

# REBECCA KURTZ-GARCIA

rkurtzgarcia@smith.edu  $\diamond$  rebeccakurtz62@gmail.com  $\diamond$  <https://rpkgarci.github.io/rpkgarci/>

## EDUCATION

---

**University of California Riverside** *Sept. 2018 - Summer 2023*  
Doctorate in Applied Statistics

**Ball State University** *Aug. 2016 - May 2018*  
Masters of Science in Statistics

**University of California Davis** *Sept. 2012 - June 2016*  
Bachelors of Science in Statistics

## EXPERIENCE

---

**Smith College**, Northampton Massachusetts *Fall 2023 - Present*  
Assistant Professor  
Department of Mathematical Sciences, Department of Statistics and Data Science

## RELEVANT RESEARCH PROJECTS

---

**Dissertation**, University of California Riverside *Fall 2020 - July 2023*  
Advisor: Dr. James Flegal  
Title: Testing Optimal Bandwidth for Zero Lugsail Estimators

**Master's Thesis**, Ball State University *Aug 2017 - May 2018*  
Advisor: Dr. Rebecca Pierce  
Title: Reality Competition Programs: Are You In Or Are You Out?

**Undergraduate Research Project**, University of California Davis *Jan 2016 - June 2016*  
Advisor: Dr. Joshua Patrick  
Title: Solar Irradiance Covariance Modeling for Sacramento County

## PUBLICATIONS

---

- **Kurtz-Garcia, R. P.**, Flegal, J. *Testing Optimal Lugsail Estimators for Robust Inference*. In preparation.
- **Kurtz-Garcia, R. P.**, *Teaching Iterative Methods in R*. In preparation.
- Flegal, James M., and **Rebecca P. Kurtz-Garcia**. *Implementing MCMC: Multivariate estimation with confidence*. arXiv preprint arXiv:2408.15396 (2024)
- Pickerill, E. S., **Kurtz, R. P.**, Evans, B., Begum, M., & Bernstein, D. A. (2019). *Pseudouridine synthase 7 impacts Candida albicans rRNA processing and morphological plasticity*. *Yeast*, 36(11), 669-677.

## CONFERENCE ACTIVITY

---

- New England Statistical Symposium, San Francisco, CA (2024, January)
  - Workshop attendee
  - Judge for student paper competition
  - Invited Oral Presentation: *Bandwidth Selection for Zero Lugsail Kernels*
- Joint Mathematical Meetings, San Francisco, CA (2024, January)
  - Project Next '23 Cohort
  - Attendee
- MathFest, Tampa, FL (2023, August)
  - Project Next '23 Cohort
  - Workshop Attendee - Jumpstarting Your Scholarship
- Joint Mathematics Meeting 2022, Boston, MA (2023, January)
  - Oral Presentation: *Lessons Learned From Teaching Programming In R Remote And In Person*
- NBER-NSF Time Series Conference, Boston, MA (2022, Fall)
  - Attendee
- Joint Statistical Meetings at Washington DC (2022, Summer)
  - Poster Presentation: *Alternative Time-Average Covariance Matrix Estimation Procedures*
  - Co-Organizer for National Institute of Statistical Sciences (NISS) Graduate Student Network Social
- NISS Graduate Student Conference (2022, Spring)
  - Oral Presentation: *Alternative Time-Average Covariance Matrix Estimation Procedures*
  - Organizing Committee
  - Session Chair
- Women in Data Science, University of California Riverside (2022, Winter)
  - Invited Workshop Presenter: *Advanced Text Analysis in R*
  - Panelist
- Minds Datathon Conference, Orange County, CA (2021, Fall)
  - Plenary Speaker: *Decision Trees with the Iris Data*
- NISS Graduate Student Conference (2021, June)
  - Oral Presentation: *Recent Advances in Time-Average Covariance Matrix Estimation*
  - Organizing Committee
  - Session Chair
- Minds Datathon Conference, Orange County, CA (2020, Fall)
  - Invited Workshop Presenter: *Random Forests*
- Women Working in Technology, Ball State University (2018, Spring)
  - Attendee
- Student Symposium, Ball State University (2018, Spring)
  - Oral Presentation: *Are You In or Are You Out?*
- Rustbelt RNA Meeting, Indianapolis, IN (2017, Fall)

- Attendee
- Women Working in Technology, Ball State University (2017, Spring)
  - Attendee
- iidata Data Science Convention, University of California Davis (2016, Spring)
  - Poster Presentation: *Solar Irradiance Covariance Modeling for Sacramento County*

## PRESENTATIONS (NOT CONFERENCE RELATED)

---

- Invited Seminar: *Time Series and Variance Estimation*, Colby College (Spring 2024)
- Invited Seminar: *Robust Variance Estimation for Time Series*, Smith College (Spring 2024)
- Invited Seminar: *Bandwidth Selection for Zero Lugsail Estimators*, University of Hartford (Fall 2023)
- Invited Seminar: *Bandwidth Selection for Zero Lugsail Estimators*, University of Massachusetts (Fall 2023)
- Invited Seminar: *Testing Optimal Lugsail Estimators for Robust Inference*, Bucknell University (Fall 2022)
- *Graduate Student Panelist*, UCR Data Science Institute (Summer 2022)
- Invited Talk: *Introduction to R* (Cancelled due to COVID19), UCR Data Science Institute (Summer 2022)
- *Introduction to Python for R Users*, UCR Statistics Graduate Student Seminar (Winter 2022)
- *Random Forests in R* (Cancelled due to emergency), R'Ladies at UCR (Spring 2020)
- *Panelist for UCR Graduate Student Open House*, UCR Graduate Division (Fall 2020)
- *Demystifying Data Science*, Center for Information and Communication Sciences, Ball State University (Spring 2018)
- *Comparison of Iterative Methods in R*, Applied Statistics and R Group, Ball State University (Spring 2017)
- *An Introduction to the R*, Mathematical Sciences Student Colloquium Series, Ball State University's Mathematical Sciences Department (Spring 2017)
- *Summary of Results: Math 167 Survey*, Mathematical Sciences UPC Faculty Committee, Ball State University's Mathematical Sciences Department (Fall 2016)

## TEACHING EXPERIENCE - PRIMARY INSTRUCTOR

---

### Smith College

- |   |                 |
|---|-----------------|
| SDS 220: Introduction to Probability and Statistics | <i>F23, S24</i> |
| MTH 320: Mathematical Statistics                    | <i>S24</i>      |

### University of California Riverside

- |   |                            |
|---|----------------------------|
| Statistics and Programming Bootcamp for Graduate Students | <i>Su21, Su20</i>          |
| STAT 107: Introduction to Statistical Computing With R    | <i>F22, Su22, W22, F21</i> |

### **Upward Bound/Ivy Tech Community College**

Introduction to Sports Analytics	<i>Su18</i>
Mathematics for Business and Life	<i>Su18</i>
Entrepreneurship	<i>Su18</i>

### **Ball State University**

MATH 125: Quantitative Reasoning	<i>Sp18, F17</i>
----------------------------------	------------------

## **TEACHING EXPERIENCE - GRADUATE TEACHING ASSISTANT**

---

### **University of California Riverside**

STAT 167: Introduction to Data Science	<i>Sp22</i>
STAT 10/100A: Introduction to Statistics	<i>Sp20, W20</i>
STAT 11/100B: Introduction to Statistics	<i>Sp20</i>
STAT 155: Probability and Statistics for Science and Engineering	<i>Sp20, W20, F19, Su19</i>

## **HONORS AND AWARDS**

---

- Dissertation Year Program Award at UCR (2022-2023)
- Graduate Student Association Travel Grant at UCR (2022)
- Earl C. Anthony Graduate Student Travel Award at UCR (2022)
- Best Presentation of Original Research Award at NISS Graduate Student Research Conference (2022)
- Mu Sigma Rho Honor Society (Spring 2019 - Current)
- Teaching Assistant of the Year Award, University of California Riverside (Spring 2020)
- Outstanding Statistical Consultation Award and Recognition, University of California Riverside (Spring 2020)
- Dr. Mir Masoom Ali Scholarship, Ball State University (Spring 2018)

## **OUTREACH AND PROFESSIONAL DEVELOPMENT**

---

- Project Next Fellow Green 2023 Cohort
- Executive Committee of NISS Graduate Student Network (June 2020 - June 2023)
- NISS Graduate Student Liaison (Fall 2021 - June 2023)
- President of Mu Sigma Rho at UCR, National Honor Society for Statistics (Fall 2021 - June 2023)
- Aspiring PUI Faculty in STEM Workshop at Bucknell University, Lewisburg, PA (Fall 2022)

- Associate for the Career Mentoring of Underrepresented STEM Students for the Professoriate Program, Riverside, CA (Spring 2022)
- Mentor for a statistics undergraduate student research project, Riverside, CA (Spring 2022)
- Vice President of Statistics Graduate Association (Fall 2020 - Summer 2022)
- Graduate Student Mentor at the Women's Resource Center (Spring 2021-Fall 2021)
- Organizing Committee of NISS Graduate Student Conference (June 2021, May 2022)
- Co-Founder and Secretary of Statistics Graduate Association (Spring 2019-Spring 2020, Fall 2022- Current)

## COMPETITIONS AND CHALLENGES

---

- Scientific and Public Affairs Advisory Committee Poster Competition at JSM 2022 (Summer 2022)
- Lawrence Livermore National Laboratory Data Science Challenge - Team Lead (Summer 2021)
- Ball State University Entrepreneurship Hackathon (Spring 2018)
- University of California Davis Data Science Convention Poster Competition (Spring 2016)

## PROFESSIONAL EXPERIENCE

---

### **Graduate Student Researcher - Intern**

*Oct 2020 - Sept 2021*

*Location:* Mathematical Analysis Research Corps - Claremont, CA

Consult on unique statistical and computational problems where solutions may result in publication. Work on long term projects both as a team and at an individual level. Interact with others that have a variety of different backgrounds, responsible for handling sensitive information. Prepare and present materials for a specialized audience.

### **Consultant**

*Sept 2019 - June 2020*

*Location:* Graduate Quantitative Methods Center, University of California Riverside

Responsible for holding quantitative consultations, and developing and presenting workshops for a variety of topics and programs. Assisted with the creation of resources and promotion of GradQuant through social media and on-campus events. Specialized In: LaTeX, Python, R, Matlab, Machine learning, Probability theory, Statistical computing, Statistical inference, Web scraping, Advanced Statistical Methods.

### **Governor's Intern**

*Summer 2017*

*Location:* State Budget Agency - Indianapolis, IN

Maintained and operated databases using R, and Microsoft programs. Developed uniform systems and programs to generate government reports using R which included forecasts of financial trends. Conducted statistical analysis on future tax revenue, trained coworkers, and wrote user and debugging manuals on the use of R.

**Student Supervisor***Aug 2014 - June 2016*

*Location:* Student Housing, University of California Davis - Davis, CA

Promoted from resident advisor. Primary response for 100 resident advisors and over 5000 residents. Supervise, provide professional feedback, and work evaluations for resident advisors. Act as a liaison between different levels of management and departments. Organize systems, schedules and information for people of various professional levels and communication styles. Lead, plan, and facilitate meetings and events for groups as small as three to several hundred. Organize and facilitate weekly discussions for diversity, equity and inclusion.

**Legislative Intern***Summer 2015*

*Location:* Office of Senator Joel Anderson - Sacramento, CA

Provided essential office tasks and worked on several legislative research projects. Responsible for constituent correspondence, assisting district office programs, maintaining and operating databases using R, SQL, and Microsoft programs. Additionally, attended community events on behalf of the Senator and made public speeches, as well as creating and presenting certificates of recognition.

**Peer Tutor***Spring 2015*

*Location:* Economics Department, University of California Davis - Davis, CA

Assisted students in improving academic achievement, review and clarify key concepts, and provide useful study skills to students that need supplemental help. Held office hours.