Sara A. Stoudt

| CONTACT INFORMATION | Evans Hall 331, Department of Statistics
Berkeley, CA 94720-3860
http://github.com/sastoudt
http://sastoudt.github.io/ | 724-464-3179
sstoudt@berkeley.edu
@sastoudt |

RESEARCH INTERESTS
applied and computational statistics in ecology and environmental science, teaching the communication of statistics, data journalism

EDUCATION

University of California, Berkeley, Berkeley, CA

Ph.D., Statistics, Fall 2015 - expected Summer 2020
Advisors: Will Fithian (Department of Statistics) and Perry de Valpine (Department of Environmental Science, Policy and Management)
Berkeley Institute for Data Science Fellow
National Physical Science Consortium Fellow
Data Sciences for the 21st Century: Environment and Society Graduate Trainee

Smith College, Northampton, MA

B.A., Mathematics and Statistics, 2015
Magna Cum Laude with Highest Honors 3.95/4.0
Major GPA: 4.0/4.0

GRADUATE RESEARCH

Dissertation Research

– Clarifying identifiability controversies in species distribution/abundance models

– Assessing model fit in hierarchical Bayesian models of joint species distributions

– Statistics communication (with Deborah Nolan): book coming soon, *Communicating with Data: The Art of Writing for Data Science*

JOB EXPERIENCE

Data Desk Intern   Summer 2019
- Los Angeles Times

  – Supervisor: Ben Welsh

  – Census data aggregator

Data Science Intern   Summer 2018
- Farmers Business Network

  – Supervisor: Matt Meisner, Ph.D

  – Crop yield prediction

Summer (Undergraduate/Graduate) Research Fellow   Summers 2013-2017
- Statistical Engineering Division, National Institute of Standards and Technology

  – Supervisor: Antonio Possolo, Ph.D

  – Measuring optical apertures for solar irradiance monitoring

  – Homogenizating of surface temperature records

  – Errors-in-variables modeling for force calibrations

  – Interpolating atmospheric greenhouse gas fluxes

  – Evaluating the accuracy, consistency, and stability of measurements of the Planck constant

TEACHING EXPERIENCE	Graduate Student Instructor (GSI), Statistics, UC Berkeley

- Co-developed and co-instructed new writing in statistics course · Fall 2017
- Co-developed and co-instructed new blogging for data science independent study · Spring 2018
- Outstanding GSI award

Miscellaneous Primary Instructor
- Introduction to Statistics in R Workshop (NICAR, 2020)
- Data Storytelling Workshop (Correlation One's Women's Summit, 2020)
- Unleashing the power of biodiversity data with data science (Lewis and Clark workshop 2019, co-instructed with Ciera Martinez)

Miscellaneous Teaching Assistant
- Linear Regression Workshop (NICAR, 2020)
- Peer Data Review coach (Open News, 2019)
- R bootcamp (D-Lab/UC Berkeley Statistics Department, 2018)
- Software Carpentry (Data Science for the 21st Century Training Program, 2018)

AWARDS

- RStudio Diversity Scholar · 2020
- Berkeley Institute for Data Science Fellow · 2018-2020
- Outstanding Graduate Student Instructor award · 2018
- National Physical Science Consortium Fellow · 2015-2018
- Data Sciences for the 21st Century: Environment and Society Graduate Training Program 2015-2017
- Gertrude M. Cox Scholarship · 2015
- Goldwater Scholar · 2014
- Elected to Phi Beta Kappa Society · 2014
- First Place: Statistics in Sports Undergraduate Research Competition at Joint Statistical Meetings · 2014
- Best in Show: Five College Data Fest · 2014, 2015

PROGRAMMING LANGUAGES

- Advanced: R (and Shiny)
- Experience With: Python, SQL, HTML, CSS, D3, JavaScript, bash, Matlab, Java, GIS, AMPL, Mathematica, NIMBLE, WinBUGS, LaTeX

PUBLICATIONS

- Possolo, A., Schlamminger, S., **Stoudt, S.**, Pratt, J. R., and Williams, C. J. "Evaluation of the accuracy, consistency, and stability of measurements of the Planck constant used in the redefinition of the International System of Units" *Metrologia* Volume 55, Number 1, December 2017
- **Stoudt, S.** "Geostatistical Models for the Spatial Distribution of Uranium in the Continental United States" *Advances in Geocomputation: Geocomputation 2015 - The 13th International Conference* Springer Advances in Geographic Information Science, 2017, pp. 325-334.
- **Stoudt, S.**, Badian-Pessot, P., Mahop, B. N., Earley, E., Menter, J., Flores, Y., Williams, D., Zhang, W., Maharajan, L., Bao, Y., Rosenbauer, L., Nguyen, V., Mendiratta, V., Tania, N. "Modeling Internet Traffic Generations Based on Individual Users and Activities for Telecommunication Applications" *American Journal of Undergraduate Research* Volume 13, Issue 3, August 2016, pp. 53-65.
- Bartel, T., Possolo, A., and **Stoudt, S**. "Force Calibrations using Errors-in-Variables Regression and Monte Carlo Uncertainty Evaluations" *Metrologia* Volume 53, Number 3, June 2016, pp. 965-980(16).
- **Stoudt, S.**, Cao, Y., Udwin, D., and Horton, N. J. "What Percent of the Continental US is Within One Mile of a Road?" *Statistics Education Web,* 2014.
- **Stoudt, S.**, Santana, L., and Baumer, B. "In Pursuit of Perfection: An Ensemble Method for Predicting March Madness Match-Up Probabilities" *JSM 2014 Proceedings*

OTHER WRITING

- Four Hours: Manhattan Beach
- Berkeley Institute for Data Science Best Practices Series
- Berkeley Science Review
- Ecology for the Masses Stats Corner
- Logic Magazine

- [Tidy Tuesday participation](#)
- [RStats blog](#)
- [What does probability mean anyway?](#)
- [Fixed, mixed, and random effects](#)
- coming soon: collaboration with [The Pudding](#)

SERVICE
- Co-organizer of Code and Coffee East Bay for the Bay Area Women in Machine Learning & Data Science Meetup group, Spring 2019-current
- Active member of [BIDS Diversity and Inclusion Working Group](#), Fall 2018-current
- Co-president of the Statistics Graduate Student Association (SGSA), Fall 2017-Spring 2018
- Co-organizer of UC Berkeley DataFest, Springs 2016-2018
- Co-organizer of [SGSA Gender Issues Roundtable Discussion](#), Fall 2016

RELEVANT ACTIVITIES
- Attended JavaScript for Shiny Users at rstudio::conf — 2020
- Author of [base R to dplyr vignette](#) — 2020
- [RLadies San Francisco Lightning Talk](#) — 2019
- Author of [base R to stringr vignette](#) — 2019
- Developer of interactive visualization for the [Wealth Tax Simulator](#) — 2019
- [Trans Day of Remembrance Hackathon Participation](#) — 2018, 2019
- Graduate Workshop on Environmental Data Analytics — 2016
- [San Francisco Estuary Institute consulting](#) — 2016
- Attended the Google Geospatial Technology Workshop — 2015
- SAMSI Summer Program: The International Temperature Initiative — 2014