Justin B. Post, Ph.D.

NC State Department of Statistics
2311 Stinson Drive
Raleigh, NC 27695-8203

E-mail: jbpost2@ncsu.edu
Phone: 919-515-0637
Web: www4.stat.ncsu.edu/~post
Github: jbpost2

Education

Ph.D., Statistics

- North Carolina State University, Raleigh, NC
- Title: *Methods to Improve Prediction Accuracy Using Structural Constraints*
- Advisor: Howard D. Bondell
- Research interests: Statistics Education, Online Education, Adaptive Learning, Statistics in Sports, Data Science, Quantitative Literacy

Master of Statistics

- North Carolina State University. Raleigh, NC
- Concentration in Biomedical Statistics

Bachelor of Science in Mathematics

- Penn State Erie, The Behrend College. Erie, PA
- Minor in Statistics

Professional Positions

6/2018 – present	**Teaching Associate Professor** at North Carolina State University
6/2018 – present	**Director of Online Education**
8/2013 – 5/2018	**Teaching Assistant Professor** at North Carolina State University
5/2015 – 5/2018	**Director of Undergraduate Research**
8/2012 – 5/2013	**Assistant Professor** at the University of Mount Union
5/2013 – 8/2013	**Adjunct Instructor** at North Carolina State University
5/2012 – 8/2012	
7/2010 – 6/2012	**Statistical Consultant** to the College of Agriculture and Life Sciences at North Carolina State University
8/2007 – 5/2010	**Teaching Assistant** at North Carolina State University

Director of Online Education Responsibilities

Position goals: Improve and develop our online master of statistics and graduate certificate in applied statistics and data management programs. Provide guidance for other online/hybrid course offerings.

Online master's and certificate programs

- Program direction
    - Created goals for master's and certificate programs
    - Assessment of programs and student outcomes
    - Plan course offerings and update curriculum
- Advise current and potential students
- Developed student support and bridge materials
    - Online program orientation sessions
    - Created open programming courses
    - Hold sessions on useful/interesting topics (git/github, using the CLI, latex, makefiles, etc.)
- Program advertisement and recruitment
    - Created and maintain online program websites
    - Write current student, alumni, and faculty spotlight articles
    - Established a virtual graduate program information session with in-person program director
    - Monitor google ad activity and keywords
- Networking
    - Coordination of networking events and social media groups
- Admissions for online master's program

Recording studio

- Created lightboard and lecture recording space
- Developed training materials and best practices for faculty and teaching assistant use

Coordination of Large Introductory Courses

- ST 311 – Introduction to Statistics (direct oversight one semester)
- ST 307 – Introduction to Statistical Programming – R
- ST 308 – Introduction to Statistical Programming – SAS
    - Approximately 800-1000 students per semester in each of ST 311 and ST 307/308
    - Provide training to in-person and hybrid teaching assistant instructors
    - Development and updating of course materials

Teaching & Curriculum Activity

Traditional (face-to-face) Course Development

- Created ST 501 and ST 502 (Fundamentals of Statistical Inference I & II)
    - Statistics master's degree core courses also serving financial mathematics students and graduate students interested in a PhD minor in statistics.
    - Modern treatment of theory with simulation (via the R software) used throughout to enhance understanding and intuition
    - Created interactive applications to allow students to investigate topics visually
    - Students implement simulation studies to investigate competing confidence interval and hypothesis testing methods

Hybrid (or flipped) Course Development

- Created ST 308 – Introduction to Statistical Programming – R (one credit)
- Transformed ST 307 – Introduction to Statistical Programming – SAS (one credit)
    - Both courses are required for statistics majors/minors and students form the College of Management
    - Interactive videos used as the lecture component with short follow up quizzes
    - I lead and train a team of teaching assistants that facilitate the hands-on in-person programming activities

Online Course Development

- Created ST 558 - Data Science for Statisticians (R based)
    - Statistics master's elective and graduate certificate course
    - Deep dive into the use of R, R Markdown, the tidyverse, good programming practices, and the creation of dashboards via R Shiny
    - Survey of common machine learning methods, creation of APIs, and use of containers (via docker)
    - Comprehensive projects used to build a portfolio on github
    - Obtained Quality Matters certification of the course in Summer 2020
- Created ST 554 (pending course approval, ST 590) – Analysis of Big Data (python based)
    - Statistics master's elective and graduate certificate course
    - Deep dive into the use of python (along with commonly used packages such as pandas, numpy, and scikit-learn), jupyter lab, and good programming practices
    - Use of spark (via pyspark) to handle, summarize, and model big data via pipelines
- Developed ST 513 and ST 514 (Statistics for Management and Social Sciences I & II)
    - Core sequence for our graduate certificate in Applied Statistics and Data Management
    - Hands-on statistical method sequence with use of software (SAS) throughout
    - Project based assessments and reports to hone student skills

Open Online Course Development

- Created Basics of R course
- Created Basics of SAS course
    - Designed to support our graduate students and faculty by providing basic training in R or SAS
    - Full course with quizzes and assignments available
- See "Other Teaching" for additional open course materials

Courses Taught at NC State

- ST 307 - Introduction to Statistical Programming - SAS
- ST 308 - Introduction to Statistical Programming - R
- ST 311 - Introduction to Statistics
- ST 370 - Probability and Statistics for Engineers
- ST 372 - Introduction to Statistical Inference and Regression
- ST 421 - Introduction to Mathematical Statistics I
- ST 422 - Introduction to Mathematical Statistics II
- ST 498 - Honors Research Project
- ST 501 - Fundamentals of Statistical Inference I
- ST 502 - Fundamentals of Statistical Inference II
- ST 511 - Statistics Methods for Researchers I
- ST 512 - Statistics Methods for Researchers II
- ST 513 - Statistics for Management and Social Sciences I
- ST 521 - Statistical Theory I
- ST 555 - Statistical Programming I
- ST 558 - Data Science for Statisticians
- ST 590 - Analysis of Big Data

Other Teaching Activity

Data Matters (Yearly data science courses put on by the Odum Institute, 2016-2022)

- Basics of R for Data Science and Statistics
- Improving R Programming
- R for Automating Workflow and Sharing Work

DATAWorks workshops

- Using R Markdown & the Tidyverse to Create Reproducible Research (2022)
- Introduction to R (2018)

Cary Academy (High School) guest lectures:

- Six lectures relating optimization, mathematical statistics, and machine learning
- Students applied ideas to a Kaggle competition

United States Conference on Teaching Statistics workshops:

- Teaching With R (2021)
- Creating R shiny Applications (with Dr. Herle McGowan, 2017)

NC State Executive Education programs:

- Infosys Data Science Program (2019-2020)
    - Calculus for Data Science
    - Statistical Thinking
- Cisco Foundations of Data Science Courses (2016-2018)
    - Multivariate Calculus for Data Science
    - Probability Overview
    - Statistics Overview

Director of Undergraduate Education Roles

Position goal: Get every student in the undergraduate program involved in an undergraduate research project or internship at least once during their time at NCSU

- Worked with statistics faculty to develop syllabi and expectations for projects suitable to undergraduates and language for inclusion of funding for projects in grant proposals. Projects needed to include
    - Application of methods to real data
    - Statistical programming
    - Write-up and presentation of analysis and results to both technical and non-technical audiences
    - Interactive application or striking visualization
    - Reflection on work completed and its relation to coursework and future plans
- Provided student support via
    - Advertisement of opportunities and matching of skillsets to projects
    - Mentoring and help through weekly group work meetings
    - Monthly group discussions and practice presentations

Awards, Nominations, & Certifications

2022	Course Quality Program Faculty Lead (NC State: DELTA $5000)
2022	North Carolina Education Datathon (member of winning team) ($2000)
2021	Gertrude Cox Gertrude Cox Award for Innovative Excellence in Teaching and Learning with Technology Nominee
2021	Michael Dickey Outstanding Research Mentor Award Nominee
2013-2021	Sixteen “Thank a teacher awards”
2019-2020	D.D. Mason Award (Distinction to the statistics department through teaching, research, or service)

2020	ST 513/514 course redesign (Statistics Department $10,000)
2020	Online Course Improvement Program Grant (NC State: DELTA $4,000)
2020	STEM Education Initiative Grant (NC State: Provost's Office $20,000)
2018-2020	Quantitative Literacy Champion (NC State: DASA $1,500/semester)
2019	Moodle Educator Certification
2019	Quality Matters APPQMR Certification
2019	Open Textbook Grant (NC State: Libraries $1,500)
2018, 2019	DELTA Faculty Fellows (NC State: DELTA $10,000)
2019	Certificate of Reflective Teaching Award
2018	Graduate student recruitment grant (NC State: Graduate School $1,400)
2018	Critical Path Redesign grant: renewal (NC State: DELTA $9,000)
2017	Critical Path Redesign grant (NC State: DELTA $24,000)
2017	Alumni Outstanding Teaching Award Recipient
2017	Outstanding Teaching Award Recipient
2013-2014	Interdisciplinary Liaisons Initiative Award (NC State: CHASS $1,000)
2010-2011	Gertrude M. Cox Academic Achievement Award Fellow (Outstanding Ph.D. Candidate)
2010-2011	Francis G. Giesbrecht Award (For excellence in Statistical Consulting)
2010-2011	Paige Plagge Graduate Award for Citizenship (Services to the department and students)

Other Scholarly Activity

Papers

- Spencer, D., Griffith, E., Briska, K., Post, J., Willis, C.. (In revision) The Role of Non-cognitive Factors in the Introductory Statistics Classroom. Statistics Education Research Journal.
- Lin, T., Shah, Sanjay B., Wang-Li, L. Oviedo-Rondon, Edgar 0., Post, J.. (2016), Development of MOS sensor-based NH3 monitor for use in poultry houses. Computers and Electronics in Agriculture, 127: 708-715.
- McCormick, M., Grand, L., Post, J., and Cubeta, M.. (2013), Phylogenetic relatedness and phenotypic characterization of Fomes fasciatus and Fomes fomentarius sampled from the United States. Mycologia, 105, no 6: 1524-1534.
- Post, J. B. and Bondell, H. D. (2013), Factor Selection and Structural Identification in the Interaction ANOVA Model. Biometrics, 69: 70–79. doi: 10.1111/j.1541-0420.2012.01810.x

Posters

- Connecting to an API and Creating a Word Cloud in R, Justin Post. 2021 United States Conference on Teaching Statistics.
- Using Visuals to Improve Quantitative Literacy Outcomes in Principles of Genetics (GN 311), Justin Post. 2021 NC State Teaching and Learning Symposium.
- Case-Study Based Redesign of a Large Introductory Course for Non-Majors, Justin Post, Jonathan Duggins. 2018 Electronic Conference on Teaching Statistics.

- Scheduling Effects in the NBA and NHL, Jason A. Osborne, Justin Post. 2018 North Carolina American Statistical Association Recycled Poster Event, Hillsborough, NC.
- Scheduling Effects in the NBA and NHL, Jason A. Osborne, Justin Post. 2017 New England Symposium on Statistics in Sports, Harvard University, Cambridge, MA.
- Interactive Math Stat Visualizations Using R Shiny, Justin Post. 2016 Electronic Conference on Teaching Statistics.
- Modelling Umpire Misclassification of Balls and Strikes using PitchFX Data, Justin Post, Jason A. Osborne. 2013 New England Symposium on Statistics in Sports, Harvard University, Cambridge, MA.

Talks, Webinars, & Non-peer reviewed articles

- Early Adopters of Moodle 4 Share Experiences. 2022 North Carolina State University, DELTA article (Discussant)
- Talking Quantitative Data Through Discussion Boards. Justin Post. 2020 North Carolina State University, Provost's newsletter, Pack hacks for Faculty. (Article)
- Creating a hands-on data exploration activity for your students - no programming required! Justin Post. 2020 North Carolina State University, Office of Faculty Development and Division of Academic and Student Affairs (Webinar).
- Championing General Education: A Model for Faculty Engagement in the General Education Assessment Process. Stephany Dunston, Samantha Rich, Justin Post. 2019 UNC System Student Success Conference. (Talk)
- Teaching Statements. 2019 North Carolina State University, Academic Packways (Discussant)
- Flip Forward into the Pool of Student Engagement, Justin Post, Christopher Beeson. 2018, 2019 North Carolina State University. (Workshop given twice)
- Friday Live: Discussions on Teaching with Technology – Understanding how and why to flip a course. Justin Post. 2019 North Carolina State University, DELTA Friday webinar. (Webinar)
- Investing in Your Students: How to build a great TA Partnership. 2019 North Carolina State University, DELTA (Panel Member)
- Blended Learning, Bethany Smith, Justin Post. 2018 North Carolina State University. (Webinar)
- Sports and Statistics at NC State, Justin Post, Nick Kapur. 2018 Chancellor's Visit, 2018 North Carolina State University. (Talk)
- Implementing a Department-wide Undergraduate Research Program, Justin Post. 2018 Joint Statistical Meetings, Vancouver, WA. (Talk)
- Integrating Programming into Statistics Curricula, Jonathan Duggins, Justin Post. 2018 Electronic Conference on Teaching Statistics. (Birds of a feather discussion)
- Discussing the Uses and Creation of R Shiny Applications, Justin Post. 2017 Joint Statistical Meetings, Baltimore, MD. (Roundtable)
- Increasing Undergraduate Student Knowledge and Interest Using a Sports Stats Club (Invited Session), Justin Post. 2015 Joint Statistical Meetings, Seattle, WA. (Talk)
- NFL Play Predictions, Will Burton and Michael Dickey (Adviser). 2015 Joint Statistical Meetings, Seattle, WA. (Speed session)
- Using NFL Draft Metrics to Predict Player Success, James Gilman, Nick Kapur, Justin Post. 2014 Joint Statistical Meetings, Boston, MA. (Talk)

- Effect of Shot Location Trends on Offensive Efficiency in the NBA, Michael Dickey, Justin Post. 2014 Joint Statistical Meetings, Boston, MA. (Speed Session)

Engagement & Activities with Professional Associations

- Joint Statistical Meetings
    - 2018 - Topic Contributed Session Organizer - Statistics Education
    - 2015 - Invited Session Organizer - Sports Data in Statistics Education
    - 2014 - Topic Contributed Session Chair - Sports Section Speed Session
- Ohio Spring Regional MAA Meetings
    - 2013 - Session Chair
- National Center for Faculty Development & Diversity member
    - 2016-2020
- American Statistical Association Sponsored Data Fest at Duke University
    - 2015, 2017 Judge
    - 2016 VIP Consultant

North Carolina State University Related Service

2019 – present	Statistics department curriculum committee
2017 – present	GLBT Advocate
2017 – present	Teaching mentor to various statistics department faculty
2015 – 2018, 2022 – present	Stat'n'Chat Organizer (Local Stat-Ed Group)
2018 – 2021	Quant Literacy Champion: Division of Academic and Student Affairs
2020	Faculty Advisor to Deep Learning with R group
2018 – 2020	DELTA Faculty Fellow
2017 – 2020	Pack Promise Mentor (First Generation College Students)
2017 –2020	Goodnight scholar mentor
2013 – 2018	Faculty Advisor to Sports Analytics Club
2014 –2017	Faculty Advisor to Statistical Learning Group