

# Susan Vanderplas

## Curriculum Vitae

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### Education

- 2009 — 2015 **Ph.D.**, *Statistics*, Iowa State University
- 2009 — 2011 **MS**, *Statistics*, Iowa State University
- 2005 — 2009 **BS**, *Psychology & Applied Mathematical Sciences*, Texas A&M University

### Professional Experience

- 2020 — **Assistant Professor**, *Statistics*, University of Nebraska-Lincoln
- Research Assistant Professor**, *Center for Statistics and Applications in Forensic Evidence*, Iowa State University
- Statistical Analyst**, Nebraska Public Power District
- Postdoc**, *Office of the Vice President for Research*, Iowa State University

### Publications


Student advisees indicated with \*. Contribution percentages estimated from git contributions using `git fame` where possible. Not all projects have github repositories for which this is meaningful. Most of these papers are highly collaborative, and intellectual contributions are typically shared between all authors.

#### Peer Reviewed Publications


- 2024 — 20. Rosenblum, Michael, Chin, Elizabeth T, Ogburn, Elizabeth L, Nishimura, Akihiko, Westreich, Daniel, Datta, Abhirup, **Vanderplas, Susan**, Cuellar, Maria, and Thompson, William C (Jan. 1, 2024). "Misuse of statistical method results in highly biased interpretation of forensic evidence in Gyll et al. (2023)". In: *Law, Probability and Risk* 23.1, mgad010. ISSN: 1470-8396. DOI: [10.1093/lpr/mgad010](https://doi.org/10.1093/lpr/mgad010). URL: <https://doi.org/10.1093/lpr/mgad010> (visited on 01/15/2024).  
**Contribution:** Writing (10%). This paper is a collaboration between all authors resulting from discussions about the Gyll et al. paper.
- 2023 — 19. Robinson, Emily A.\*, Howard, Reka, and **VanderPlas, Susan** (Oct. 2, 2023). "Eye Fitting Straight Lines in the Modern Era". In: *Journal of Computational and Graphical Statistics* 32.4, pp. 1537–1544. ISSN: 1061-8600. DOI: [10.1080/10618600.2022.2140668](https://doi.org/10.1080/10618600.2022.2140668).  
**Contribution:** Programming and analysis (10%), Writing (10%), Advising (60%).
- 2023 — 18. **VanderPlas, Susan**, Ge, Yawei\*, Unwin, Antony, and Hofmann, Heike (Mar. 2023). "Penguins Go Parallel: a grammar of graphics framework for generalized parallel coordinate plots". In: *Journal of Computational and Graphical Statistics*. DOI: [10.1080/10618600.2023.2195462](https://doi.org/10.1080/10618600.2023.2195462).  
**Contribution:** Writing (50%).
- 2023 — 17. Zemmels, Joseph\*, **Vanderplas, Susan**, and Hofmann, Heike (Feb. 9, 2023). "A Study in Reproducibility: The Congruent Matching Cells Algorithm and cmcR package". In: *R Journal* 14

(4), pp. 79–102. DOI: [10.32614/RJ-2023-014](https://doi.org/10.32614/RJ-2023-014).


**Contribution:** Programming and analysis (10%), Writing (20%), Advising (40%).

16.  2023 Robinson, Emily\*, Howard, Reka, and **VanderPlas, Susan** (Jan. 2023). “You Draw It: Implementation of visually fitted trends with r2d3”. In: *Journal of Data Science*. ISSN: 1680-743X. DOI: [10.6339/22-JDS1083](https://doi.org/10.6339/22-JDS1083).


**Contribution:** Writing (10%), Advising (80%).

15.  2022 Bradford, Denise\* and **VanderPlas, Susan** (Dec. 2022). “Exploring Rural Shrink Smart Through Guided Discovery Dashboards”. In: *Journal of Data Science*, pp. 1–12. ISSN: 1680-743X. DOI: [10.6339/22-JDS1080](https://doi.org/10.6339/22-JDS1080).


**Contribution:** Programming and analysis (10%), Writing (10%), Advising (100%).

14.  2022 Wilhelm, Adalbert and **VanderPlas, Susan** (Nov. 2022). “Visual Narratives of the Covid-19 pandemic”. In: *Journal of Data Science, Statistics, and Visualisation* 2.7, pp. 84–113. DOI: [10.52933/jdssv.v2i7.64](https://doi.org/10.52933/jdssv.v2i7.64).


**Contribution:** Writing (60%).

13.  2021 Hofmann, Heike, Carriquiry, Alicia, and **Vanderplas, Susan** (May 5, 2021). “Treatment of inconclusives in the AFTE range of conclusions”. In: *Law, Probability and Risk* 19.3-4, pp. 317–364. ISSN: 1470-8396. DOI: <https://doi.org/10.1093/lpr/mgab002>.


**Contribution:** Writing (50%).

12.  2021 **Vanderplas, Susan**, Röttger, Christian, Cook, Dianne, and Hofmann, Heike (Dec. 1, 2021). “Statistical significance calculations for scenarios in visual inference”. In: *Stat* 10.1, e337. DOI: <https://doi.org/10.1002/sta4.337>.


**Contribution:** Programming and analysis (30%), Writing (65%).

11.  2020 **Vanderplas, Susan**, Carriquiry, Alicia, Hofmann, Heike, Hamby, James, and Tai, Xiao Hui (2020). “An introduction to firearms examination for researchers in statistics”. In: *Handbook of Forensic Statistics*. Ed. by Banks, D., Kafadar, K., Kaye, D., and Tackett, M. New York: Chapman and Hall/CRC 2020. DOI: <https://doi.org/10.1201/9780367527709>.


**Contribution:** Writing (50%).


10.  2020 **Vanderplas, Susan**, Nally, Melissa, Klep, Tylor, Cadevall, Cristina, and Hofmann, Heike (Mar. 1, 2020). “Comparison of three similarity scores for bullet LEA matching”. In: *Forensic Science International* 308, p. 110167. ISSN: 0379-0738. DOI: <https://doi.org/10.1016/j.forsciint.2020.110167>.

**Contribution:** Programming and analysis (20%), Writing (55%).


9.  2020 **Vanderplas, Susan**, Cook, Dianne, and Hofmann, Heike (Mar. 1, 2020). “Testing Statistical Charts: What Makes a Good Graph?” In: *Annual Review of Statistics and Its Application* 7.1, pp. 61–88. DOI: <https://doi.org/10.1146/annurev-statistics-031219-041252>.


**Contribution:** Writing (85%).

8.  2019 Rutter, Lindsay, **Vanderplas, Susan**, Cook, Dianne, and Graham, Michelle (May 29, 2019). “ggenealogy: An R Package for Visualizing Genealogical Data”. In: *Journal of Statistical Software* 89.13, pp. 1–31. DOI: <https://doi.org/10.18637/jss.v089.i13>.

7.  2019 **Vanderplas, Susan**, Goluch, Ryan C, and Hofmann, Heike (Apr. 1, 2019). “Framed! Reproducing and Revisiting 150-Year-Old Charts”. In: *Journal of Computational and Graphical Statistics* 28.3, pp. 620–634. DOI: <https://doi.org/10.1080/10618600.2018.1562937>.


**Contribution:** Programming and analysis (60%), writing (50%).

6.  2018 Sievert, Carson, **Vanderplas, Susan**, Cai, Jun, Ferris, Kevin, Khan, Faizan Uddin Fahad, and Hocking, Toby Dylan (Nov. 14, 2018). “Extending ggplot2 for Linked and Animated Web Graphics”. In: *Journal of Computational and Graphical Statistics* 28.2, pp. 299–308. DOI: <https://doi.org/10.1080/10618600.2018.1513367>.


5.  2017 **Vanderplas, Susan** and Hofmann, Heike (Apr. 24, 2017). “Clusters Beat Trend!? Testing Feature Hierarchy in Statistical Graphics”. In: *Journal of Computational and Graphical Statistics* 26.2,

pp. 231–242. DOI: <https://doi.org/10.1080/10618600.2016.1209116>.


**Contribution:** Programming and analysis (90%), writing (50%).


4.  **VanderPlas, Susan** and Hofmann, Heike (Dec. 31, 2016). “Spatial Reasoning and Data Displays”. In: *IEEE Transactions on Visualization and Computer Graphics* 22.1, pp. 459–468. DOI: <https://doi.org/10.1109/TVCG.2015.2469125>.

**Contribution:** Programming and analysis (90%), writing (75%).

3.  **Vanderplas, Susan** and Hofmann, Heike (Dec. 10, 2015). “Signs of the Sine Illusion - why we need to care”. In: *Journal of Computational and Graphical Statistics* 24.4, pp. 1170–1190. DOI: <https://doi.org/10.1080/10618600.2014.951547>.

**Contribution:** Programming and analysis (50%), writing (60%).


2.  Towfic, Fadi, **Vanderplas, Susan**, Oliver, Casey A, Couture, Oliver, Tuggle, Christopher K, Greenlee, M Heather West, and Honavar, Vasant (2010). “Detection of gene orthology from gene co-expression and protein interaction networks”. In: *BMC bioinformatics* 11.Suppl 3, S7. DOI: <https://doi.org/10.1186/1471-2105-11-S3-S7>.

1.  Hull, Rachel, Bortfeld, Heather, and **Koons, Susan** (2009). “Near-infrared spectroscopy and cortical responses to speech production”. In: *The open neuroimaging journal* 3, p. 26. DOI: <https://doi.org/10.2174/1874440000903010026>.


## Other Publications

5.  **Vanderplas, Susan** (Feb. 14, 2024). *Statistical Computing Using R and Python* Feb. 14, 2024. URL: <https://srvanderplas.github.io/stat-computing-r-python/>.


**Contribution:** Writing (100%). This online textbook is published on Github and continually updated. It serves UNL Stat 850, Stat 151, and Stat 251 and has been used in classes at California Polytechnic and Chadron State College.

4.  *Submitted as an invited response to Hullman & Gelman’s “Designing for Interactive Exploratory Data Analysis Requires Theories of Graphical Inference”.*


**VanderPlas, Susan** (July 30, 2021). “Designing Graphics Requires Useful Experimental Testing Frameworks and Graphics Derived From Empirical Results”. In: *Harvard Data Science Review* 3.3. DOI: <https://doi.org/10.1162/99608f92.7d099fd0>.

3.  Carriquiry, Alicia, Hofmann, Heike, Tai, Xiao Hui, and **Vanderplas, Susan** (Apr. 1, 2019). “Machine learning in forensic applications”. In: *Significance* 16.2, pp. 29–35. DOI: <https://doi.org/10.1111/j.1740-9713.2019.01252.x>.

**Contribution:** Writing (50%).


2.  *Submitted as an invited response to Donoho’s “50 years of Data Science”.*  
Hofmann, Heike and **Vanderplas, Susan** (Dec. 19, 2017). “All of This Has Happened Before. All of This Will Happen Again: Data Science”. In: *Journal of Computational and Graphical Statistics* 26.4, pp. 775–778. DOI: <https://doi.org/10.1080/10618600.2017.1385474>.


**Contribution:** Writing (75%).


1.  Budrus, Sarah, **Vanderplas, Susan**, and Cook, Dianne (2013). “In tennis, do smashes win matches?” In: *Significance* 10.3, pp. 35–38. DOI: <https://doi.org/10.1111/j.1740-9713.2013.00665.x>.

## Software

Dates show initial involvement; only packages which are no longer maintained have end dates.

 **ggpcp**, *Generalized parallel coordinate plots*, <https://github.com/heike/ggpcp>

 **vinference**, *Analysis of visual inference experiments*, <https://github.com/heike/vinference>

 **groovefinder**, *Identification of grooves in scans of bullet land engraved areas*, <https://github.com/heike/groovefinder>

2019	<b>cmcR</b> , <i>Automated matching of 3d cartridge case scans using the congruent matching cells algorithm</i> , <a href="https://github.com/CSAFE-ISU/cmcR">https://github.com/CSAFE-ISU/cmcR</a>
2018	<b>bulletxtrctr</b> , <i>Automated matching of 3d bullet scans</i> , <a href="https://github.com/heike/bulletxtrctr">https://github.com/heike/bulletxtrctr</a>
2018	<b>x3ptools</b> , <i>Reading, manipulating, and visualizing x3p files</i> , <a href="https://github.com/heike/x3ptools">https://github.com/heike/x3ptools</a>
2018	<b>bulletsamplr</b> , <i>Resampling of bullet signatures</i> , <a href="https://github.com/srvanderplas/bulletsamplr">https://github.com/srvanderplas/bulletsamplr</a>
2018 2020	<b>ShoeScrapeR</b> , <i>Acquisition of shoe images and metadata from online retailers</i> , <a href="https://github.com/srvanderplas/shoescraper">https://github.com/srvanderplas/shoescraper</a>
2018	<b>ImageAlignR</b> , <i>Image registration algorithms for forensics</i> , <a href="https://github.com/srvanderplas/imagealignr">https://github.com/srvanderplas/imagealignr</a>
2021	
2013	<b>animint</b> , <i>Animated, interactive web graphics for R using ggplot2 and d3.js</i> , <a href="https://github.com/tdhock/animint">https://github.com/tdhock/animint</a>
2015	

## Grants

### Under Review

2023	<b>NSF: CAREER</b> , <i>What Do You See? Perception, Decisions, and Statistical Graphics</i> , PI, Total: \$666,485
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### Funded

2021 2023	<b>NIJ: R&amp;D In Forensic Science</b> , <i>Automatic Acquisition and Identification of Footwear Class Characteristics</i> , PI, Total: \$380,650
2021 2022	<b>USDA-NIFA: Agriculture and Food Research Initiative</b> , <i>Corn Residue Adaptive Grazing Strategies</i> , Collaborator, Total: \$300,000
2020 2025	<b>NIST: Center for Statistics and Applications in Forensic Evidence</b> , <i>Footwear Class Characteristics and Human Factors</i> , PI, Total: \$20,000,000, Sub: \$456,930
2021 2023	<b>USDA-NRCS: Conservation Innovation Grant On-Farm Trials</b> , <i>Improving the Economic and Ecological Sustainability of US Crop Production through On-Farm Precision Experimentation</i> , PI, Total: \$4,000,000, Sub: \$400,000 (Split between 3 UNL co-PIs)
2020 2023	<b>NSF: Smart and Connected Communities</b> , <i>Overcoming the Rural Data Deficit to Improve Quality of Life and Community Services in Smart &amp; Connected Small Communities</i> , PI, Total: \$1,500,000, Sub: \$123,445
2019 2020	<b>NIJ: R&amp;D In Forensic Science</b> , <i>Statistical Infrastructure for the Use of Error Rate Studies in the Interpretation of Forensic Evidence</i> , Collaborator, Total: \$197,699, Sub: \$57,596

### Not Funded


2022	<b>NIJ: R&amp;D In Forensic Science</b> , <i>Physical Simulation of Lower Body Biomechanics for Artificial Shoe Wear and Forensics Analysis</i> , Co-PI, Total: \$299,859, Sub: \$73,693
2020	<b>USDA-NIFA: Agriculture and Food Research Initiative</b> , <i>Practical Framework to Facilitate Adoption of In-Season N Management Technology in Commercial Fields</i> , Collaborator, Total: \$300,000
2020	<b>NSF: National Artificial Intelligence Research Institutes</b> , <i>AI Institute: AgroAI: The Institute for Advancing Agriculture and Food in a Changing World Using AI</i> , Collaborator, Total: \$20,000,000
2019	<b>USDA-AFRI: Sustainable Agricultural Systems</b> , <i>A Cyber-Physical System for Data-Intensive Farm Management</i> , PI, Total: \$3,000,000
2018	<b>NIJ: R&amp;D In Forensic Science</b> , <i>Evaluating Photogrammetry for 3D Footwear Impression Recovery</i> , PI, Total: \$281,755

## Awards

2012

**Student Paper Award**, *Graphics Section, American Statistical Association*

## Talks


 provides a link to slides, where available

### Invited

2024

**Cultivating Insights: Harnessing the Power of Data Visualization in Agriculture** , *International Conference for On-Farm Precision Experimentation*, Corpus Christie, TX


2023

**Multimodal User Testing: Producing comprehensive, task-focused guidelines for chart design** , *Australian Statistical Conference*, Wollongong, NSW, AUS

2023

**How Do You Define a Circle? Perception and Computer Vision Diagnostics** , *International Association for Statistical Computing*, Asian Regional Section Meeting, Macquarie, NSW, AUS

2023

**Multimodal User Testing: Producing comprehensive, task-focused guidelines for chart design** , *International Conference on Data Science*, Universidad Diego Portales, Chile

2023

**Testing Statistical Graphics** , *JSM*, Section on Statistical Graphics, Toronto, ON, CA

2021

**How do you define a circle? Perception and Computer Vision Diagnostics** , *JSM*, Section on Statistical Graphics, Seattle, WA

2021

**Pandemics, Graphics, and Perception of Log Scales** , *R Ladies DC*, Washington, DC

2020

**Perception and Visual Communication in a Global Pandemic** , *Data Science, Statistics, and Visualization*, SAMSI, Online

2020

**One of these things is not like the others: Visual Statistics and Testing in Statistical Graphics** , *Data Science Symposium*, South Dakota State University, Brookings, SD


2020

**Big Data, Big Experiments, and Big Problems** , *Plant and Animal Genome*, San Diego, CA

2019

**Statistical Lineups for Bayesians** , *JSM*, Section on Statistical Graphics, Denver, CO


2018

**Clusters Beat Trend!? Testing Feature Hierarchy in Statistical Graphics** , *SDSS*, Reston, VA

2015


**Animint: Interactive Web-Based Animations using Ggplot2's Grammar of Graphics** , *JSM*, Section on Statistical Graphics, Seattle, WA

2014

**The curse of three dimensions: Why your brain is lying to you** , *JSM*, Section on Statistical Graphics, Boston, MA

### Contributed

2022

**Local Population Footwear Class Characteristics - An End-to-End Pipeline for Automatic Data Acquisition and Analysis** , *International Association for Identification Meeting*, Omaha, NE

2022

**From Scans to Scores**, *International Association for Identification Meeting*, Omaha, NE

2022

**How do you define a circle? Perception and Computer Vision Diagnostics** , *SDSU Data Science Symposium*, South Dakota State University, Brookings, SD

2021

**Welcome to Forensic Statistics** , *Data Mishaps Night*, Online

2018

**Framed Charts in the 1870 Statistical Atlas** , *JSM*, Section on Statistical Graphics, Vancouver, BC, CA

2017

**A Bayesian Approach to Visual Inference** , *JSM*, Section on Statistical Graphics, Baltimore, MD

2016

**Clusters Beat Trend!? Testing Feature Hierarchy in Statistical Graphics** [📄](#), *JSM*, Section on Statistical Graphics, Chicago, IL

2015

**Visual Aptitude and Statistical Graphics** , *InfoVis*, IEEE, Chicago, IL

2014

**Do You See What I See? Using Shiny for User Testing** [📄](#), *JSM*, Section on Statistical Graphics, Boston, MA

2014

**Animint: Interactive, Web-Ready Graphics with R** [📄](#), *Great Plains R User Group*, Sioux Center, IA

2013

**Signs of the Sine Illusion – why we need to care** , *JSM*, Section on Statistical Graphics, Montreal, ON, CA

## Seminars

2024

**Building a CV with R and Google Sheets** [📄](#), *Graphics Group*, University of Nebraska, Online

2024

**Using Git Submodules** [📄](#), *Graphics Group*, University of Nebraska, Online

2023

**Graphics and Cognition: How Do We Perceive Charts?** [📄](#), *Graphics Group*, University of Nebraska-Lincoln, Iowa State University, and other interested affiliates, Online

2023

**What Makes a Good Graph? Graphical Testing and Principles for Graph Design** [📄](#), *Center for Brain, Biology, and Behavior*, University of Nebraska, Lincoln, NE

2023

**Inconclusive Conclusions: Biases and Consequences** [📄](#), *Biostatistics*, Johns Hopkins University, Baltimore, MD

2022

**Reproducible Science: Statistics, Forensics, and the Law** [📄](#), *Statistics*, University of Nebraska - Lincoln, Lincoln, NE

2022

**How to make good charts** [📄](#), *Complex Biosystems*, University of Nebraska - Lincoln, Lincoln, NE

2022

**Pandemics, Graphics, and Perception of Log Scales** [📄](#), *Math*, University of Nebraska - Omaha, Omaha, NE

2022

**Automatic Acquisition of Footwear Class Characteristics** [📄](#), *Center for Statistical Applications in Forensic Evidence*, Online

2021

**Pandemics, Graphics, and Perception of Log Scales** [📄](#), *NUMBATS*, Monash University, Melbourne, Vic, AUS

2021

**Exploring Rural Quality of Life Using Data Science and Public Data** [📄](#), *QQPM*, University of Nebraska - Lincoln, Lincoln, NE

2021

**Inconclusive Conclusions: Biases and Consequences** [📄](#), *Law and Psychology Brown Bag*, University of Nebraska - Lincoln, Lincoln, NE

2021

**Visual Statistics: Communication and Graphical Testing** [📄](#), *Animal Science*, University of Nebraska - Lincoln, Lincoln, NE

2021

**How to Make Good Charts** [📄](#), *Biological and Systems Engineering GSA*, University of Nebraska - Lincoln, Lincoln, NE

2020

**Statistical Evaluation of Firearms and Toolmark Evidence** [📄](#), *Statistics*, University of Nebraska - Lincoln, Lincoln, NE

## Teaching



- 2024 **STAT 151**, *Introduction to Statistical Computing*, University of Nebraska - Lincoln, Flipped synchronous
- 2024 **STAT 251**, *Data Wrangling*, University of Nebraska - Lincoln, Flipped synchronous
- 2023 **STAT 151**, *Introduction to Statistical Computing*, University of Nebraska - Lincoln, Flipped synchronous. Evals: 4.55 (mean), 5 (median)
- 2023 **STAT 251**, *Data Wrangling*, University of Nebraska - Lincoln, Flipped synchronous. Evals: 4.30 (mean), 5 (median)
- 2023 **STAT 892**, *Data Technologies for Statistical Analysis*, University of Nebraska - Lincoln, Co-taught with ISU Stat 585, Hybrid synchronous
- 2023 **STAT 850**, *Computing Tools for Statisticians*, University of Nebraska - Lincoln, Flipped synchronous. Evals: 4.31 (mean), 5 (median)
- 2023 **STAT 892**, *Writing in Statistics/TA Prep*, University of Nebraska - Lincoln, In person synchronous. Evals: 4.13 (mean), 4 (median)
- 2022 **STAT 151**, *Introduction to Statistical Computing*, University of Nebraska - Lincoln, Flipped synchronous. Evals: 4.95 (mean), 5 (median)
- 2022 **STAT 218**, *Introduction to Statistics*, University of Nebraska - Lincoln, Online asynchronous. Evals: 3.72 (mean), 4 (median)
- 2022 **STAT 850**, *Computing Tools for Statisticians*, University of Nebraska - Lincoln, Flipped synchronous. Evals: 4.33 (mean), 5 (median)
- 2022 **STAT 892**, *Writing in Statistics/TA Prep*, University of Nebraska - Lincoln, In person synchronous. Evals: 4.29 (mean), 5 (median)
- 2022 **STAT 982**, *Advanced Inference*, University of Nebraska - Lincoln, Co-taught with Bertrand Clarke. Evals: 4.34 (mean), 5 (median)
- 2021 **STAT 218**, *Introduction to Statistics*, University of Nebraska - Lincoln, Online asynchronous.. Evals: 4.01 (mean), 4 (median)
- 2021 **STAT 850**, *Computing Tools for Statisticians*, University of Nebraska - Lincoln, Hybrid, flipped, synchronous. Evals: 4.79 (mean), 5 (median)
- 2020 **STAT 218**, *Introduction to Statistics*, University of Nebraska - Lincoln, Initially in person synchronous, then online asynchronous. Evals: 4.20 (mean), 4 (median)
- 2020 **STAT 850**, *Computing Tools for Statisticians*, University of Nebraska - Lincoln, Hybrid, flipped, synchronous. Evals: 4.76 (mean), 5 (median)
- 2019 **STAT 585**, *Data Technologies for Statistical Analysis*, Iowa State, Co-taught with Heike Hofmann. Evals: 4.92 (mean), 5 (median)

## Mentoring

### Ph.D.

- 2023 **Tyler Wiederich**, *Perception of Three Dimensional Graphics*, University of Nebraska - Lincoln
- 2023 **Muxin Ha**, *Automatic Recognition of Shoe Class Characteristics*, University of Nebraska - Lincoln
- 2022 **Weihao (Patrick) Li**, *Advances in Artificial Intelligence for Data Visualization: Developing Computer Vision Models to Automate Reading of Data Plots, with Application to Predictive Model Diagnostics*, co-advised with Dianne Cook and Emi Tanaka, Monash University

2021

**Denise Bradford**, *Dashboards for Exploratory Multivariate Data Analysis*, University of Nebraska - Lincoln

2021

2024

**Rachel Rogers**, *Explainable Machine Learning for Forensics in Courtrooms*, University of Nebraska - Lincoln

2020

2023

**Alison Kleffner**, *Spatial Statistics and Visualization in Ecology and Agriculture*, co-advised with Yawen Guan, University of Nebraska - Lincoln

2020

2023

**Joseph Zemmels**, *Analysis and Matching of Cartridge Cases*, co-advised with Heike Hofmann, Iowa State University

2020

2022

**Emily Robinson**, *Perception of Log Scales*, co-advised with Reka Howard, University of Nebraska - Lincoln

## MS

2023

2025

**Carson Trego**, *A Statistical Approach to Learning Computer Vision*, University of Nebraska - Lincoln

2022

2023

**Tyler Wiederich**, *Perception of Three Dimensional Graphics*, University of Nebraska - Lincoln

2022

2023

**Muxin Ha**, *Automatic Recognition of Shoe Class Characteristics*, University of Nebraska - Lincoln

2021

2022

**Jayden Stack**, *Automatic Recognition of Shoe Class Characteristics*, University of Nebraska - Lincoln

2020

**Ved Piyush**, *Machine Learning and Computer Vision*, University of Nebraska - Lincoln

2019

2020

**Joseph Zemmels**, *Analysis and Matching of Cartridge Cases*, co-advised with Heike Hofmann, Iowa State University

2019

2020

**Eryn Blagg**, *Analysis of Wear Development in Three-Dimensional Shoe Scans*, co-advised with Heike Hofmann, Iowa State University

2018

2019

**Miranda Tilton**, *Footwear Class Characteristics and Computer Vision*, Iowa State University

## Undergraduate

2021

**Xinyu Liu**, *Machine Learning for Shoe Sole Images*, UNL FYRE Program, University of Nebraska - Lincoln

2019

**Jason Seo**, *R package for visualization of neural networks using the python library keras-vis*, Iowa State University

2018

2019

**Talen Fisher**, *Database engineering and tools for working with x3p files*, Iowa State University

## Summer

2019

**Molly McDermott and Andrew Maloney**, *Bullet Scan Quality and Machine Learning*, Iowa State University

2019

**Syema Ailia, Emmanuelle Hernandez Morales, Tiger Ji**, *Rapid quality control tools for confocal microscopy scans*, Iowa State University

2018

**Ben Wonderlin, Jenny Kim**, *Footwear Class Characteristics and Computer Vision*, Young Engineers and Scientists Program, Iowa State University

## Service

### Discipline

2023

2025

**Member**, *Advisory Committee on Forensic Science*, ASA

2023

2024

**Chair**, *Section on Statistical Graphics*, ASA



2022	<b>Chair-Elect</b> , <i>Section on Statistical Graphics</i> , ASA
2023	
2021	<b>Associate Editor</b> , <i>Journal of Computational and Graphical Statistics</i>
2024	
2020	<b>Associate Editor</b> , <i>R Journal</i>
2026	
2020	<b>Program Chair</b> , <i>Section on Statistical Graphics</i> , ASA
2022	
2020	<b>Program Committee (Graphics)</b> , <i>Symposium on Data Science and Statistics (2020)</i>
2019	<b>Member</b> , <i>Gertrude Cox Scholarship Committee</i> , ASA
2021	
2019	<b>Organizing Committee</b> , <i>Uncoast Unconference</i> , Des Moines, IA, Organized the first R Uncoast Unconference to bring R developers in flyover country together for a 3-day event. Over 50% of the participants at the conference were women or minorities, and participants included students, academics, and industry R programmers with a variety of experience levels in R programming.
2017	<b>Council of Sections Representative</b> , <i>Section on Statistical Graphics</i> , ASA
2019	
	<b>Institution</b>
2023	<b>Member</b> , <i>Ad-Hoc Committee on EM 16</i> , Faculty Senate
2022	<b>Representative</b> , <i>Statistics Department</i> , Faculty Senate
2021	<b>Vice-Chair</b> , <i>Statistics Department Representative</i> , Faculty Advisory Council
2022	
2021	<b>Member</b> , <i>Digital Ag Minor Committee</i>
2021	<b>Member</b> , <i>Data Science Joint Committee</i> , Committee of Math, Computer Science, and Statistics departments to develop a comprehensive undergraduate data science program
2020	<b>Poster Judge</b> , <i>SCIL 101</i> , Fall Semester
	<b>Department</b>
2021	<b>Member</b> , <i>MS Comprehensive Exam Committee</i>
2022	
2021	<b>Coordinator</b> , <i>R workshops</i> , University of Nebraska Lincoln, Develop and coordinate a week of R workshops taught in January and May each year
2020	<b>Organizer</b> , <i>Seminar</i> , Statistics Department
2021	
2019	<b>Member</b> , <i>Undergraduate Program Committee</i> , Statistics Department, Design the undergraduate statistics program, propose new classes to support the program, and submit proposals to the university for new courses and programs.
2020	
Reviewing	I have provided peer reviews for CRC/Chapman & Hall Book, IEEE InfoVis, Journal of Computational and Graphical Statistics, R Journal, Forensic Science International, Symmetry, Forensic Sciences Research, Law, Probability, and Risk, Harvard Data Science Review, Journal of the American Statistical Association, The American Statistician

## Professional Development

2023	<b>Digital Accessibility Training</b> , <i>Online training - creating accessible digital content</i>
2022	<b>Faculty Fellow</b> , <i>Nebraska Governance and Technology Center</i>
2023	
2021	<b>Peer Review of Teaching Program</b> , <i>Create a course portfolio for Stat 850 in order to assess course design and analyze student engagement and learning</i>
2022	
2020	<b>New Faculty Development Program</b>

