, Department of Mathematics and Statistics
California State University Sacramento

cappiello@csus.edu
lgpcappiello.github.io

EDUCATION

Ph.D., Applied Statistics
B.S., Statistics, *summa cum laude*

University of California, Riverside
University of California, Riverside

TEACHING

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
- Math 26A Calculus I for the Social and Life Sciences

University of California, Riverside

Instructor of Record

Sep 2018 - Dec 2019

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

RESEARCH

Papers

Cappiello, L., Flores, A., *Challenges and successes of emergency online teaching*. (Brief Communication). In review.

Cappiello, L., Zhang, Z., Shen, C., Butala, N.M., Cui, X. and Yeh, R.W. (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.

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

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.

MENTORING

Undergraduate Research Projects

Feini Pek, CSUS Mathematics Major

Fall 2021 – ongoing

- Feini is doing statistical analyses for an ongoing research project conducted in Andrew Ream's lab in the CSUS Biology Department. We have worked on R for statistical analyses and data visualization as well as the use of non and semi-parametric tests.

Sacramento State U-Mentor Program

Mentor

Spring 2022

- Working with two students on academic and career advising as well as “overall achievement of success”.

Consulting for Student Research

Sam Haynes, CSUS Economics Masters Student Fall 2021

- Met to discuss possible approaches to running beta regressions for longitudinal data in R.

Connor Drab, CSUS Mathematics Major Fall 2021

- Met to discuss possible approaches to a statistical analysis of time series data he was doing for his work.

Athena by Women in STEM

Shriya Iyer, Camp Talaria Participant Summer 2020

- Camp Talaria is a remote mentored research program for underrepresented, female-identified high school students.
- Shriya used Python to scrape Twitter data for a sentiment analysis on the use of face masks during the COVID-19 pandemic.

ACADEMIC CONSULTING

California State University, Sacramento

Erin Green, CSUS Assistant Professor of Physical Therapy Summer 2021

- Complete data cleaning, analysis, and write up for an American Council of Academic Physical Therapy survey.

Sue Hobbs, CSUS Assistant Professor of Child and Adolescent Development Spring 2021

- Brief consultation on the use of propensity score matched data in structural equation modeling.

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.
- Supervised and managed a team of part time consultants.
- 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

California State University, Sacramento

Applied for *Pedagogy Enhancement Award* with Jasdeep Pannu to redesign Stat 103, Intermediate Statistics.

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

- Proposed (with Sayonita Ghosh Hajra, Jasdeep Pannu, and Topaz Wiscons) to redesign Math 10, Essentials of Algebra. This proposal was funded for the full \$39654.12 requested.

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.

OTHER PRESENTATIONS AND WORKSHOPS

Panelist, *Faculty Panel* May 13, 2021 and 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) <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>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

PROFESSIONAL DEVELOPMENT

UNCF Institute for Capacity Building - Excelencia - Coleridge Initiative CSUS Team Member, <i>Leveraging Big Data to Achieve Equity</i>	Jan 2022 - Apr 2022
Mathematical Association of America Fellow, <i>Project NeXT (New Experiences in Teaching)</i>	Aug 2021 - Aug 2022
The Association of College and University Educators (ACUE) Microcredential: <i>Designing Student-Centered Courses</i>	Spring 2022
California State University, Sacramento	
· <i>Designing Student Centered Courses: Math Group.</i> Professional Learning Community	2022
· <i>Flexible Fundamentals Workshop.</i> Faculty Learning Community	Summer 2021
· <i>Designing for Student Success: Building Inclusive Practices by Interrogating Power and Privilege.</i> Professional Learning Community	2020 - 2021
· <i>Teach ON!-Line Summer Camp</i>	Aug 2020
Union of Concerned Scientists Mentee, Science Network Program	2019

SERVICE TO UNIVERSITY

California State University, Sacramento University Committees	
· General Education Curriculum Review Subcommittee	2021 - 2024
Department of Mathematics and Statistics Committees	
· Search Committee	2021 - 2022
· Core Curriculum Committee	2021 - 2022
· Social Committee	2021 - 2022
· Curriculum Committee	2020 - 2021
· Lower division computing course working group	
· Calculus Committee	2020 - 2021
Editorial Board, Cummings J. <i>Proofs, A Long-Form Mathematics Textbook.</i>	2021
University of California, Riverside	
· President and Cofounder, 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

DataFest at Chico State

Visiting Consultant

April 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

Mathematical Association of America

Co-Coordinator - Gold '21 Cohort, *Project NeXT*

Aug 2021 - Aug 2022

Sacramento Statistical Association

Secretary

February 2022 - ongoing

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

Member, Mathematical Association of America

2021 - ongoing

Member, American Statistical Association

2019 - ongoing

· Section on Statistics and Data Science Education

· Section on Nonparametric Statistics

· Biopharmaceutical Section

· Sacramento Statistical Association

· Justice, Equity, Diversity, and Inclusion Outreach Group

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

Character Stats (2022). Discusses a simulation approach and an order statistics approach to finding the average sum of rolling four dice and dropping the lowest roll.

Published on my website lgpcappiello.github.io/chrstats/

Rolling with Advantage and Disadvantage (2021). Discusses the addition and multiplication rules of probability through the lens of tabletop rpgs. Published on my website lgpcappiello.github.io/advdisdice/

A Gentle Introduction to Probability Using Dice (2021). This is a beginner's guide to probability using dice to illustrate concepts. Published on my website lgpcappiello.github.io/introprobdice/

Dungeons and Dragons Character Generator, an RShiny App (2020). Discussed and shared via my website lgpcappiello.github.io/shinyapp/

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/