

Kirsten Doehler

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University Address

Elon University

Department of Mathematics and Statistics

2320 Campus Box

Elon, NC 27244

Degrees

- 2006 Ph.D., Statistics, North Carolina State University
Advisor: Marie Davidian
- 2002 Master of Statistics, North Carolina State University
- 2000 B.A., Mathematics and Education, State University of New York College at Geneseo

Experience

- 2014 - present **Associate Professor of Statistics, Elon University**
Teach statistics courses, advise undergraduate student research, and work on a variety of research and consulting projects which often involve collaboration with researchers both within and outside of Elon University.
- 2013 - 2017 **Statistics Program Coordinator, Elon University**
Perform numerous duties including completing program assessments, organizing the review process for portfolios submitted by senior statistics majors, serving as an administrative liaison with other university offices, and providing academic guidance to students.
- 2008 - present **Educational Testing Service**
Participated in the grading of the Free Response Questions on the 2007, 2008, 2009, 2013, 2014, 2015, 2016, and 2017 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.
- 2004 - 2005 **Preparing the Professoriate Program, North Carolina State University**
Co-taught an honors statistics class with mentor.
- 2002 - 2003 **Graduate Technical Student, SAS Institute**
Tested different SAS/STAT procedures and edited the corresponding documentation. Presented demonstrations and answered SAS software questions at statistical meetings.
- 2001 - 2004 **Teaching Assistant, North Carolina State University**
Taught eight sections of the undergraduate course 'Introduction to Statistics'.

Teaching

<u>Elon University</u>	<u>Most Recently Taught</u>	<u># of Students</u>
STS 212 / MTH 220 Statistics in Application	Fall 2016	30
STS 213 Survey Sampling Methods	Fall 2015	23
STS 232 Statistical Modeling	Spring 2010	29
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 2016	3
STS 499 Independent Research in Statistics	Spring 2016	1
MTH 110 Intro. to Statistical Reasoning	Fall 2016	30
MTH 112 General Statistics	Spring 2010	55 (2 sections)
COE 310 Transition Strategies for Stats Majors	Fall 2015	9
GBL 198 Dominican Republic (D.R.) Prep. Seminar	Fall 2016	24
GBL 298 D.R. Study Abroad: Baseball & Tourism	Winter 2017	24
ELON 101 First Year Seminar	Fall 2016	15

* 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

Peer-Reviewed Publications

1. Palmquist, A. E. L. and Doehler, K. (2016). Human Milk Sharing Practices in the U.S. *Maternal & Child Nutrition* **12**, 278-290.
2. 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.
3. 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.
4. Taylor, L. and Doehler, K. (2015). Reinforcing Sampling Distributions through a Randomization-Based Activity for Introducing ANOVA. *Journal of Statistics Education* **23**, 1-33.
5. 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.

6. Taylor, L. and Doehler, K. (2014). Using Online Surveys to Promote and Assess Learning. *Teaching Statistics* **36**, 34-40.
7. Doehler, K. (2013). Audio Explanations to Enhance Statistical Understanding: A Case Study in Introductory Statistics. *Mathematics Statistics Operations Research (MSOR) Connections* **13**, 24-31.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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

1. A Randomization-Based Activity to Introduce ANOVA while Reinforcing Knowledge of Sampling Distributions. Joint Statistical Meetings. *Chicago, IL*, August 2016.
2. Using Code-Based Statistical Software in an Introductory Statistics Course (with Laura Taylor). Virtual Poster Presentation, Electronic Conference on Teaching Statistics. May 2016.
3. A Randomization-Based Activity to Introduce ANOVA and Review Sampling Distributions. Invited Speaker, University of North Carolina at Greensboro. *Greensboro, NC*, April 2016.
4. Lessons Learned from the 2015 AP Statistics Reading. (with Jim Beuerle) North Carolina Council of Teachers of Mathematics Meeting. *Greensboro, NC*, November 2015.
5. Using Code-Based Statistical Software in an Introductory Statistics Course. Joint Statistical Meetings. *Seattle, WA*, August 2015.
6. Lessons Learned from the 2014 AP Statistics Reading. (with Jim Beuerle) North Carolina Council of Teachers of Mathematics Meeting. *Greensboro, NC*, October 2014.
7. A Closer Look at the Marathon Gender Gap and a Possible Two-Hour Marathon. Carolinas Sports Analytics Meeting. *Greenville, SC*, April 2014.
8. Using Google Forms to Effectively Collect Data in Class. (with Laura Taylor) North Carolina Council of Teachers of Mathematics Meeting. *Greensboro, NC*, October 2013.
9. Faculty Views of Statistics in Teaching and Research. (with Laura Taylor) Invited presenters, JSE Webinar Series. July 2013.
10. How to Collect Data Quicker in Class. AP Statistic Reading Best Practices Session. *Kansas City, MO*, June 2013.
11. 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.
12. 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.
13. A Faculty Perspective of the Use of Statistics in Undergraduate Research. (with Laura Taylor) Poster presentation, Spring Undergraduate Research Forum. *Elon, NC*, April 2013.
14. Faculty Perceptions toward Statistics. (with Laura Taylor and Jessalyn Smith) Peer Reviewed Poster Presentation, United States Conference on Teaching Statistics. *Cary, NC*, May 2011.

15. Faculty Perceptions of Statistics. North Carolina Symposium for Women in Mathematics and Statistics. *Raleigh, NC*, April 2011.
16. 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.
17. 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.
18. Data Analysis: from grades 5-8. Workshop presented as part of a TEAMS Workshop Day. *Elon, NC*, January 2010.
19. Statistical Inference in Introductory Statistics. Workshop co-presented with Laura Taylor. Elon University Mathematics Department. *Elon, NC*, April 2009.
20. The Moose Problem - 2008 AP Statistics Exam Form A # 5. North Carolina Council of Teachers of Mathematics State Conference. *Greensboro, NC*, September 2008.
21. 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.
22. Using the Semiparametric Density to Estimate Survival Functions in the presence of Censored Data. ENAR Spring Meeting. *Arlington, VA*, March 2008.
23. Estimating Survival Functions with the Semiparametric Density. Invited Speaker, Elon University Mathematics Department. *Elon, NC*, December 2007.
24. Estimating Survival Functions with the Semiparametric Density. International Conference on Advances in Interdisciplinary Statistics and Combinatorics. *Greensboro, NC*, October 2007.
25. An Introduction to Survival Analysis. Guest Lecture in Doug Levine's graduate Psychology class. *Greensboro, NC*, February 2007.
26. Smooth Inference for Survival Functions with Arbitrarily Censored Data. Joint Mathematics Meetings. *New Orleans, LA*, January 2007.
27. Smooth Inference for Survival Functions with Arbitrarily Censored Data. Mathematics and Statistics Department Colloquium. *Greensboro, NC*, October 2006.
28. Smooth Inference for Survival Functions with Arbitrarily Censored Data. ENAR Spring Meeting. *Tampa, FL*, March 2006.
29. Smooth Inference for Survival Functions with Arbitrarily Censored Data. Joint Statistical Meetings. *Minneapolis, MN*, August 2005.

Student Research Direction

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-advisor with Laura Taylor.
Spring 2009	David Filonuk - Linear Models and Home-Court Advantage Co-advisor with Laura Taylor.
Fall 2007 - Spring 2008	Guolin Zhao - Masters Thesis: Nonparametric and Parametric Survival Analysis of Censored Data with Possible Violation of Method Assumptions

Department Service

2016	Member of the Statistics Assistant Professor Search Committee
2015 - 2016	Statistics Writing Excellence Initiative (WEI) Committee member and Chair
2015 - 2016	Member of a Continuance Review Committee
2015 - 2016	Member of the Strategic Planning Committee
2015	Member of Statistics Lecturer Search Committee
2013 - 2017	Statistics Program Coordinator
2013 - 2016	Chair of Senior Comprehension Task Force
2013	Faculty advisor for two SOLVE student consulting groups
2012 - 2015	Member of the Task Force to Create Opportunities for Faculty Scholarship
2012 - 2013	Member of the Math Learning Outcomes / Math Senior Assessment Committee
2011 - 2012	Chair of Statistics Lecturer Search Committee
2010 - 2011	Member of the Senior Assessment Committee
2010 - 2011	Member of Committee on Department Chair Responsibilities
2009 - 2010	Member of the Southeastern Mathematics Association of American Conference Planning Committee
2009 - present	Math Education Interviewer
2008 - present	Member of the High School Mathematics Contest Committee
2008 - present	Member of the Statistics Committee
2008 - 2009	Member of Statistics Lecturer Search Committee

University Service

- 2015 - 2017 Member of Academic Standing Committee
- 2014 - 2015 Member of Matthew Feather's Thesis Defense Committee
- 2013 - 2015 Faculty Advisor for the co-ed service fraternity Alpha Phi Omega
- 2012 - 2013 Member of the Analytics Program Feasibility Study Committee
- 2011 Member of the Faculty Research and Development Subcommittee on Course Releases
- 2010 - 2013 Member of the Faculty Athletics Committee (2012-2013 Committee Chair)
- 2010 - 2012 Faculty Advisor for the Men's Club Volleyball Team
- 2010 Member of the GlaxoSmithKline Women in Science Scholarship Committee

Professional Service

- 2017 Reader, AP Statistics Exam, Educational Testing Services (*Kansas City, MO*)
- 2016 Reader, AP Statistics Exam, Educational Testing Services (*Kansas City, MO*)
- 2016 Reviewer for *Statistics Education Research Journal*
- 2015 Mentor for the Preparing Future Faculty Fellows Program at Duke University
- 2015 Reader, AP Statistics Exam, Educational Testing Services (*Kansas City, MO*)
- 2015 Mentor for the Mentoring and Teaching Practicum Program at North Carolina State University
- 2014 Reader, AP Statistics Exam, Educational Testing Services (*Kansas City, MO*)
- 2014 Wrote and submitted multiple choice questions for consideration in future AP Statistics Exams
- 2013 Reader, AP Statistics Exam, Educational Testing Services (*Kansas City, MO*)
- 2013 Reviewer for *Statistics Education Research Journal*
- 2013 Mentor for the Mentoring and Teaching Practicum Program at North Carolina State University
- 2011 Session Chair at the UNCG Regional Mathematics and Statistics Conference (*Greensboro, NC*)
- 2011 Textbook Reviewer, Concept Publishing USA
- 2009 Reader, AP Statistics Exam, Educational Testing Services (*Louisville, KY*)
- 2009 Reviewer for *Journal of Statistics Education*
- 2008 Reader, AP Statistics Exam, Educational Testing Services (*Louisville, KY*)
- 2008 Session Chair at the Eastern North America Region of the Biometric Society Spring Meeting (*Arlington, VA*)
- 2007 Reader, AP Statistics Exam, Educational Testing Services (*Louisville, KY*)
- 2007 Reviewer for *Journal of Statistical Computation and Simulation*
- 2007 Lead a round table discussion with Vance Berger on the topic of "Key Points in Biostatistics: How to Read the Medical Literature" for NIH Employees (*Bethesda, MD*)
- 2007 Lead a round table discussion with Vance Berger on the topic of "An Overview of Biostatistical Principals" for NIH Fellows in (*Bethesda, MD*)
- 2007 Judge for Undergraduate Poster Competition at the Joint Mathematics Meetings (*New Orleans, LA*)
- 2007 Session Chair at the Joint Mathematics Meetings (*New Orleans, LA*)
- 2006 Reviewer for MERLOT (Multimedia Educational Resource for Learning and Online Teaching)
- 2006 Reviewer for *Journal of Statistical Theory and Practice*
- 2006 Reviewer for *Statistics Education Research Journal*
- 2006 Session Chair at the Eastern North America Region of the Biometric Society Spring 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 Chosen as one of four Elon faculty members for the Elon Service-Learning Faculty Scholars Program
- 2013 - 2014 Released Time Fellowship, Elon University
- 2009 - 2010 Chosen as one of six Elon faculty members for the Elon Teaching & Learning Partnership
- 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, Dept. of Statistics, NCSU
- 2004 - 2005 Preparing the Professoriate Program participant under the direction of William Swallow
- 2004 - 2005 NSF VIGRE (Vertical Integration of Research and Education) Fellow
- 2002 Outstanding Teaching Assistant Award, Dept. of Statistics, NCSU
- 2002 Elected to Mu Sigma Rho Statistics Honor Society
- 2000 Passed Society of Actuaries Exam 100

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.

Programming and Computing Skills

SAS, R, 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