
Megan L. (Liedtke) Tesar

Contact Information:

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EDUCATION:

Ph.D. in Statistics, University of Nebraska-Lincoln, May 2011

- Dissertation: "A Comparison of Spatial Prediction Techniques Using Both Hard and Soft Data"
- Advisor: Dr. David B. Marx

M.S. in Statistics, University of Nebraska-Lincoln, May 2008

- Project: "Hidden Markov Models: Modeling Hitting Streaks in Major League Baseball" (Submitted to *SABR, Society for American Baseball Research*)

B.S. in Mathematics, Doane College, Crete NE, May 2006

- Graduated Summa Cum Laude
- Presented analysis research to the Nebraska/Southeast South Dakota Section of the Mathematical Association of America

HONORS:

- Mu Sigma Rho Member: The National Statistics Honorary Society, 2008-Present
- The National Scholars Honor Society, invited to become a member in 2007
- Mathematics Excellence Award, presented to a senior mathematics major who displayed excellence in their undergraduate coursework, Spring 2006
- Alpha Lambda Delta National Honor Society for Women, Spring 2003-2006

TEACHING EXPERIENCE:

Instructor for STAT 218: Introduction to Statistics, 4 semesters, August 2006-May 2008

- Complete responsibility for planning and teaching the class
- Taught in a completely computer based classroom
- Incorporated hands-on activities, group projects, and article critiques into course requirements
- Used Blackboard to post notes, assignments, and grades
- Topics of instruction included: Central Limit Theorem, sampling distributions, probability, Binomial distribution, Normal distribution, sampling techniques, one and two sample confidence intervals and hypothesis tests for proportions and means

Instructor for STAT 380: Statistics and Applications, July 2009-August 2009, January 2010-May 2010

- Complete responsibility for planning and teaching the class
- Created chapter handouts for students
- Used Blackboard to post notes, assignments, and grades
- Topics of instruction included: Central Limit Theorem, sampling distributions, probability, Binomial distribution, Normal distribution, sampling techniques, one and two sample confidence intervals and hypothesis tests for proportions and means

TEACHING EXPERIENCE: (Continued)

Statistics Adjunct Professor: January 2012-December 2012

Southeast Community College, Lincoln, NE

- Complete responsibility for planning and teaching the class
- Taught in a completely computer based classroom
- Topics of instruction include: Central Limit Theorem, sampling distributions, probability, discrete and continuous probability distributions, sampling techniques, confidence intervals and hypothesis tests for proportions, means, and variances

Guest Lecturer

- Guest lecturer for STAT 883: Statistical Inference, Spring 2010
 - Topics taught: Maximum Likelihood Estimation
- Guest lecturer for STAT 450: Introduction to Regression Analysis, Fall 2009
 - Topics taught: Statistics used to determine the best regression model, forward stepwise procedure, backward elimination procedure, stepwise regression procedure, detecting influential observations and outliers
- Recitation lecturer for STAT 462: Introduction to Mathematical Statistics I, Fall 2009
 - Topics taught: Probability, discrete and continuous probability distributions, mean, variance, moment generating functions, cumulative distribution functions
- Guest lecturer for STAT 802: Experimental Design, Spring 2009
 - Topics taught: Randomized complete block design (model, assumptions, ANOVA, analysis), relative and adjusted relative efficiency of blocking

Joint Instructor

- Assisted my academic advisor with STAT 997: Practicum in Statistical Consulting, Spring 2009
 - Topics discussed: Testing regression lines for different slopes, importance of replication, ANOVA tables, split plot in time, determining sample size, censored data, defining contrasts, nonparametric tests

Biostatistics Adjunct Professor: May 2017-Present

University of Nebraska Medical Center, Omaha, NE

- Adjunct Professor for online courses of BIOS 806/CPH 506

RESEARCH EXPERIENCE:

Statistician: November 2010-2012

Cabela's World's Foremost Bank, Research & Analysis, Lincoln, NE

- Set up and execute analytical and modeling methodologies to support the Credit, Collections, Fraud, and Marketing Departments
- Process, summarize, and analyze data to validate and improve business strategies
- Present models, analysis results, and recommendations to senior management for approval

Research Assistant: May 2007-August 2007, May 2008-2011

Department of Statistics, University of Nebraska-Lincoln

- Assisted my academic advisor Dr. David Marx with consulting meetings and projects
- Visited the Roman L. Hruska U.S. Meat Animal Research Center to observe research

- projects underway and assist with the experimental design of future projects
- Analyzed 2006 season statistics for the University of Nebraska-Lincoln volleyball team
- Collected data at the University of Nebraska-Lincoln Rogers Memorial Farm to assess spatial structure
- Visited the Rogers Memorial Farm several times to observe research projects underway by the Department of Biological Systems Engineering, discuss experimental design of projects, and suggest how to properly analyze the data
- Organized and participated in a Bayesian Maximum Entropy workshop led by Dr. Marc Serre from the University of North Carolina
- Researched spatial prediction techniques which utilize soft data
- Developed new methodology, weighted kriging, which incorporates soft data in the kriging equations
- Collaborated with the Department of Natural Resources to analyze groundwater nitrate concentrations in Nebraska by means of weighted kriging
- Conducted simulations to compare weighted kriging to Bayesian Maximum Entropy

Statistical Intern: - United States Department of Agriculture National Agricultural Statistics Service: May 2006-August 2006

Statistical Methods Branch, Washington, D.C.

- Investigated computerized imputation methodology to estimate missing data on quarterly labor survey
- Presented imputation results at a Labor Net Conference
- Developed SAS program for Maryland turfgrass summary and publication

CONFERENCES:

- Attended the New England Symposium on Statistics in Sports at Harvard University, September 2007
- Attended the Conference on Applied Statistics in Agriculture at Kansas State University, April 2008
- Presented “Incorporating Soft Data into the Kriging Equations” and served as Session Chair at 8th Annual Hawaii International Conference on Statistics, Mathematics and Related Fields, January 13-15, 2009
- Served as Session Chair of “Challenges in Interdisciplinary Spatial and Spatiotemporal Analysis” at Joint Statistical Meetings in Vancouver, BC, Canada, August 1-5, 2010
- Presenting “A Comparison of Spatial Prediction Techniques Using Both Hard and Soft Data” at Joint Statistical Meetings in Miami, Florida, August 1-5, 2011

FELLOWSHIPS:

- College of Agricultural Sciences and Natural Resources of the University of Nebraska-Lincoln Milton E. Mohr Fellowship, which recognizes outstanding students in the sciences based on their academic performance and potential for accomplishments in their specific field, 2007-2008, 2009-2011
- William J. Curtis Endowed Fellowship, which recognizes students based on academic and scholastic achievement and promise, 2008-2009
- University of Nebraska-Lincoln Othmer Graduate Fellowship, which is intended to assist in recruiting exceptional scholars, 2006-2009
- Levi and Hazel Wilson Scholarship for Continued Education in Mathematics/Science, financed by former professors of Doane College, Fall 2006