

Forrest Williamson

BA, BSMTH, MS, PhD, GStat

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To view my LinkedIn, follow the link on my personal site.

Education

- August 2010 – **PhD in Statistics**, *Baylor University*, Waco, TX.
December 2014
- August 2010 – **MS in Statistics**, *Baylor University*, Waco, TX.
December 2011
- August 2007 – **BSMTH in Mathematics**, *University of North Texas*, Denton, TX.
December 2009 *Magne Cum Laude*
- BA in French**, *University of North Texas*, Denton, TX.
Magna Cum Laude

Certificates and Accreditations

- March 2014 **Graduate Statistician (GStat) Accreditation**, *American Statistical Association*.
- May 2012 **Teaching Certificate in Higher Education**, *Baylor University*, Waco, TX.
- July 2010 **National Institutes of Health Certification: Protecting Human Research Participants**, *NIH*, Online.
- December 2009 **Certificate in Statistics**, *University of North Texas*, Denton, TX.
Certificate in Professional French, *University of North Texas*, Denton, TX.

Experience

- August 2014 – **Research Scientist**, *Eli Lilly and Company*, Indianapolis, IN.
Present
- June 2013 – July 2014 **Health Care Research Intern**, *Baylor Health Care Systems*, Dallas, TX.
Survey Research and Clinical Trials Group. Statistical consulting, survey design and analysis, and report production. Primarily using SAS and R for analysis, and SNAP for web-based surveys.
- May 2013 **ASA Delegation to Cuba**, *American Statistical Association*, Hanava, Cuba.
The purpose of the visit to Cuba was to develop an improved understanding of the roles played by statistics and statisticians in Cuba in academe, business, and government, and the efforts underway to train statisticians and build capacity for the profession. We discussed matters of common interest regarding the development of statistical capacity in the workforce. We learned about how statisticians are trained in Cuba, and shared information about statistical workforce development in the US.
- December 2010 – **Statistical Consultant**, *Baylor University*, Waco, TX.
June 2013 Work closely with researchers, colleagues, and Master's and PhD students from different departments on studies, grant proposals, data collection, and theses including statistical data analysis in the areas of categorical analysis, multivariate data analysis, dimension reduction, and measurement error. Code written in SAS and R.

- May 2012 – **Biostatistician Intern**, *Axio Research, LLC.*, Seattle, WA.
- August 2012 Perform statistical analyses (including preparations for Data Monitoring Committee reports, integrated summaries of efficacy or safety, final study reports and publications) by retrieving the needed data from the database, creating analysis datasets, using appropriate statistical methods to perform statistical analyses (as directed by a statistician), creating output in the appropriate format, and provide summaries and interpretation of results. Keep appropriate manager(s) (i.e., Project Director(s), Director of Biostatistics, and/or Director of Production) informed on work progress. Provide randomization lists and procedures. Specify analysis data sets and report elements. Set up documents, test study databases, test study data entry and data validation (i.e., “query”) systems. Run various programs and reports.
- August 2011 – **Teacher of Record**, *Department of Statistical Science, Baylor University*, Waco, TX.
- May 2012 Covered a variety of statistical methods used in the decision-making process in number of disciplines. Topics included methods for accessing and describing data, probability theory to provide a framework for risk analysis, confidence interval estimation, and hypothesis testing. Lectured and emphasized the use of regression in studies involving trend estimation, linear prediction, and data mining. Built awareness of practical considerations, such as data accuracy, collection difficulties, sampling bias, and organizational barriers to implementing solutions. Provided students with the opportunities to present results from assigned projects with the objective of refining their communication skills where technical details are involved and gave constructive feedback. Taught students the use of the statistical software package JMP.
- December 2010 – **Statistics Lab Assistant**, *Department of Statistical Science, Baylor University*, Waco, TX.
- May 2012 Assisted students with their assignments from traditional classroom sections, such as Quantitative Business Analysis, Biostatistics, Introduction to Statistics, and Research in Statistics. Provided help with statistical software packages.
- Summer 2010 **Summer Institute for Training in Biostatistics**, *Department of Statistics, North Carolina State University*, Raleigh, NC, *Cohosted by the Duke Clinical Research Institute*.
- The Summer Institute for Training in Biostatistics (SIBS), supported by grants from the National Heart, Lung, and Blood Institute (NHLBI), provides a comprehensive six-to seven-week program designed to expose undergraduate students to the opportunities offered by a career in biostatistics and encourage them to pursue graduate study in the field. The program focuses on providing participants with an intensive introduction to biostatistical principles and methodologies and the essential role of biostatistics in health sciences research. Participants enjoy instruction and lectures by recognized experts in the field; meet practicing biostatisticians, epidemiologists, and statistical geneticists; and gain real-world experience working with data from internationally recognized studies.
- August 2009 – **Supplemental Instructor**, *Department of Mathematics, University of North Texas*, Denton, TX.
- December 2009 Assisted in lecturing to undergraduate students in statistics, assisted in course development and exam content. Taught statistics by emphasizing its applications. Offered one-on-one help for students during office hours.
- August 2008 – **Grader**, *Department of Mathematics, University of North Texas*, Denton, TX.
- December 2009 Graded homework for eight sections of Elementary Probability and Statistics. Provided feedback and corrections for assigned problems.

- August 2008 – **Tutor**, *Department of Mathematics, University of North Texas*, Denton, TX.
May 2009 Provided academic assistance to students in several courses in Mathematics/Statistics, including Algebra, Calculus, Trigonometry, Introduction to Statistics, Business Statistics, Quantitative Business Analysis, Calculus I, II, III, Pre-calculus, Elementary Mathematics, Analysis. Helped students through the process of identifying business problems, suggesting statistical solutions, and constructing presentations for their projects. Taught students how to develop the study skills necessary for academic success. Specialized to tutor students in Probability and Statistics courses.

Publications

- 2013 Stinchcomb, Gary E.; Messner, Timothy C.; **Williamson, Forrest C.**; Driese, Steven G.; and Nordt, Lee C. "Climatic and human controls on Holocene floodplain vegetation changes in eastern Pennsylvania based on the isotopic composition of soil organic matter." *Quaternary Research* (2013).

In Preparation

Williamson, Forrest; Harvill, Jane; and Stamey, James. "A Generalized Blinding Index for Randomized, Controlled Trials."

Williamson, Forrest; Stamey, James; and Harvill, Jane. "A Bayesian Perspective on Blinding Indexes."

Contributed Presentations

- August 2014 **A Generalized Blinding Index for Randomized, Controlled Trials**, *Joint Statistical Meetings*, Boston, MA.

Department or Organization Presentations

- November 2012 **Contract Research Organizations**, *Baylor University*, Waco, TX.
Measurement Error Models, *Baylor University*, Waco, TX.
Multivariate Adaptive Regression Splines and Application to Ancient Climate Modeling, *Baylor University*, Waco, TX.
The Empirical Bayes Approach, *Baylor University*, Waco, TX.
- June 2012 **An Introduction to Measurement Error**, *Axio Research, LLC*, Seattle, WA.
- April 2012 **Disease Mapping in Spatial Statistics**, *Baylor University*, Waco, TX.
- March 2012 **Additive Hazards Regression Models**, *Baylor University*, Waco, TX.
Bayesian Binomial Regression, *Baylor University*, Waco, TX.
- December 2011 **Time Series with Periodic Structure**, *Baylor University*, Waco, TX.
- November 2011 **Power Study of the Robustness of the Brown-Forsythe Test for Equal Variances**, *Baylor University*, Waco, TX.
- April 2011 **Random Effects Models for Binary Data**, *Baylor University*, Waco, TX.
- December 2010 **Retention and Graduation Rates at Baylor University: Recruiting Necessities**, *Baylor University*, Waco, TX.
- July 2010 **Mediators of Social Support (MOSS) Study: Influence of social support systems on long-term morbidity and mortality of patients with coronary artery disease**, *North Carolina State University*, Raleigh, NC.

Posters

- June 2013 **Investigation of Blinding Indices in Randomized Clinical Trials**, *Southern Regional Council on Statistics Summer Research Conference*, Montgomery Bell State Park, Burns, TN.
- November 2012 **Towards a Unified Model of Predicting Climate from Mineral Soils**, *Geological Society of America Annual Meeting and Exposition*, Charlotte, NC.

Continuing Education and Personal Skill Development

- October 2014 **Advanced Topics in Logistic Regression**, *American Statistical Association, Central Indiana Chapter*, Indianapolis, IN.
- August 2014 **Analysis of Clinical Trials: Theory and Applications**, *Joint Statistical Meetings*, Boston, MA.
- August 2014 **Learning and Improving Skills to Become a More Effective Statistical Collaborator**, *Joint Statistical Meetings*, Boston, MA.
- August 2014 **Effective Presentations for Statisticians**, *Joint Statistical Meetings*, Boston, MA.
- August 2014 **Strategic Career Management**, *Joint Statistical Meetings*, Boston, MA.
- August 2013 **Practical Software Engineering for Statisticians**, *Joint Statistical Meetings*, Montréal, QC.

Languages

English **Native**

French **High Proficiency**

Written, Read, Spoken

Computer skills

- General Microsoft Office (Excel, Power Point, Word, Outlook, Access), C++
- Statistical SAS/SAS EG, JMP, R, WinBUGS/OpenBUGS, Mathematica
- Other LaTeX/LyX, SNAP

Graduate Course Work: Statistics

- Theory of Statistics I, II, III
- Statistical Methods for Research
- Large Sample Theory
- Experimental Design & Clinical Trials
- Regression Analysis
- Analysis of Categorical Responses
- Semiparametric Regression Models
- Theory of Linear Models
- Bayesian Theory
- Bayesian Methods of Data Analysis
- Computational Statistics
- Time Series Analysis
- Spatial Statistics
- Multivariate Statistics
- Survival and Reliability
- Statistical Bioinformatics

Honors

- 2014 First GStat accredited statistician (American Statistical Association)
- 2013 Featured in a "Future of Statistics" Series by ValuePenguin, highlighting the up-and-coming generation of statisticians across the United States. Republished on Statistics2013.org

- Golden Key International Honour Society
2009 University of North Texas President's List
2008 Pi Delta Phi – National French Honor Society

Awards

- 2014 Outstanding Ambassador for Community and Professional Relations Award, Baylor University Department of Statistical Science
2013 Boyd Harshbarger Student Travel Award
2011 First-Year Graduate Student Award for Excellence, Baylor University Department of Statistical Science
2010 Presidential Scholar, Baylor University (August 2010 – December 2014)
2009 Solveig-Olsen Scholarship in French
2008 Faculty Award for Excellence in French

Professional Activities

- 2014 Contributing Editor, *STATtr@k*. “A Journey to Statistics, the ASA, and Accreditation.” Republished in *AMSTAT News* October 2014 Issue #448.
Invited Panelist: ASA Accreditation Informational Session. *Joint Statistical Meetings*. Boston, MA
ASA Feature Video: GStat Accreditation
2013 American Statistical Association Delegation to Cuba
Statistics Without Borders (2013 – present)
2010 American Statistical Association (2010 – present)