Lane Drew

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Education

Colorado State University — Fort Collins, CO
Ph.D, Statistics, Advisor: Dr. Andee Kaplan — *July 2025 (Anticipated)*

Colorado State University — Fort Collins, CO
MS, Statistics, Advisor: Dr. Andee Kaplan — *August 2019 – May 2023*

University of New Mexico — Albuquerque, NM
BS, Statistics & Psychology, summa cum laude — *August 2008 – May 2012*

Research Interests

Bayesian Statistics, Entity Resolution and Record Linkage, Statistical Computing, Spatial Statistics, Point Processes, Ecology, Environmental Science

Honors and Awards

CSU College of Natural Sciences Thomas A. Jones Graduate Fellowship	August 2024
EnviBayes Workshop on Complex Environmental Data Registration Award	September 2023
CSU Department of Statistics James R. zumBrunnen Statistical Collaboration Award	May 2023
CSU Department of Statistics Department Distinguished Service Award	May 2023
Phi Kappa Phi Honor Society	March 2011
Psi Chi Psychology Honor Society	September 2010
Dean's List, University of New Mexico	Fall 2008 – Spring 2012

Journal Publications

Preprints

- **Drew**, **L.**, Kaplan, A., Breckheimer, I."A Bayesian Record Linkage Approach to Applications in Tree Demography Using Overlapping LiDAR Scans". http://arxiv.org/abs/2501.13285. (2024+) (Under revision at *Annals of Applied Statistics*).
- **Drew**, **L.**, Kaplan, A."ldmppr: Location-Dependent Marked Point Processes in R". (2025+) (Submitted to *Journal of Statistical Software*).

Talks, Software, and Poster Presentations

Contributed Talks

- "A Bayesian Record Linkage Approach to Tree Demography Using Overlapping LiDAR Scans". *WNAR*. Student Paper Presentation. International Biometric Society. Fort Collins, CO, June 2024.
- "Bayesian Spatial Record Linkage as Applied to Tree Demography Using Overlapping LiDAR Scans". *Spatial Statistics*. Topic Contributed Talk. Elsevier. Boulder, CO, July 2023.

Software

- **Drew, L.**, Kaplan, A. *ldmppr: Estimate and Simulate from Location Dependent Marked Point Processes*. R package version 1.0.4. 2024.

Posters

- "A Bayesian Record Linkage Approach to Tree Demography Using Overlapping LiDAR Scans". *ENVR Workshop: Spatial Data Science for the Environment*. Contributed Poster. ASA. Boulder, CO, October 2024.
- "A Bayesian Record Linkage Approach to Tree Demography Using Overlapping LiDAR Scans". *EnviBayes Workshop on Complex Environmental Data*. Contributed Poster. ISBA. Fort Collins, CO, September 2023.
- "A Bayesian Record Linkage Approach to Tree Demography Using Overlapping LiDAR Scans". *Conference on Data Analysis*. Contributed Poster. LANL. Santa Fe, NM, March 2023.

Research Experience

Graduate Research Assistant Summer 2021/2022/2023

Colorado State University *Fort Collins, CO*

- Developed and implemented the framework for a Bayesian entity resolution and deduplication model using ALS derived spatial location data alongside Dr. Andee Kaplan and Dr. Ian Breckheimer (Rocky Mountain Biological Laboratory) for applications in tree demography.

Consulting Experience

Prison Agriculture Lab Fall 2022

Colorado State University *Fort Collins, CO*

- Worked alongside the lab directors, Dr. Carrie Chennault and Dr. Josh Sbicca, to Develop a comprehensive national dataset by integrating data from multiple sources using advanced record linkage techniques.
- Constructed predictive models to identify key drivers influencing agricultural programs within the US prison system.

Teaching Experience

Graduate Teaching Assistant August 2019 – Present

Colorado State University *Fort Collins, CO*

- Instructor of record for STAT 100 Statistical Literacy (SP 23, FA 24), STAT 158 Introduction to R Programming (SU 23, SU 24, SP 25), STAT 201 General Statistics (SU 20), STAT 204 Statistics with Business Applications (SU 20), and STAT 301 Introduction to Applied Statistical Methods (FA 21, SP 22, FA 22, SP 24).
- Served as a grader for upper division undergraduate and graduate level statistics courses including STAT: 315 (FA 19), 421 (SP 20), 430 (SP 20), 440 (SP 20), 600 (SP 24), STAR: 511 (FA 21/22), 513 (SP 22), STAA: 556 (SU 24).
- Tutored students in introductory-level statistics courses in the Statistics Success Center at Colorado State University including STAT: 100, 158, 201, 204, 301, 307, 315.

Coding & Cookies Instructor March 2022 – November 2024

Colorado State University *Fort Collins, CO*

- Workshop facilitator for Version Control Using git (SP 24, FA 24), Data Visualization Using ggplot (SP 22), and R Basics (FA 22, SP 23, FA 23).

Professional Experience

Restaurant Manager July 2016 – August 2019

The Shed *Santa Fe, NM*

- Managed a team of approximately 50 staff across hosting, service, bar, and kitchen areas, ensuring efficient operations and high-quality customer service in a high volume business.
- Promoted to management after serving in various roles from August 2012 to July 2016, demonstrating adaptability and leadership skills.

Sampler & Lab Technician September 2009 – August 2019

Indepth Water Testing *Santa Fe, NM*

- Collected and analyzed water samples, maintaining strict adherence to quality control standards and regulatory compliance.
- Conducted microbiological and chemical analyses, compiling detailed reports to communicate findings to clients.
- Collaborated with community organizations to design sampling protocols, ensuring the reliability of environmental assessments.

Graduate Coursework

STAT: 520 Intro to Probability Theory, 525 Analysis of Time Series I, 530 Mathematical Statistics, 540 Data Analysis and Regression, 555/556 Statistical Consulting Sequence, 620 Introduction to Measure Theoretic Probability, 630 Advanced Statistical Data Analysis, 640 Design and Linear Modeling I, 670 Bayesian Statistics, 720 Probability Theory, 730 Advanced Theory of Statistics I, 740 Advanced Statistical Methods (Point Processes)

Technical Skills

Languages: R, STAN, LaTeX, Markdown
Developer Tools: Git, RStudio
Libraries: Rcpp, rstan, ggplot2, tidyverse, tidymodels, devtools