

# LAUREN CAPPIELLO

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California State University Sacramento

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## EDUCATION

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

University of California, Riverside  
University of California, Riverside

## TEACHING

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### 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

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### 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 Bio-statistics 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

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### 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 are working 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

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### 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

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### 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

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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)  
*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, <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

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

## SERVICE TO UNIVERSITY

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<b>California State University, Sacramento</b> University Committees · General Education Curriculum Review Subcommittee	2021 - 2024
Department of Mathematics and Statistics Committees · Search Committee · Core Curriculum Committee · Social Committee · Curriculum Committee · Lower division computing course working group · Calculus Committee	2021 - 2022 2021 - 2022 2021 - 2022 2020 - 2021 2020 - 2021
Editorial Board, Cummings J. <i>Proofs, A Long-Form Mathematics Textbook</i> .	2021
<b>University of California, Riverside</b> · President and Cofounder, Statistics Graduate Student Association · Graduate Student Ambassador, Statistics Department · President, Mu Sigma Rho · Secretary, Mu Sigma Rho	2019 - 2020 2019 - 2020 2018 - 2020 2017 - 2018

## SERVICE TO COMMUNITY

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<b>DataFest at Chico State</b> Visiting Consultant	April 2022
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**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

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**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

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**ONLINE PUBLICATIONS AND EDUCATIONAL BLOG POSTS**

Educational RShiny Apps (available at [lgpcappiello.github.io/teaching/shinyapps/](https://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/](https://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/](https://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/](https://lgpcappiello.github.io/introprobdice/)

*Dungeons and Dragons Character Generator, an RShiny App* (2020). Discussed and shared via my website [lgpcappiello.github.io/shinyapp/](https://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/](https://lgpcappiello.github.io/lovestatistics/).

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**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/](https://statehornet.com/2021/04/sac-state-students-fall-2021-in-person-opinions/)