

John P. Holcomb, Jr.

Professor

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EDUCATION

Ph.D. - Mathematical Statistics - The State University of New York at Albany (1995)
M.A. - Mathematics - The State University of New York at Albany (1991)
B.S. - Mathematics - St. Bonaventure University (1989)

PROFESSIONAL POSITIONS

Fall 2010 – Present, Chair, Department of Mathematics, Cleveland State University
Fall 2000 – Fall 2010, Assistant/Associate/Full Professor, Cleveland State University
Fall 1995 - Spring 2000, Assistant/Associate Professor, Youngstown State University
Fall 1989 - Summer 1995, Teaching Assistant, The State University of NY at Albany

PUBLICATIONS

Peer - Reviewed or Invited Articles

- [1] Boyd, J., Delost, M., and Holcomb, J., (1998). Calcium, phosphorus, and alkaline phosphatase laboratory values of elderly subjects, *Clinical Laboratory Science*, 11, 223-227.
- [2] Faires, J. D., Holcomb, J., and Ritchey, N., (1999). Identification and development of mathematically promising students via honors calculus and the university scholars program. In *Developing Mathematically Talented Students*, Linda Sheffield editor. National Council of Teachers of Mathematics, Reston, VA.
- [3] Holcomb, J., (1999). Characterization theorems when variables are measured with error, *Journal of Multivariate Analysis*, 68, 283-298.
- [4] Holcomb, J. (1999). Regression with covariates and outcome calculated from a comment set of variables in the presence of measurement error: estimation using the SIMEX method, *Statistics in Medicine*, 21, 2847-2862.
- [5] Holben, D. and Holcomb J. (2000). Seasoned lean ground beef and turkey are preferred over seasoned ground emu by consumers, *Journal of Family and Consumer Sciences*, 28, 401-408.
- [6] Holcomb, J. and Ruffer, R. (2000). Using a term-long project sequence in introductory statistics, *The American Statistician*, 54, 49-53.
- [7] Tarpey, T. and Holcomb J. (2000). Spline bottles, *The American Statistician*, 54, 129-135.
- [8] Boyd, J., Rothenberg, R., and Holcomb J., (2000), The effects of bone density testing at health fairs on awareness and treatment of osteoporosis, *Arthritis Care and Research*, 13(5), 330-332.
- [9] Rothenberg, R., and Holcomb J. (2000). Guidelines for monitoring of NSAIDS, who listened? *Journal of Clinical Rheumatology*, 6(5), 258-265.

- [10] McNutt, L., Holcomb, J., and Carlson, B. (2000). Logistic Regression Analysis: When the odds ratio doesn't work - An example using intimate partner violence data, *Journal of Interpersonal Violence*, 15(10), 1050-1059.
- [11] Ruffer, R., and Holcomb, J. (2001). To build or buy: an empirical study of the characteristics affecting a firm's expansion decision, *Journal of Economics and Business*, 53(5), 481-495.
- [12] Flexer, C., Biley, K., Hinkley, A., Harkema, C., and Holcomb, J. (2002). Using sound-field to teach phonemic awareness to pre-schoolers, *The Hearing Journal*, 55(3), 38-44.
- [13] Holcomb, J., (2002). The ethics of comparison: a statistician wrestles with the orthodoxy of a control group, in *Ethical Issues in the Scholarship of Teaching and Learning*, Pat Hutchings, editor, Carnegie Foundation for the Advancement of Teaching.
- [14] Holben D., Smith, A., Ilich, J., Landoll, J., Holcomb, J. and Matkovic, V., (2002). Puberty does not negatively affect selenium status in young females, *Journal of the American Dietetic Association*, 102:1082-1087.
- [15] Boyd, J., Holcomb, J., and Rothenberg R., (2002). Physician treatment of osteoporosis in response to heel ultrasound bone mineral density reports, *Journal of Clinical Densitometry*, 5(4), 375-381.
- [16] Holben, D. H., McClincy, M. C. , Holcomb J. P., Dean K. L., and Walker, C., (2004). Food security status of households in Appalachian Ohio with children in Head Start, *Journal of the American Dietetic Association*, 104:238-241.
- [17] Rothenberg, R, Boyd J., and Holcomb J., (2004). Quantitative ultrasound of the calcaneus as a screening tool to detect osteoporosis, *Journal of Clinical Densitometry*, 7:101-110.
- [18] Shih, S. Holben, D., and Holcomb, J, (2004). Self-Identified Knowledge And Practices Of Family Physicians In Appalachian Ohio Regarding Food Acquisition Of Patients, *Journal of the American Dietetic Association*, 104:1718-1721.
- [19] Holcomb, J. and Spalsbury, A. (2005). Teaching Students to Use Summary Statistics and Graphics to Clean and Analyze Data, *Journal of Statistics Education* [Online], 13(3).
- [20] Daly, J., Roenigk, K., Holcomb, J., Rogers, J., Butler, K., Gansen, J., McCabe, J., and Ruff, R., (2006). A randomized controlled trial of FNS in chronic stroke subjects, *Stroke*, 37, 172-178.
- [21] Holben, D., Barnett, M, and Holcomb, J., (2006). Food insecurity is associated with health status of older adults participating in the Commodity Supplemental Food Program, *Journal of Hunger and Environmental Nutrition*, 1(2), 89-99.
- [22] Kropf, M, Holben, D., Holcomb, J., and Anderson, H., (2007). Food security status and produce intake and behaviors of Special Supplemental Nutrition Program for Women, Infants, and Children and Farmers' Market Nutrition Program participants. *Journal of the American Dietetic Association*, 107(11), p. 1903-1908.
- [23] Holcomb, J., and Radke-Sharpe, N., (2007) Forecasting Police Calls during Peak Times for the City of Cleveland, *Case Studies in Business, Industry, and Government Statistics*, 1(1), p. 47 - 53.
- [24] Walker J., Holben, D., Kropf, M., Holcomb, J., and Anderson H., (2007). Food insecurity is inversely associated with poor social capital and health in females from Special Supplemental Nutrition program for Women, Infants and Children

- households in Appalachian Ohio, *Journal of the American Dietetic Association*, 107(11), p. 1989-1993.
- [25] O’Connell, K., Holben, D., and Holcomb, J., (2007). Use of food pantries is associated with household food insecurity in Ohio. *Journal of Hunger and Environmental Nutrition*, 2(2/3), p. 93-109.
- [26] Daly, J., J., Nethery, J., McCabe, J.P., Brenner, I., Rogers, J., Gansen J., Butler, K., Roenigk, K., Burdsall, and Holcomb, J. (2009). “Development and Testing of the Gait Assessment and Intervention Tool (G.A.I.T.): A Measure of Coordinated Gait Components,” (2009). *Journal of Neuroscience Methods*, 178(2), 334-339.
- [27] Bletzacker, K, Holben, D., and Holcomb J. (2009). Poverty and proximity to food assistance programs are inversely related to community food security in an Appalachian Ohio region, *Journal of Hunger and Environmental Nutrition* 4(2), 172-184.
- [28] Garfield, J., Zieffler, A., Kaplan, D., Cobb, G., Chance, B., and Holcomb, J. (2011). “Rethinking Assessment of Student Learning in Statistics Courses,” to appear in *The American Statistician*.
- [29] Daly, J., Holcomb, J. et al. (2011). “Recovery of Coordinated Gait: Randomized Controlled Stroke Trial of Functional Electrical Stimulation vs No-FES, With Weight-Supported Treadmill and Over-ground Training,” to appear in *Neurorehabilitation and Neural Repair*.

Student Publications

Batizy, L. (2004), “Using Quantitative Methods to Model Urban Police Calls for Service,” *STATS Magazine*, 40: 14-18.

Textbook Writing

Reviser for 8th edition, Biostatistics: A Foundation for Analysis in the Health Sciences, by Wayne Daniel. Rewrote and updated hundreds of examples and exercises using actual medical data from researchers around the world, John Wiley and Sons, Fall 2004.

Co-author/reviser for 9th and 10th edition, Mathematics with Applications, with Marge Lial and Thomas Hungerford. Rewrote/updated chapters dealing with probability, statistics, finite mathematics, and calculus for this widely-adopted text for business, sociology, and life science majors, Pearson, Spring 2006 and Spring 2010.

PRESENTATIONS

National Convention Addresses

“Using Actual Data sets in Elementary Statistics,” Joint Mathematics Meetings, Seattle, WA, August 1996.

“Characterization Theorems when Variables are Measured with Error,” Joint Statistical Meetings, Chicago, IL, August 1996

“Simulation - Extrapolation Estimation for Calculated Variables,” Joint Statistical Meetings, Anaheim, CA, August 1997.

“Using a Term-long Project Sequence to Teach Introductory Data Analysis,” Joint Statistical Meetings, Dallas, TX, August 1998.

“Using Real Data for Authentic Assessment,” Joint Statistical Meetings, New York, NY, August 2002.

- “Rethinking Assessment in Statistics Education: Realigning Goals and Practices,” Discussant, Joint Statistical Meetings, San Francisco, CA, August 2003.
- “Teaching Students to Use Summary Statistics and Graphics to Clean and Analyze Data,” Joint Statistical Meetings, Toronto, CA, August 2004.
- “Turning Your Class into a Research Lab”, United States Conference on Teaching Statistics (USCOTS), Columbus, OH, May 2005.
- “Career Advice in Statistics Education: A panel discussion including Waller Education Award Winners”, Invited Session, Joint Statistical Meetings, Minneapolis, MN, August 2005.
- “Spanning the Parametric/Nonparametric Divide”, Invited Session, Joint Statistical Meetings, Seattle, WA, August 2006.
- “Issues in Conducting Experiments in Statistical Education,” Invited Session, Joint Statistical Meetings, Salt Lake City, UT, July 2007.
- “Innovative Ideas in Assessment,” Discussant, Invited Session, Joint Statistical Meetings, Denver, CO, August 2008.

Invited and Keynote Addresses at International and National Theme Based Conferences

- “Assessing Student Learning from Collaborative and Written Project Reports,” First Annual Joint UK and USA Conference on the Scholarship of Teaching and Learning, co-sponsored by the University of East London, and City University of London, London, England, June 2001.
- “Defining the Problem,” Carnegie Conference on the Scholarship of Teaching and Learning, Youngstown State University, February 2001.
- “Assessing Student Learning from Collaborative and Written Project Reports,” New Directions in the Scholarship of Teaching and Learning Conference, Bowling Green State University, November, 2001.
- “Making the Case: Retention, Tenure, Promotion, and the Scholarship of Teaching and Learning,” American Association of Colleges and Universities Conference on Liberal Education, Washington, DC, January, 2004.
- “Authentic Assessment in Introductory Statistics,” ARTIST Roundtable Conference, Lawrence University, Appleton, WI., August, 2004.
- “Understanding Lies, Damned Lies, and Statistics: A Look at Why So Many People Find Statistics Frustrating,” Ohio Section of the Mathematics Association of America, Miami University, April 2005.
- “Calls For 911 Service: A Collaboration Between Cleveland State University and the Cleveland City Police Department,” International Conference on Teaching Statistics (ICOTS), Salvador, Brazil, July, 2006.
- “Writing and Data Analysis Projects for Introductory Statistics,” CAUSE Webinar to national audience, Fall 2006.
- “Introducing Concepts of Statistical Inference via Randomization Tests,” International Conference on Teaching Statistics (ICOTS), Ljubljana, Slovenia, July 2010.

Invited Workshop Presentations

- “Using Projects in Introductory Statistics,” NSF-Sponsored 5 day Workshop, Hope, Michigan, 1999.
- “Using Real Data in a Term Long Project Sequence,” and “Take Home Examinations for Use in Introductory Statistics,” Beyond the Formula V Conference, Rochester, New York, August 2001.

- “Real Data for Projects and Take Home Examinations,” Teaching Statistics 2 day Workshop, Eastern Kentucky University, May 2004.
- “Alternate Assessment for Introductory Statistics,” Assessment Workshop, Minneapolis, MN., August, 2005 and MAA Minicourse, San Antonio, TX, January, 2006.
- “A Beginner’s Guide to SoTL”, MAA Minicourse, San Antonio, TX, January, 2006.
- “Making Statistics Real: Quantifying Health Effects of Domestic Violence”, Beyond AP Statistics, Bowling Green, OH, April 2006.
- “Navigating the First Statistics Service Course,” CAUSE 5 day workshop, Rochester, NY August 2007.
- “Conceptual Statistics Initiative,” A CAUSE workshop, Joint Mathematics Meetings, San Diego, CA, January 2008.
- “Introducing Concepts of Statistical Inference,” A CAUSE workshop, USCOTS, Columbus, OH, June 2009.
- “Become a Catalyst for Change in Statistics Education,” A CAUSE workshop, USCOTS, Columbus, OH, June 2009 and the Joint Mathematics Meetings, San Francisco, CA, January, 2010.

Colloquiums

- “Team Teaching Statistics Service Courses,” Statistical Education Conference, Case Western Reserve University, October 1995.
- “Communicating Data,” Clarion University, March 1996.
- “Visual Display of Statistical Data,” Slippery Rock University, October, 1997 and January, 2004; St. Bonaventure University, May 1996.
- “Simulation - Extrapolation Estimation for Calculated Variables,” Wright State University, May 1998; Case Western Reserve University, October 1996.
- “To Build or Merge - that is the Question,” St. Bonaventure University, September 2000.
- “Health Outcomes of Domestic Violence: A Statistical Analysis,” Seton Hall University, December 2000; Villanova University, November 1999; Westminster College, February 1999; Xavier University, March 1998.
- “The Scholarship of Teaching and Learning: A Humble Example in Introductory Statistics,” Ohio Project NExT, The Ohio State University, April 2003, Wright State University, February, 2004.
- “A Statistician Learns about Osteoporosis: a Summary of Methods and Results,” Youngstown State University, April 2003.
- “Teaching Statistics at the College Level: How Did I Get Here?” The Ohio State University, Fall 2006.
- “Forecasting Police Calls during Peak Times for the City of Cleveland: A Case Study,” Case Western Reserve University, April 2007, Cal Poly San Luis Obispo, May 2007, and Kenyon College, April, 2008.

CONSULTING

- Hoppe, Frey, Hewitt & Milligan, Attorneys at Law, 1996-1998
Completed probability estimation for litigation cases.
- City Clerk Candidate Sara Brown-Clark, 1999
Completed statistical analysis of voting patterns across precincts in city of Youngstown to estimate results with a candidate who had withdrawn from race.
- Berea School District, Berea, OH; Evaluator, 2000-2001
Statistical Analysis for phoneme project to evaluate how children acquire

sound recognition.

Seton Hall University, South Orange, NJ, External Evaluator, 2000-2003

External evaluator for innovative statistics education reform across several depts.

Northeast Ohio Regional Sewer District, Cleveland, OH, 2002

Simulated Sewage plant discharge levels from Cuyahoga River flow data for Ohio EPA report.

Assessment Resource Tools for Improving Statistical Education (ARTIST), Content

Consultant for NSF funded grant related to assessment in statistics education.

ThinkFive Initiative, External Evaluator and Developer, Summer 2002

External evaluator and developer of on-line course materials for students and teachers of AP statistics.

Introductory Statistics, Advisory Panel Member, new text by Alan Agresti and Chris

Franklin to be published by Prentice-Hall.

Northeast Ohio Regional Sewer District, Cleveland, OH, 2006,

Modeled bacteria levels of local beaches.

Northeast Ohio Regional Sewer District, Cleveland, OH, 2008-2009,

Modeled bacteria levels of local beaches and investigated data analysis methods for water safety.

FUNDED GRANT ACTIVITY

Role	Funding Agency	Project Title	Investigators	Duration	Grant Award
Statistical Consultant	Veteran's Administration Rehabilitation, Research, and Development Service	CNS plasticity induced by motor learning technologies	Daly, J., Cleveland VA Hospital	2005-2010	\$3,174,000
Statistical Consultant	Ohio University	Food Security among WIC and Farmer's Market Users in Appalachian Women	Holben, D., Ohio University	2006	\$5,622
External Evaluator	National Science Foundation DUE -CCLI	Concepts of Statistical Inference: A Randomization-Based Curriculum	Rossmann, A., and Chance, B., Cal Poly San Luis Obispo	2007-2008	\$149,842
External Evaluator	National Science Foundation DUE -CCLI	A STEP to grow in science-engineering-mathematics undergraduate degrees	Ramachandran, Grinshpan, Bénéteau, Campbell, Fox, and Lewis, University of South Florida	2008-2011	\$1,573,237
Consultant	National Science Foundation DUE-CCLI	The CATALSTS Project, Change Agents for Teaching and Learning Statistics	Garfield, delMas, Zieffler, UMN	2008-2011	\$318,290

PROFESSIONAL SOCIETIES

Pi Mu Epsilon Mathematics Honors Society

Mathematics Association of America

American Statistical Association

Project Kaleidoscope - Science, Engineering, Mathematics, and Technology Faculty for

HONORS AND AWARDS

Project NExT Fellowship, Exxon Foundation and MAA, Summer 1995
Master Teacher, YSU College of Arts and Sciences, 1997-2000
Distinguished Professor, Teaching, Youngstown State University, Spring 1998
Supported Research, \$7500 donation to YSU for osteoporosis research from Merck Pharmaceuticals, Summer 1999
Carnegie Scholar, Carnegie Foundation for the Advancement of Teaching, 2000-2001
Waller Award for Teaching Excellence of Introductory Statistics, American Statistical Association, Summer 2003.
Distinguished Faculty Teaching Award, Cleveland State University, Fall 2005.
Chapter Service Recognition Award, American Statistical Association, August, 2006.

STUDENT ADVISEES

Mathematics (Graduate Exit Projects)

Julie Thornton, "Prediction and Diagnosis of Osteoporosis," 2001
Mark Backues, "SAS Programming with Yeast Data," 2002
Diem Hong Vuong, "Data Analysis of 911 Calls in the City of Cleveland in 2002," 2004
Michael Scott, "Teaching Linear Algebra and Multivariable Calculus with Technology," 2004
Vasile Lucien Pop, "Analyzing Cleveland Police Data by District and Building a Cleveland State University Enrollment Funnel," 2004
Rich Mociolek, "Cleveland Police Department: Officer Complaint Analysis 2000 – 2003," 2005
Michael Sarnowski, "Significance of Soil Moisture in Lythrum Salicaria (Canadian Weed)," 2005
Craig Jones, "Comparing Linear, Poisson, and ARIMA Modeling with Application to Cleveland Police Data," 2005
Lauren Sullenberger, "Comparing Multiple Regression Methods for Ordinal Data Applied to Stroke Research Data," 2005
Mark Skor, "Analysis of Summer Enrollment Survey, Student Demographics, and the 2005 Enrollment Cycle," 2006
Blerta Mellani, "Analysis of Ohio Graduation Test Scores for Parma School District," 2008.
Conrad Oyatsi, "The Correlation of Education and Military Expenditures with Linguistic Diversity, Economic Inequality, and Corruption," 2008
Kathleen Adams, "Analysis of Student Performance and Cleveland Central Catholic High School," 2008.
Artur Goduni, "Analysis of EEG Data for Brain Computer Interface," 2009.
Megan Scheider, "A retrospective study of time of day effects on mathematics and science performance in secondary school students," 2009.
Dan Shepherd, "Is Advantage Math Advantageous?" 2009.
Chris Reid, "A Time Series Analysis of 1999-2008 U.S. Traffic Fatalities," 2010.

Terry Provost, "Modeling Income Distribution in the U.S. (2007)," 2010.
Veronica Foster, "Predicting the 2010-2015 populations of Cuyahoga County, OH using correlates: time, poverty, unemployment, and births," 2010.
Wayne Colonna, "A Regression Analysis of the National Basketball Association," 2010.

Mathematics (Undergraduate Senior Projects)

Nathan Smith, "Use and Satisfaction of the CSU Mathematics Assistance Center," 2009
Chris Reid, "A Statistical Analysis of all 2005 Fatal Car Accidents in the United States," 2008.
Michael McGuire, "Analysis of a Droplet in Spray," 2009.

Masters of Public Health

Ray Harvey, "A meta-analytical review of the perceived threat of HIV among gay men from 1980-2003," 2004

Electrical Engineering

Sailesh Shastri, "Predicting Public Supply Water Use in Ohio Using Regression," 2005 (co-advised with Dr. Yongjian Fu)

PROFESSIONAL SERVICE

Reviewer, National Science Foundation, DUE Grants, July 1996 and July 2001
Conference Organizer, Statistics Educators Conference for greater Northeast Ohio, Spring 1997
National Page Webmaster, Pi Mu Epsilon Council, 1998-2000
Associate Editor, *Journal of Statistics Education*, 1998-2004
Referee, *The American Statistician*, 1999, 2003, 2006-2008
Journal of the Royal Statistical Society – Series B, 2002
Journal of Statistics Education, 2005-2008
Technology Innovations in Statistics Education, 2007, 2008
College Mathematics Journal, 2008 and 2009
Bone, 2009
Session Organizer, Projects in Statistics Education, Joint Statistical Meetings, Summer 1999
Session Organizer, Distance Learning, Joint Statistical Meetings, Summer 2000
Roundtable Lunch Discussion Organizer, Joint Statistical Meetings, Summer 2001
Ohio NExT Organizer, Recruitment coordinator for OH MAA Section, Summer 2001-2003
Committee Member, Joint MAA-ASA Committee, 2001-2007
Advisory Board Member, ASA representative to the MAA advisory board for the Committee on Mathematics Competitions, 2001 – 2007
Program Chair, Section on Statistics Education, for ASA Joint Statistical Meetings, Summer 2002
AP Statistics Reader, Educational Testing Services, Summer 2002-2003, 2005-2009
Member of Research Advisory Board for Consortium for the Advancement of Undergraduate Statistics Education (CAUSE), 2002-present
Member, Undergraduate Data Analysis Poster Competition Advisory Board, 2005-present
Judge, ASA Statistics K-12 Poster Competition, Cleveland, OH, Spring 2003 - present

Science Fair Mentor, Statistical advisor for High school students, Mentor, OH, 2003-present

Judge, International Science and Engineering Fair, Cleveland, OH, Summer 2003

Treasurer, Cleveland Chapter of the American Statistical Association, 2002-2004

President, Cleveland Chapter of the American Statistical Association, 2005-present

UNIVERSITY AND DEPARTMENT SERVICE

Presenter, Sonia Kovalevsky Day, September 2000

Computer Planning Committee, 2000-present

Mathematics Dept. Undergraduate Program Committee, 2001-2006, 2007-2009

University Assessment Council, 2002-2005

Ad-hoc Arts and Sciences College Reorganization Committee, 2002

Department Assessment Committee, 2002-2003

College of Science Transition Committee, 2003

College of Arts and Sciences Curriculum Committee, 2003-2004

Department Appointments Committee, 2004-2006, 2007-present, (Chair)

College of Science Budget and Planning Committee, 2004-2006, 2008-2010 (Chair)

University President's Budget Advisory Committee, 2004-2006

Committee Awarding Provost's Research for Undergraduates, Grants 2008

Graduate Council, 2008-2010

College of Science Promotion and Tenure Committee, 2009