

KIRSTEN DOEHLER, Ph.D.

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Department of Mathematics and Statistics

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SENIOR EDUCATOR AND RESEARCHER focused on delivering excellence in statistics education through skilled instruction, scholarship, service and professional development. Actively contribute to discipline knowledge through extensive research, collaboration, publications and presentations. Academy leadership includes active participation in department and University committees, as well as past service as Statistics Program Coordinator. Committed to inspiring students to appreciate the real-world importance of statistics and to ensuring that students have a deeper understanding of how they learn.

Education

- 2006 Ph.D., Statistics, North Carolina State University
 Advisor: Marie Davidian
 Dissertation: Smooth Inference for Survival Functions with Arbitrarily Censored Data
- 2002 Master of Statistics, North Carolina State University
- 2000 B.A., Mathematics and Education, State University of New York College at Geneseo

Experience

- 2018 - **First-Year Coordinator (Mathematics and Statistics)**
- 2014 - **Associate Professor of Statistics, Elon University**
 Teach statistics courses, advise undergraduate student research, and carry out numerous research and consulting projects.
- 2013 - 2017 **Statistics Program Coordinator, Elon University**
 Completed program assessments, organized reviews of senior portfolios, provided academic guidance to students, and led significant curriculum improvements.
- 2007 - 2018 **Reader, Educational Testing Service**
 Participated in the grading of the Free Response Questions on the 2007, 2008, 2009, 2013, 2014, 2015, 2016, 2017, and 2018 Advanced Placement Statistics Exams.
- 2008 - 2014 **Assistant Professor of Statistics, Elon University**
- 2006 - 2008 **Assistant Professor of Statistics, University of North Carolina at Greensboro**
- 2006 - 2007 **Project NExT Fellow, Mathematics Association of America**
 Participated in Project NExT (New Experiences in Teaching), a professional development program for new or recent Ph.D.s pursuing academic careers in the mathematical sciences.
- 2004 - 2006 **VIGRE Fellow, National Science Foundation**
 Participated as a VIGRE (Vertical Integration of Research and Education) Fellow in the mathematical sciences.
- 2002 - 2003 **Graduate Technical Student, SAS Institute**
- 2000 - 2004 **Statistics Instructor/Teaching Assistant, North Carolina State University**

Teaching

<u>Elon University</u>	<u>Most Recently Taught</u>	<u># of Students</u>
STS 110 Intro. to Statistical Reasoning (online)	Summer 2018	16
STS 212 Statistics in Application	Fall 2017	57 (2 sections)
STS 213 Survey Sampling Methods	Fall 2015	23
STS 232 Statistical Modeling	Spring 2018	45 (2 sections)
STS 256 Applied Nonparametric Statistics *	Spring 2016	18
STS 327 Statistical Computing *	Winter 2013	20
STS 342 Statistical Theory *	Spring 2015	7
STS 481 Internship in Statistics	Summer 2018	2
STS 499 Independent Research in Statistics	Spring 2018	1
COE 310 Transition Strategies for Statistics Majors	Fall 2015	9
ELON 101 First Year Seminar	Fall 2017	17
GBL 198 Dominican Republic (D.R.) Prep. Seminar	Fall 2018	26
GBL 298 D.R. Study Abroad: Baseball & Tourism	Winter 2018	25
MTH 112 General Statistics	Spring 2010	55 (2 sections)
MTH 481 Internship in Mathematics	Summer 2018	1

* Taught the first offering of this course at Elon.

<u>UNC Greensboro</u>	<u>Most Recently Taught</u>	<u># of Students</u>
STA 108 Intro. to Probability and Statistics	Summer 2008	29
STA 290 Intro. to Probability and Statistical Inference	Fall 2007	6
STA 352 Statistical Inference	Spring 2008	4
STA 551 Probability and Mathematical Statistics I	Fall 2006	7
STA 552 Probability and Mathematical Statistics II	Spring 2007	5
STA 573 Theory of Linear Regression	Spring 2007	11
STA 673 Linear Models	Fall 2007	3
STA 699 Graduate Thesis	Spring 2008	1

<u>North Carolina State University</u>	<u>Most Recently Taught</u>	<u># of Students</u>
ST 101H - Statistics by Example (Honors Section)	Spring 2005	30
ST 311 Intro. to Statistics	Fall 2004	65

Refereed Publications

1. Doehler, K. (2018). Successful service-learning for statistics students studying survey sampling. *Statistics Education Research Journal*, in press.
2. Doehler, K. and Taylor, L. (2018). Diversity-Related Projects in an Introductory Statistics Course. *Proceedings of the 10th International Conference on Teaching Statistics*, in press.
3. Palmquist, A. E. L. and Doehler, K. (2016). Human Milk Sharing Practices in the U.S. *Maternal & Child Nutrition* **12**, 278-290.
4. Taylor, L., Doehler, K., and Smith, J. (2016). The Development and Factor Structure of the Faculty Perceptions of Statistics (FPS) Scale. *International Journal of Learning, Teaching and Educational Research* **15**, 1-20.

5. Doehler, K. and Taylor, L. (2015). Incorporating Code-Based Software in an Introductory Statistics Course. *International Journal of Mathematical Education in Science and Technology* **46**, 841-852.
6. Taylor, L. and Doehler, K. (2015). Reinforcing Sampling Distributions through a Randomization-Based Activity for Introducing ANOVA. *Journal of Statistics Education* **23**, 1-33.
7. Palmquist, A. E. L. and Doehler, K. (2014). Contextualizing Online Human Milk Sharing: Structural Factors and Lactation Disparity among Middle Income Women in the United States. *Social Science & Medicine* **122**, 140-147.
8. Taylor, L. and Doehler, K. (2014). Using Online Surveys to Promote and Assess Learning. *Teaching Statistics* **36**, 34-40.
9. Doehler, K. (2013). Audio Explanations to Enhance Statistical Understanding: A Case Study in Introductory Statistics. *Mathematics Statistics Operations Research (MSOR) Connections* **13**, 24-31.
10. Doehler, K., Taylor, L., and Smith, J. (2013). A Study of Faculty Views of Statistics and Student Preparation Beyond an Introductory Class. *Journal of Statistics Education* **21**, 1-21.
11. Kapfer, J. M., Doehler, K., and Hay, R. (2013). The influence of habitat type and the presence of an invasive wetland plant (*Phalaris arundinacea*) on capture rates of sympatric rare and common gartersnake species (*Thamnophis butleri* and *Thamnophis sirtalis*). *Journal of Herpetology* **47**, 126-130.
12. Hooper, L. M., Wallace, S. A., Doehler, K., and Dantzler, J. (2012). Parentification, ethnic identity, and psychological health in Black and White American college students: Implications of family of origin and cultural factors. *Journal of Comparative Family Studies* **43**, 811-835.
13. Hooper, L. M. and Doehler, K. (2012). Assessing Family Caregiving: A Comparison of Three Retrospective Parentification Measures. *Journal of Marital and Family Therapy* **38**, 653-666.
14. Hooper, L. M., Doehler, K., Jankowski, P., and Tomek, S. (2012). Patterns of Self-Reported Alcohol Use, Depressive Symptoms, and Body Mass Index in a Family Sample: The Buffering Effects of Parentification. *The Family Journal: Counseling and Therapy for Couples and Families* **20**, 164-178.
15. Pauers, M. J., Kapfer, J. M., Doehler, K., Lee, J. T., and Berg, C. S. (2012). Gross colour pattern is used to distinguish between opponents during aggressive encounters in a Lake Malawi cichlid. *Ecology of Freshwater Fish* **21**, 34-41.
16. Hooper, L. M., Doehler, K., Wallace, S. A., and Hannah, N. J. (2011). The Parentification Inventory: Development, Validation, and Cross-Validation. *The American Journal of Family Therapy* **39**, 226-241.
17. Hooper, L. M. and Doehler, K. (2011). The mediating and moderating effects of differentiation of self on body mass index and depressive symptomatology among an American college sample. *Counselling Psychology Quarterly* **24**, 71-82.
18. Doehler, K. and Davidian, M. (2008). 'Smooth' inference for survival functions with arbitrarily censored data. *Statistics in Medicine* **27**, 5421-5439.

Book Chapter

1. Palmquist, A. E. L. and Doehler, K. (2016). Forging new partnerships for milk sharing. In Smith, P. H. and Labbok, M., Eds., *Advancing Breastfeeding: Forging Partnership for a Better Tomorrow*, 229-236, Praeclarus Press.

Presentations and Workshops

1. Efficacy of 'The Islands'-based Projects Compared to Student-Collected Data Projects in Introductory Statistics Courses (with Lisa Rosenberg, Laura Taylor, and Ryne VanKrevelen). Virtual Poster Presentation, Electronic Conference on Teaching Statistics. May 2018.
2. Grading AP Statistics Free-Response Questions and Class Activities for AP Statistics. Workshop presented to AP Statistics Teachers. *Elon, NC*, August 2017.
3. Data Analysis and Probability in Grades K-8. (with Lisa Rosenberg) Workshop presented to Elementary School Teachers. *Elon, NC*, August 2017.
4. A Randomization-Based Activity to Introduce ANOVA while Reinforcing Knowledge of Sampling Distributions. Joint Statistical Meetings. *Chicago, IL*, August 2016.
5. Using Code-Based Statistical Software in an Introductory Statistics Course (with Laura Taylor). Virtual Poster Presentation, Electronic Conference on Teaching Statistics. May 2016.
6. A Randomization-Based Activity to Introduce ANOVA and Review Sampling Distributions. Invited Speaker, University of North Carolina at Greensboro. *Greensboro, NC*, April 2016.
7. Lessons Learned from the 2015 AP Statistics Reading. (with Jim Beuerle) North Carolina Council of Teachers of Mathematics Meeting. *Greensboro, NC*, November 2015.
8. Using Code-Based Statistical Software in an Introductory Statistics Course. Joint Statistical Meetings. *Seattle, WA*, August 2015.
9. Lessons Learned from the 2014 AP Statistics Reading. (with Jim Beuerle) North Carolina Council of Teachers of Mathematics Meeting. *Greensboro, NC*, October 2014.
10. A Closer Look at the Marathon Gender Gap and a Possible Two-Hour Marathon. Carolinas Sports Analytics Meeting. *Greenville, SC*, April 2014.
11. Using Google Forms to Effectively Collect Data in Class. (with Laura Taylor) North Carolina Council of Teachers of Mathematics Meeting. *Greensboro, NC*, October 2013.
12. Faculty Views of Statistics in Teaching and Research. (with Laura Taylor) Invited presenters, JSE Webinar Series. July 2013.
13. How to Collect Data Quicker in Class. AP Statistic Reading Best Practices Session. *Kansas City, MO*, June 2013.
14. A Faculty Perspective of the Use of Statistics in Undergraduate Teaching. (with Laura Taylor) Peer Reviewed Poster Presentation, United States Conference on Teaching Statistics. *Cary, NC*, May 2013.
15. A Randomization-Based Method to Emphasize Sampling Distributions & Introduce ANOVA. (with Laura Taylor) Peer Reviewed Poster Presentation, United States Conference on Teaching Statistics. *Cary, NC*, May 2013.

16. A Faculty Perspective of the Use of Statistics in Undergraduate Research. (with Laura Taylor) Poster presentation, Spring Undergraduate Research Forum. *Elon, NC*, April 2013.
17. Faculty Perceptions toward Statistics. (with Laura Taylor and Jessalyn Smith) Peer Reviewed Poster Presentation, United States Conference on Teaching Statistics. *Cary, NC*, May 2011.
18. Faculty Perceptions of Statistics. North Carolina Symposium for Women in Mathematics and Statistics. *Raleigh, NC*, April 2011.
19. Data Analysis and Probability in grades K-4. Workshop presented in a Teachers Empowering All students in Math and Science (TEAMS) Workshop Day. *Hillsborough, NC*, March 2010.
20. Statistics: from K through AP. Presentation at a teacher workshop held at Northern Guilford Middle School for elementary, middle, and high school teachers. *Greensboro, NC*, February 2010.
21. Data Analysis: from grades 5-8. Workshop presented as part of a TEAMS Workshop Day. *Elon, NC*, January 2010.
22. Statistical Inference in Introductory Statistics. Workshop co-presented with Laura Taylor. Elon University Mathematics Department. *Elon, NC*, April 2009.
23. The Moose Problem - 2008 AP Statistics Exam Form A # 5. North Carolina Council of Teachers of Mathematics State Conference. *Greensboro, NC*, September 2008.
24. The Basics of Survival Analysis and How the SNP Density Can Help. Invited Speaker, Appalachian State University Department of Mathematical Sciences. *Boone, NC*, April 2008.
25. Using the Semiparametric Density to Estimate Survival Functions in the presence of Censored Data. ENAR Spring Meeting. *Arlington, VA*, March 2008.
26. Estimating Survival Functions with the Semiparametric Density. Invited Speaker, Elon University Mathematics Department. *Elon, NC*, December 2007.
27. Estimating Survival Functions with the Semiparametric Density. International Conference on Advances in Interdisciplinary Statistics and Combinatorics. *Greensboro, NC*, October 2007.
28. Smooth Inference for Survival Functions with Arbitrarily Censored Data. Joint Mathematics Meetings. *New Orleans, LA*, January 2007.
29. Smooth Inference for Survival Functions with Arbitrarily Censored Data. Mathematics and Statistics Department Colloquium. *Greensboro, NC*, October 2006.
30. Smooth Inference for Survival Functions with Arbitrarily Censored Data. ENAR Spring Meeting. *Tampa, FL*, March 2006.
31. Smooth Inference for Survival Functions with Arbitrarily Censored Data. Joint Statistical Meetings. *Minneapolis, MN*, August 2005.

Grants

- 2015 Stage 2 Diversity Infusion Project Grant (joint with Laura Taylor)
- 2015 Community Partnership Initiative Grant
- 2014 CATL Grant to purchase teaching materials (joint with James Beuerle)
- 2014 Faculty Research Grant to purchase computer equipment
- 2013 Community Partnership Initiative Grant
- 2013 Diversity Infusion Project Grant (joint with Laura Taylor)
- 2013 CATL Travel Grant (joint with Laura Taylor)
- 2013 Winter Term Mini Grant
- 2011 Associate Provost Special Grant (joint with Laura Taylor)
- 2007 International Conference on Advances in Interdisciplinary Statistics and Combinatorics. Funded by the National Science Foundation Division of Mathematical Sciences. Role: Co-PI (one of 2). PI: Sat Gupta, Department of Mathematics and Statistics, UNCG.

Department Service

- 2017 Chair, Tenure Track Assistant Professor of Statistics Search Committee
- 2017 - Member, Statistics Curriculum Mapping Committee
- 2017 - Member, Statistics Writing Excellence Initiative Committee
- 2016 - 2017 Member, Task Force to promote accomplishments of faculty and student alumni.
- 2016 Member, Tenure Track Assistant Professor of Statistics Search Committee
- 2015 - 2016 Chair, Statistics Writing Excellence Initiative Committee
- 2015 - 2016 Member, Continuance Review Committee
- 2015 - 2016 Member, Strategic Planning Committee
- 2015 - 2016 Member, Statistics Lecturer Search Committee
- 2013 - 2017 Statistics Program Coordinator
- 2013 - 2016 Chair, Senior Comprehension Task Force
- 2013 Faculty Advisor, SOLVE student consulting groups
- 2012 - 2015 Member, Task Force to Create Opportunities for Faculty Scholarship
- 2012 - 2013 Member, Math Learning Outcomes and Senior Assessment Committee
- 2011 - 2012 Chair, Statistics Lecturer Search Committee
- 2010 - 2011 Member, Senior Assessment Committee
- 2010 - 2011 Member, Department Chair Responsibilities Committee
- 2009 - 2010 Member, Southeastern MAA Conference Planning Committee
- 2009 - 2016 Interviewer, Mathematics Education Candidates
- 2008 - 2016 Member, High School Mathematics Contest Committee
- 2008 - Member, Statistics Committee
- 2008 - 2009 Member, Statistics Lecturer Search Committee

University Service

- 2018 - First-Year Coordinator (Mathematics and Statistics)
- 2018 - Member, Global Education Center Curriculum Committee
- 2018 - Member, Common Reading Committee
- 2017 - Member, Global Education Center Advisory Committee
- 2017 - Member, Honor Board
- 2016 - Faculty Fellow, Center for Organizational Analytics
- 2015 - 2017 Member, Academic Standing Committee
- 2014 - 2015 Member, Thesis Defense Committee for Matthew Feather
- 2013 - 2015 Faculty Advisor, Alpha Phi Omega Service Fraternity
- 2012 - 2013 Member, Analytics Program Feasibility Study Committee
- 2011 Member, Faculty Research and Development Subcommittee on Course Releases
- 2010 - 2013 Member, Faculty Athletics Committee (2012-2013 Committee Chair)
- 2010 - 2012 Faculty Advisor, Club Volleyball Team
- 2010 Member, GlaxoSmithKline Women in Science Scholarship Committee

Professional Service

- 2018 Reviewer, *Proceedings of the 10th International Conference on Teaching Statistics*
- 2013 - 2018 Reader, AP Statistics Exam, Educational Testing Services (**6 years** in *Kansas City, MO*)
- 2007 - 2009 Reader, AP Statistics Exam, Educational Testing Services (**3 years** in *Louisville, KY*)
- 2016 Reviewer, *Statistics Education Research Journal*
- 2015 Mentor, Preparing Future Faculty Fellows Program at Duke University
- 2015 Mentor, Mentoring and Teaching Practicum Program at North Carolina State University
- 2014 Question Author, ETS Multiple choice statistics questions
- 2013 Reviewer, *Statistics Education Research Journal*
- 2013 Mentor, Mentoring and Teaching Practicum Program at North Carolina State University
- 2011 Session Chair, UNCG Regional Mathematics and Statistics Conference (*Greensboro, NC*)
- 2011 Textbook Reviewer, Concept Publishing USA
- 2009 Reviewer, *Journal of Statistics Education*
- 2008 Session Chair, Eastern North America Region of the Biometric Society Meeting (*Arlington, VA*)
- 2007 Reviewer, *Journal of Statistical Computation and Simulation*
- 2007 Judge, Undergraduate Poster Competition, Joint Mathematics Meetings (*New Orleans, LA*)
- 2007 Session Chair, Joint Mathematics Meetings (*New Orleans, LA*)
- 2006 Reviewer, MERLOT (Multimedia Educational Resource for Learning and Online Teaching)
- 2006 Reviewer, *Journal of Statistical Theory and Practice*
- 2006 Reviewer, *Statistics Education Research Journal*
- 2006 Session Chair, Eastern North America Region of the Biometric Society Meeting (*Tampa, FL*)

Awards and Accomplishments

2015 - 2016	Released Time Fellowship, Elon University
2015	Summer Research Fellowship, Elon University
2014 - 2015	Released Time Fellowship, Elon University
2014	Summer Research Fellowship, Elon University
2014	SAS Certified Base Programmer
2013 - 2014	Elon Service-Learning Faculty Scholar
2013 - 2014	Released Time Fellowship, Elon University
2009 - 2010	Elon Teaching & Learning Partnership Scholar
2007	Young Researchers Award for the International Conference on Advances in Interdisciplinary Statistics and Combinatorics
2006 - 2007	Project NExT Fellow, Mathematics Association of America
2005	Outstanding Teaching Assistant Award, Department of Statistics, NCSU
2004 - 2005	Preparing the Professoriate Program
2004 - 2006	NSF VIGRE (Vertical Integration of Research and Education) Fellow
2002	Outstanding Teaching Assistant Award, Department of Statistics, NCSU
2002	Elected to Mu Sigma Rho Statistics Honor Society
2000	Passed Society of Actuaries Exam 100

Undergraduate Student Research Direction at Elon University

Spring 2018	Christian Wagner, Analysis of NC Public School Funding with R Shiny Apps
Fall 2017	Christian Wagner, Abigail Phillips, Analysis of NC Public School Funding
Fall 2015 - Spring 2016	Sabina Bains - NCAA Outdoor Track Distance Running Trends
Spring 2015 - Fall 2015	Jennifer Faig, Jessica Weiss - Analysis of Finishing and Split Times in the Chicago Marathon
Spring 2014 - Fall 2014	Connor DelPrete, Christine Keneally, Sunna Vidisdottir - Basketball Analytics
Fall 2013	Matthew Feather, Derek Heard, Seamus McGuire, Sunna Vidisdottir - Basketball Analytics
Fall 2011 - Fall 2012	Alison Miller - Comparing the Semiparametric Survival Function Estimator to the Kaplan-Meier Estimator for Right-Censored Data (Alison won 1 st place in the Undergraduate Student Research Competition at the 8 th Annual UNC Greensboro Mathematics and Statistics Conference)
Fall 2011, Fall 2012	Theodore Berkowitz - Estimating Proportions with the Binomial Distribution: Traditional Methods and Improved Alternatives
Spring 2011	Jonathan Leeds - Do Binomial Confidence Intervals Have the Right Confidence?
Spring 2010, Spring 2011	Russell Swan - Sequential Testing: Do we Reject or get more data?
Summer 2010	Brandon Landreth - The Effect of Dental Sealants and Fluoride Varnish on Survival Time of Premolars in 6 to 8 Year Old Children
Spring 2010	Cam Jessup - What Country is really Winning the Olympics?
Fall 2010	Jennifer Batchelor - An Exploration of Nonparametric Equivalence Testing
Spring 2009	Jennifer Batchelor - Apportionment Issues in the House of Representatives Co-adviser with Laura Taylor.
Spring 2009	David Filonuk - Linear Models and Home-Court Advantage Co-adviser with Laura Taylor.

Graduate Student Research Direction at UNC Greensboro

Fall 2007 - Spring 2008	Guolin Zhao - Masters Thesis: Nonparametric and Parametric Survival Analysis of Censored Data with Possible Violation of Method Assumptions
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Programming and Computing Skills

SAS, R, Python, L^AT_EX, HTML, Adobe Acrobat Pro, MS Word/Excel/PowerPoint

Professional Organizations

American Statistical Association, Council on Undergraduate Research

Miscellaneous: Some Race Times

<u>Date</u>	<u>Race</u>	<u>Time</u>
Apr. 18, 2016	Boston Marathon (<i>Boston, MA</i>)	3:36:59
Jun. 12, 2015	1.96 Mile Prediction Run (<i>Kansas City, MO</i>)	13:25
Apr. 19, 2015	Tar Heel 10 Miler (<i>Chapel Hill, NC</i>)	1:20:50
Nov. 15, 2014	Thunder Road Marathon (<i>Charlotte, NC</i>)	3:33:36
Jun. 15, 2014	1.96 Mile Prediction Run (<i>Kansas City, MO</i>)	13:41
Feb. 3, 2007	Uwharrie 8 Mile Trail Run (<i>Troy, NC</i>)	1:19:59
Dec. 9, 2006	Thunder Road Marathon (<i>Charlotte, NC</i>)	3:35:21
Oct. 14, 2006	Cannonball Half Marathon (<i>Greensboro, NC</i>)	1:34:57
Jun. 10, 2006	Race for the Cure 5K (<i>Raleigh, NC</i>)	20:09
Dec. 31, 2005	NC Roadrunners Club 5K Resolution Run (<i>Raleigh, NC</i>)	19:41
Nov. 29, 1999	Division III National 5K Cross Country Race (<i>Winnecome, WI</i>)	18:16
Mar. 13, 1999	Division III National 1500m Indoor Track Race (<i>Ada, OH</i>)	4:43