Justin B. Post, Ph.D.

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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

8/2024 – present	**Teaching Professor** at North Carolina State University
6/2018 – 7/2025	**Director of Online Education**
3/2023 – 12/2024	**Research Consultant**, Criminal Justice Institute, University of North Carolina – Chapel Hill
6/2018 – 7/2024	**Teaching Associate Professor** at North Carolina State University
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
  - Assessed programs and student outcomes
  - Planned course offerings and updated curriculum
- Advised current and potential students
- Developed student support and bridge materials
  - Hosted online program orientation sessions
  - Created open programming courses
  - Held sessions on useful/interesting topics (git/github, using the CLI, latex, makefiles, etc.)
- Program advertisement and recruitment
  - Created and maintain online program websites
  - Wrote current student, alumni, and faculty spotlight articles
  - Established a virtual graduate program information session with in-person program director
  - Monitored google ad activity and keywords
- Networking
  - Coordinated networking events and social media groups
  - Hosted of research round robin (PhD and master's programs)
- Conducted 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

Creation of Teaching and Learning Statistics & Data Science Graduate Certificate
- Re-envisioned defunct Statistics Education graduate certificate with Dr. Hollylynne Lee
- Program focuses on developing knowledge of core statistical and data science concepts and methods along with best practices for their instruction.
- Meant to serve practicing high school and college teachers in any discipline that uses data as well as graduate students interested in faculty or teaching careers.

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 implemented 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 led and trained 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 – 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

- o   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
  - o   Core sequence for our graduate certificate in Applied Statistics and Data Management
  - o   Hands-on statistical method sequence with use of software (SAS) throughout
  - o   Project based assessments and reports to hone student skills

Open Online Course Development

- Created Basics of R course & Basics of SAS course
  - o   Designed to support our graduate students and faculty by providing basic training in R or SAS
- Created website with learning materials for ST 558 – Data Science for Statisticians
- Created website with learning materials for ST 554 – Analysis of Big Data

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 554 - Analysis of Big Data
- ST 555 - Statistical Programming I
- ST 557 - Using Technology to Teach and Learn with Data
- ST 558 - Data Science for Statisticians
- ST 563 – Introduction to Statistical Learning

Other Teaching Activity

Data Matters (Yearly data science courses put on by the Odum Institute, 2016-2023)
- 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:
- 2024 lecture: Brought 18 Cary Academy high school students to campus for a day and taught them about data visualization best practices
- 2023 lectures: Six lectures about statistical modeling & inference including multiple linear regression and logistic regression. Students applied ideas to an actuarial competition
- 2021 lectures: Six lectures relating optimization, mathematical statistics, and machine learning. Students applied ideas to a Kaggle competition

United States Conference on Teaching Statistics workshops:
- Modules to support statistics instructors in actively engaging students with authentic data (2025)
- [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

2025-current	Research Fellow for DELTA's Course Quality Program (NC State: DELTA $5000)
2023-current	Co-PI, Modules for Statistics Graduate Teaching Assistants Learning to Teach Equitably with Authentic Data (GTAs-LEAD) (NSF: IUSE $400,000)
2023-2024	SoTL Institute Scholar (NC State: OFE $1500)
2023-2024	Course Quality Program Faculty Lead (NC State: DELTA $5000)
2023	Graduate School Outstanding Graduate Faculty Mentor Award Nominee
2023	Two "Thank an Advisor Award"s
2023	RED Inclusive Teaching Certification
2023	Quality Matters Peer Reviewer Certification
2022	Course Quality Program Faculty Lead (NC State: DELTA $5000)
2022	North Carolina Education Datathon (member of winning team) ($2000)
2022	Provost's Award for Excellence in Teaching Nominee
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 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

- Ferrell, M. and Post, J. (In revision), Implementing Oral Exams at Scale Using Graduate Student Instructors. Journal of Statistic and Data Science Education.
- Spencer, D., Griffith, E., Briska, K., Post, J., Willis, C.. (2023) 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

- Implementing Oral Exams at Scale Using Graduate Student Instructors, Justin Post and Matthew Ferrell. 2025 United States Conference on Teaching Statistics: Research Satellite.
- Authentic Data Explorations: Immersive Statistical Investigations in Real-world Contexts, Maria Cruiciani and Justin Post. 2025 United States Conference on Teaching Statistics.
- Implementing Oral Exams at Scale Using Graduate Student Instructors, Justin Post and Matthew Ferrell. 2025 NC State Conference on Faculty Excellence.
- Authentic Data Explorations: Investigating the Normal Distribution through Comparative Rent Data, Maria Cruciani, Justin Post, Jennifer Green, & Sunghwan Byun. 2024 Joint Statistical Meetings.
- Authentic Data Explorations: Exploring the Normal Distribution through Comparative Rent Data, Maria Cruciani, Justin Post, Jennifer Green, and Sunghwan Byun. 2024 Electronic Conference on Teaching Statistics.
- Persistence of Online Graduate Students in Statistics Programs, Justin Post. 2024 NC State Conference on Faculty Excellence.
- Introductory Data Science Course Project: Retrieving data from an API and conducting an EDA, Justin Post. 2023 United States Conference on Teaching Statistics.
- Teaching and Student Exploration of Convergence Concepts Using Interactive Shiny Applications, Xiaoxia Champon, Justin Post. 2023 United States Conference on Teaching Statistics.
- 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
- (Talk) Flipped Course Requirements and Student Outcomes: Evidence from a Randomized Controlled Trial, Elizabeth Davis and Justin Post. 2025 UNC System Quality Matters Summit, Durham, NC
- (Talk) Opening Session Five Minute Talk, Kickoff Dinner, Justin Post. 2025 United States Conference on Teaching Statistics, Ames, IA
- (Talk) Building a Thinking Classroom (BTC) to Improve Student Learning in Statistics and Data Science, Nathan Kenny and Justin Post. 2025 United States Conference on Teaching Statistics, Ames, IA
- (Webinar Panel Member) Using AI for Teaching Statistics in Health Sciences. ASA Section Statistics In the Health Sciences Winter Webinar, 2025
- (Invited Talk) Teaching Reproducible Workflows, Justin Post. 2025 Southern Regional Council on Statistics, Jekyll Island, GA
- (Talk) Using Generative AI to Supplement Learning in Statistical Programming Courses (Invited Session), Justin Post. 2024 Joint Statistical Meetings, Portland, OR
- (Speed Session) Authentic Data Explorations: Investigating the Normal Distribution through Comparative Rent Data, Maria Cruciani, Justin Post, Jennifer Green, Sunghwan Byun. 2024 Joint Statistical Meetings, Portland, OR
- (Talk) GTAs' Problems of Practice for Teaching Introductory Statistics Courses (Topic-Contributed Paper Session), Sunghwan Byun, Jennifer Green, Justin Post, Maria Cruciani, Matthew Ferrell. 2024 Joint Statistical Meetings, Portland, OR
- (Talk) Statistics GTAs' Conceptualizations of Equitable Teaching, Sunghwan Byun, Jennifer Green, Maria Cruciani, Justin Post, and Matthew Ferrell. 2024 Joint Statistical Meetings, Portland, OR
- (Talk) Teaching Reproducible Workflows Using Digital Notebooks, Justin Post. 2024 North Carolina eCOTS regional conference, Raleigh, NC
- (Birds of a Feather Discussion) AI Chatbots & Statistics/Data Science Education, Justin Post, Matthew Beckman. 2023 United States Conference on Teaching Statistics.
- (Roundtable organizer and participant) ChatGPT – Adapt, Embrace, or Reject. 2023 NC State Conference on Faculty Excellence
- (Project-Based Learning Expert Talk) Statistics: Worlds of Opportunities. 2023 Pine Springs Preparatory Academy
- (Discussant) Early Adopters of Moodle 4 Share Experiences. 2022 North Carolina State University, DELTA article

- (Article) Talking Quantitative Data Through Discussion Boards. Justin Post. 2020 North Carolina State University, Provost's newsletter, Pack hacks for Faculty.
- (Webinar) 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
- (Talk) 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) Championing General Education: A Model for Faculty Engagement in the General Education Assessment Process. Stephany Dunston, Samantha Rich, Casie Fedukovich, Justin Post, Carrie Zelna. 2019 NCAIR conference
- (Discussant) Teaching Statements. 2019 North Carolina State University, Academic Packways
- (Workshop, given twice) Flip Forward into the Pool of Student Engagement, Justin Post, Christopher Beeson. 2018, 2019 North Carolina State University
- (Webinar) 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
- (Panel Member) Investing in Your Students: How to build a great TA Partnership. 2019 North Carolina State University, DELTA
- (Webinar) Blended Learning, Bethany Smith, Justin Post. 2018 North Carolina State University
- (Talk) 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
- (Birds of a feather discussion) Integrating Programming into Statistics Curricula, Jonathan Duggins, Justin Post. 2018 Electronic Conference on Teaching Statistics
- (Roundtable) Discussing the Uses and Creation of R Shiny Applications, Justin Post. 2017 Joint Statistical Meetings, Baltimore, MD
- (Talk) Increasing Undergraduate Student Knowledge and Interest Using a Sports Stats Club (Invited Session), Justin Post. 2015 Joint Statistical Meetings, Seattle, WA
- (Speed session) NFL Play Predictions, Will Burton and Michael Dickey (Adviser). 2015 Joint Statistical Meetings, Seattle, WA
- (Talk) Using NFL Draft Metrics to Predict Player Success, James Gilman, Nick Kapur, Justin Post. 2014 Joint Statistical Meetings, Boston, MA
- (Speed Session) Effect of Shot Location Trends on Offensive Efficiency in the NBA, Michael Dickey, Justin Post. 2014 Joint Statistical Meetings, Boston, MA

Engagement & Activities with Professional Associations
- 2025 – present, Mentor for ASA Section on Statistics and Data Science Education Program (Sarah Medley)
- 2024 – present, Mentor for ASA Section on Statistics and Data Science Education High School Teacher Fellowship (Nathan Kenny)
- 2025, Mentor for United States Conference on Teaching Statistics Speed Mentoring
- 2023 – present, Journal of Statistics and Data Science Education Reviewer

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

Service

North Carolina State University Related Service

2025 – present	Master's and Graduate Certificate Curriculum Committee
2025 – present	Statistics Department Award Committee
2017 – present	Teaching Mentor to Statistics Faculty
2025	STEM Education Search Committee
2024 – 2025	(Chair) Master's and Graduate Certificate Curriculum Committee
2019 – 2024	Statistics Department Curriculum Committee
2020 – 2024	Statistics Department Research Round Robin Host
2024	Lecturer Search Committee Chair
2023	Lecturer Search Committee Chair
2017 – 2023	GLBT Advocate
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
2016 – 2017	JUNTOS program development of reporting and database systems
2013 – 2018	Faculty Advisor to Sports Analytics Club
2014 – 2017	Faculty Advisor to Statistical Learning Group

Other

2023 – present	Reviewer, Journal of Statistics and Data Science Education
2025	UseR Conference Orgranization and Planning Committees
2024	Regional Electronic Conference on Statistics Education Committee
2015 – 2018, 2022 – 2024	Stat'n'Chat Organizer (Local Stat-Ed Group)
2021, 2023, 2024	Guest Lecturer, Cary Academy
2023	Project-Based Learning Expert, Pine Springs Preparatory Academy

2015, 2017	Data Fest Judge
2016	Data Fest VIP Consultant