

# Amanda Ellis

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## **EDUCATION**

- Ph.D., Statistics, University of Kentucky. 2018
- M.S., Statistics, University of Kentucky. 2013
- B.S., Mathematics, University of Kentucky. 2009

## **ACADEMIC POSITIONS**

- Assistant Professor, Department of Biostatistics, University of Kentucky August 2020-Current
- Assistant Professor, Statistics, Department of Mathematics and Statistics, Eastern Kentucky University Fall 2017-Current
- Graduate Teaching Assistant, Statistics, Department of Statistics, University of Kentucky 2011-2017

## **TEACHING** (Updated Spring 2020)

### **University of Kentucky**

- CPH 603 Introduction to Data Analysis in Public Health (1)

### **Eastern Kentucky University**

- STA 215 Introduction to Statistical Reasoning (10)
- STA 215P Quantitative Support for STA 215 (1)
- STA 270 Applied Statistics (4)
- STA 270L Applied Statistics I Lab (1)
- STA 340 Applied Regression (2)
- STA 585 Experimental Design (2)
- STA 470 Applied Probability (1)
- STA 580 R and Introductory Data Mining (2)
- STA 520 Mathematical Statistics I (1)
- STA 521 Mathematical Statistics II (1)
- STA 495 Independent Study-Research on Statistical Education with a Focus on Probability (1)

## **RESEARCH/CREATIVE INTERESTS**

Statistical Education.

## **PUBLISHED WORKS**

### **Refereed Journal Articles:**

- William Rayens & Amanda Ellis (2018) Creating a Student-Centered Learning Environment Online, *Journal of Statistics Education*, 26:2, 92-102
- Nardone, R., Heller, Y., Thomschewski, A., Bathke, A. C., Ellis, A. R., Golaszewski, S. M., Trinka, E. (2015). Assessment of corticospinal excitability after traumatic spinal cord injury using MEP recruitment curves: a preliminary TMS study. *Spinal cord*. 534-538.
- Ellis, A. R., Burchett, W., Bathke, A. C., Harrar, S. (2017). Nonparametric Inference for Multivariate Data: The R Package nrmv. *Journal of Statistical Software*. 1-18

## **ORAL PAPERS PRESENTED/ INVITED LECTURES**

- Amanda Ellis. "Methods to Motivate Students to Connect Statistical Ideas with their Individual Interest through Classroom Discussion" Encouraging a Critical Mindset on Social Statistics — Topic Contributed Panel International Statistical Institute. JSM 2020.
- \*Amanda Ellis. "Incorporation of Non-Technical Skills in an R Programming Course" Electronic Conference on Teaching Statistics. Lexington KY, May 2020. (Contributed) - Cancelled due to COVID-19
- Neil Moore, Chris Schardl, Amanda Ellis, Jerzy Jaromczyk, A. Leuchtmann and C. A. Young. "5S33-4 Pan Genome Analysis of *Epichloë Typhina*, a Pathogen of Several Grasses and a Mutualist of a Few." 11th International Mycological Congress. San Juan, Puerto Rico. July 2018. Moore and Schardl presenting. (Contributed)
- Amanda Ellis and Simon Bonner. "Accounting for Matching Uncertainty in Automated Photo-Identification" International Statistical Ecology Conference. St. Andrews Scotland, July 2018. (Contributed)
- Simon Bonner and Amanda Ellis. "Accounting for Matching Uncertainty in Photo-Identification of Wild Animals." Statistical Society of Canada Annual Meeting. McGill University, Montreal, Québec. June 2018. Bonner presenting. (Contributed)
- Amanda Ellis. "Inference from Mark-Recapture Models while Allowing for Uncertainty in Photographic Identification." ECU Mathematics and Statistics Department Colloquium Series. February 2018.
- Amanda Ellis and Melissa Pittard. "Reflections on Using Simulation Based Methods to Teach" Electronic Conference on Teaching Statistics. Georgetown KY, May 2016. (Contributed)
- Amanda Ellis. "Modeling Uncertainty in the Photo Identification of Whale Sharks" Student Research Symposium. Spring Chapter Meeting KYASA. Lexington Ky. April 2016. (Contributed)
- Simon Bonner, Woodrow Burchett and Amanda Ellis. "Modern Mark Recapture Methods- Beyond the Hyper-Geometric Distribution" University of Western Ontario. London, Canada. March 2016. (Contributed)

- Amanda Ellis and Sarah Janse. "A Brief Introduction to the Field of Statistics" UK DHN Supervised Practice Program Orientation; University of Kentucky, Lexington KY, January 2016. (Contributed)
- Amanda Ellis. "Introduction to Latex" University of Kentucky Student Statistics Association Seminar Series. Lexington KY, August 2015. (Contributed)
- Amanda Ellis, Rebecca Crouch. "Experiences in Transitioning a Blended Classroom to an Online Environment" WKU- Math Symposium. Bowling Green KY, October 2014. (Contributed)
- Amanda Ellis. "Intro to Bayesian Statistics" Workshop for the Council on Post-secondary Education, Frankfort KY, May 2014. (Contributed)
- Woody Burchett, Amanda Ellis, Meng Qi, Solomon W. Harrar, Arne C. Bathke. "How to use R for a Fully Non-parametric Comparison of Multivariate Samples" Joint Statistical Meetings, San Diego CA, July 2012 Ellis and Burchett Presenting. Session 399. (Contributed)

### **POSTERS PRESENTED**

- \*Bird, B., Ellis, A.R., & Incera, S. (2020). The Timing of Taboo Effects in First and Second Language Speakers of American English. Presented at the Eastern Kentucky University Presentation Showcase Event, Richmond, Kentucky. -Cancelled due to COVID-19
- Michelle Smith and Amanda Ellis. "Development and Implementation of WISE (Workshop to Inspire Statistical Excellence) to Recruit Future Statisticians" JSM, Denver, Colorado, August 2019.
- Amanda Ellis. "Transformation of Large Lecture Class with the Aid of Technology" USCOTS, State College, Pennsylvania, May 2019.
- Amanda Ellis, Melissa Pittard, William Rayens. "Experiences in Creating an Innovative Online Statistical Concepts Course" Joint Statistical Meetings, Boston MA, July 2014. Session 518. (Contributed)
- Amanda Ellis, Woody Burchett, Hardas S. Sarita, D. Allan Butterfield, Rukhsana Sultana, Peng Wu, Eric A. Grulke, Robert A. Yokel, Solomon W. Harrar, Matthew Schofield, Arne C. Bathke. "Comparison Between Multivariate Non-parametric, and Hierarchical Bayesian Analysis of Small Sample Size Data" SRCOS Summer Research Conference, Jekyll Island Georgia, June 2012. (Contributed)
- Meng Qi, Amanda Ellis, Woody Burchett, Hardas S. Sarita, D. Allan Butterfield, Rukhsana Sultana, Peng Wu, Eric A. Grulke, Robert A. Yokel, Solomon W. Harrar, Matthew Schofield, Arne C. Bathke. "Meeting the Challenges of Complex Small Sample Data: Analyzing Nanotoxicology Data using Nonparametric Methods" 17th Annual KY EPSCoR Conference Aiming Science for Impact, Lexington Ky, May 2012. (Contributed)
- Woodrow Burchett, Amanda Ellis, Sarita S. Hardas, David Allan Butterfield, Rukhsana Sultana, Peng Wu, Eric A. Grulke, Robert A. Yokel, Solomon W. Harrar, Matthew Schofield, Arne C. Bathke "Making Sense of Complex Data: Analyzing Nanotoxicology Data from Opposite Statistical Angles" UT-ORNL-KBRIN Bioinformatics Summit, Louisville KY, March 2012.

## **PROFESSIONAL MEETINGS/WORKSHOPS (ATTENDED)**

- JSM, Virtual, 8/3/2020-8/6/2020.
- JSM, Denver, Colorado, 7/27/2019-8/1/2019
- USCOTS, State College, Pennsylvania, 5/16/2019-5/18/2019.
- Women in Statistics and Data Science Conference, Cincinnati OH, 10/19/2018.
- Showcase of Teaching and Learning, ECU, Richmond, 12/5/2018.
- Professional Development Session: Metacognition hosted by Professor Matthew Winslow. 08/31/2018.
- Professional Development Session: Critical Reading for Math given by Professor Jill Parrott from the English Department. 08/16/2018.
- Professional Development Workshop: Transitioning to Teaching Larger Classes hosted by Professor Shane Redmond. 08/15/2018.
- Professional Development Session: Study Skills and Growth mindset given by Laura Vance from the Student Success Center. 08/10/2018.
- ISEC, St. Andrews Scotland. 07/02/2018-07/06/2018.
- ECOTS, Eastern Kentucky University, 05/25/2018.
- Data Science Symposium, Eastern Kentucky University, 09/20/2017.
- Presentation by Dennis King of STATKING Clinical Services, Eastern Kentucky University, 09/17/2017.

## **INSTITUTIONAL SERVICE**

### University Service

- Co-Organized R User Group with Assistant Professor Sara Incera from the Department of Psychology (Fall 2019-Present)
- Hosted an introduction to R workshop in the Noel Studio for all members of the ECU community. (9/19/19)
- Member of the ADA Awareness Accessibility Committee for Spring 2019 and the 2019-2020 academic year
- Organized and hosted DataFest with Professor Lisa Key (5/5/19-5/7/19)
- Presented "Unlocking the Mysteries of Bayesian Statistics" during the Department of Psychology Colloquium Series. (11/05/2018)
- Received Graduate Faculty status. (9/24/2018)
- Presented at a professional development workshop on Transitioning to Teaching Larger Classes hosted by Professor Shane Redmond. Fall 2018
- Co-Organized Data Fest, Spring 2018 and 2019
- Worked table at Grad Blitz, Spring 2018
- Worked table at Colonels Craze to Promote Statistics Club, Fall 2017

### College Service

- Alternative for the College Curriculum Committee, Fall 2018-Current.
- Hosted an introduction to R workshop for the REU: Disturbance Ecology in Central Appalachia. (6/21/19)
- Volunteered at Science and Math Camp (6/3/2019 – 6/5/19)
- Volunteered during Diversity Event. (2/22/2019)
- Presented “Common errors in thinking about statistics” during the BIOS Seminar Series. (10/12/18)
- Volunteered during Celebration of Science and Mathematics Week, 2017
- Participated in the College of Arts and Sciences mentoring program.

### Departmental Service

- Served on Search Committee for Tenured Track Professor in Math Education, 2020
- Served on Search Committee for Tenured Track Professor in Mathematics, 2020
- Department of Math and Statistics: Developmental Committee, Fall 2108-Current
- Department of Math and Statistics: Statistics Committee, Fall 2107-Current
- Department of Math and Statistics: Graduate Committee, Fall 2107-Current
- Department of Math and Statistics: Recruiting Committee, Fall 2107-Current
- Developed and hosted Workshop on Statistical Excellence (W.I.S.E) with Professor Michelle Smith (5/12/19)
- Presented “How Bayesian Statistics Saved the Life of One Fisherman and what it Can Do for You” in the department’s Coffee Time series. (9/26/2018)
- Served on Search Committee for Tenured Track Professor in Math Education, 2018
- Created and Maintains Department’s Twitter Account, Spring 2018-Current.

### **SERVICE TO THE PROFESSION**

- Chaired a session during JSM 2019.
- Reviewer and consultant for Journal of Occupational Therapy Education (J.O.T.E)
- Reviewed *Statistics the Art and Science of Learning from Data* written by Agresti, Franklin and Montgomery. Summer 2018
- Help organize Regional ECOTS at ECU Spring 2018
- Maintainer of the R-Package nrmv, Fall 2015-Current

### **PROFESSIONALLY RELATED COMMUNITY SERVICE**

- Invited to attend the first annual “Celebration of Women in STEM Brunch” held at Berea College (03/20/2019)
- 2014-2018 Data Collection and Analysis, Keeneland Concours d’Elegance, Lexington KY

## **PROFESSIONAL MEMBERSHIPS**

- 2011-Present Member, American Statistical Association

## **HONORS AND AWARDS**

- Student Research Symposium Best Talk Award, 2016 Spring Chapter Meeting KYASA, Lexington KY.
- Provost Outstanding Teaching, 2015, University of Kentucky (University Award)
- R.L. Anderson Award for Outstanding Teaching, 2012, UK Department of Statistics, Lexington KY.
- College of Arts and Sciences Certificate for Outstanding Teaching, 2012, University of Kentucky, Lexington KY.
- Boyd Hershberger Travel Award, 2012, provided by National Science Foundation to attend SRCOS, Jekyll Island GA.