

VITA
Stephen Bruce Vardeman

Personal Data

Citizenship: U.S.A.
Security Clearance: L (Department of Energy)

Education

B.S. Mathematics	Iowa State University	1971
M.S. Mathematics	Iowa State University	1973
Ph.D. Statistics	Michigan State University	1975

Previous Professional Experience

Graduate Assistant	Iowa State U. Mathematics Department	8/71-8/73
Graduate Assistant	Michigan State U. Statistics Department	9/73-8/75
Assistant Professor	Purdue University Statistics Department	8/75-5/81

Iowa State University Record

Assistant Professor of Statistics	7/81-6/83
Associate Professor of Statistics	7/83-6/86
Associate Professor of Industrial Engineering	7/85-6/86
Professor of Statistics and Industrial Engineering	7/86-6/05
University Professor	7/05-
Faculty Improvement Leave	1/89-5/89
LAS Award for Outstanding Teaching	1993, 2006
Iowa Stat-ers (Statistics Graduate Students) Teacher of the Year	2000-2001
Regents Faculty Excellence Award	2001
Foreign Travel Grant (ICOTS-6, Cape Town, South Africa)	2002
Faculty Development Assignment (University of Dortmund)	8/03-12/03

Other Professional Experience

Hewlett-Packard	5 One-Week Advanced SPC Short Courses	1984
John Deere	One-Week Advanced SPC Short Course	1985
GM/Saturn/NSF	Four-Week Faculty Research Visit	1998
Los Alamos National Lab	Visiting Faculty Member	2000-present
Genencor	Three-Day Engr. Stat and SPC Short Course	2005

Private Consulting with Amana Refrigeration, Proctor and Gamble, Maytag, Dow Chemical, Westinghouse, Minitab, Pall, Mg Biologics

Editorial Experience

Associate Editor	<i>The American Statistician</i>	'84-'87, '96-'08
Associate Editor	<i>Technometrics</i>	'86-'91
Editor-Elect	<i>Technometrics</i>	1992
Editor	<i>Technometrics</i>	'93-'95
Associate Editor	<i>Naval Research Logistics</i>	'03-'06

Professional Societies and Honors

American Statistical Association, Fellow	Elected 1988
International Statistical Institute, Ordinary Member	Elected 1992
ASEE, Meriam/Wiley Distinguished Author Award	1994

American Statistical Association (Life Member)
International Statistical Institute
Institute of Mathematical Statistics (Life Member)

Offices Held in Professional Societies

Program Chair, ASA Section on Physical and Engineering Sciences, '86
Regional Councilor, Statistics Division, ASQC, '85-'86
Chair, ASA Section on Physical and Engineering Sciences, '91
ASA Council of Sections Representative (SPES), '97
ASA Council of Sections Vice Chair, '98-'00
ASA Board of Directors (Council of Sections Representative), '01-'03

Committee Memberships (National)

ASA Committee on Quality and Productivity, '84-'86
ASA Committee on Award for Outstanding Statistical Application, '87-'89, Chair '89
ASA Publications Committee, '94-'96
ASA Committee on Nominations, '95-'96
ASA Publications Management Committee, '97-'99
ASQ Publications Management Board, '97-'99
Technometrics Management Committee Chair, '97-'99
Technometrics Management Committee (ASQ Representative), '03-'08
ASEE Meriam/Wiley Distinguished Author Award Committee, '04, '05-'06, '07-'08
(Chair)
Council of Presidents of Statistical Societies, Presidents' Award Committee, '06-'08
ASA *The American Statistician* Editor Search Committee, '07-'08
National Academies Panel on Information Technology, '09

Public/Community Service

Greater Iowa Credit Union Board of Directors, '06-present

Projects Funded

PI, Purdue Research Foundation Faculty XL Grant, '77, "Sets and Sequences of Finite State Decision Problems With Applications to the Analysis of Remote Sensing Data"
PI, NSF Research Grant, '78, "Methods for Making a Number of Structurally Similar Statistical Decisions With Applications to the Analysis of Remote Sensing Data"
PI, NSF Research Grant, '79-'80, "Methods for Making a Number of Structurally Similar Statistical Decisions With Applications to the Analysis of Remote Sensing Data"
Co-PI, NSF Research Grant, '82, "Admissibility in Multiparameter Estimation and in Finite Population Sampling"
Co-PI, NSF Equipment Grant, '90, "NSF Instrumentation and Laboratory Improvement: Quality in Manufacturing Laboratory"
Co-PI, NSF Research Grant, '90-'92, "Functionality and Cost Engineering"

Co-PI, ISU Instructional Development Grant, '90, "Curriculum Development for Statistical Quality Control"

PI, AlliedSignal Aerospace, '94-'95, "Comparing AlliedSignal Aerospace 100 Continuous Inspection Plan and the Military Standard 1275 Inspection Plan"

Co-PI, Heinz Company, '94-'96, "Improving the Quality Control and Cost-Efficiency of Testing Tomato Seed Lots for Bacterial Canker"

Co-PI, NSF Research Grant, '97-'98, "Collaborative Research Between General Motors Corporation and Iowa State University"

PI, John Deere Foundation, '98-'99, '99-'00, '00-'01, '01-'02, '02-'03, '03-'04, '04-'05, '05-'06, '06-'07, '07-'08, '08-'09 "Research and Education in Quality and Reliability"

Co-PI, General Motors, '01, "Statistical Analysis of Vehicle Communication Systems"

PI, Iowa Department of Revenue and Iowa Legislative Services Agency, '04-'05, "Research Collaboration Between Tax Research and Program Analysis Section, Iowa Department of Revenue and Iowa State University"

PI, Air Force Research Laboratory/Solid State Scientific Corporation, '04-'05, "Modeling and Decision Analysis for Threat Warning Based on the Time Evolution of Sensed Electromagnetic Spectra"

Co-PI, NSF Research Training Grant, '05-'09, "Statistics for Physical and Engineering Sciences: A Plan for the Establishment of a Research Training Group"

PI, Iowa Department of Revenue and Iowa Legislative Services Agency, '05-'06, "Research Collaboration Between Tax Research and Program Analysis Section, Iowa Department of Revenue and Iowa State University"

Co-PI, Iowa Department of Human Services Child Support Recovery Unit and Division of Results Based Accountability, '09-'11, "Effectiveness Evaluation for 2008 Special Improvement Project Grant (CFDA 93.601) from the Federal Office of Child Support Enforcement"

Program Participation at Professional Meetings and Conferences (2006-present)

Short Course: An Introduction to Bayesian Statistics for Industry, 33rd Annual AICE Conference, ASQ Automotive Division, March 2006, Davenport, IA

Presenter, Panelist, and Mentor, NISS/ASA/NSF Technical Writing Workshop for Young Researchers, July 2007, Salt Lake City, UT

Short Course: An Introduction to Bayesian Statistics for Industry, 35th Annual AICE Conference, ASQ Automotive Division, March 2008, Davenport, IA

Short Course: Statistics and Measurement, 35th Annual AICE Conference, ASQ Automotive Division, March 2008, Davenport, IA

Presenter and Mentor, NISS/ASA Technical Writing Workshop for Young Researchers, August 2009, Washington, DC

Extension and Affiliate Program Courses Taught

Advanced Statistical Methods for Process Control and Improvement, March '86 and March '87 (Scheman Center, ISU)

Statistics and Probability for Reliability Engineers, August '86 and September '86 (Rockwell-Collins, Cedar Rapids, IA)

University Courses Taught

Iowa State Statistics Department

Statistics 104 (Introduction to Statistics) F'04 (5 weeks)

Statistics 105 (Introduction to Statistics for Engineers) F'81, F'83, Sp'84, F'84, F'86, F'87, F'88

Statistics 231 (Probability and Statistics for Engineers) F'81, Sp'82, Sp'83, F'83, F'85, F'90 (6 weeks), F'97, Sp '10

Statistics 305 (Engineering Statistics) Sp'82, Sp'84, Sp'85, Sp'86, Sp'87, Sp'88, F'89, Sp'90, F'90, Sp'91, F'91, Sp'92, F'93, Sp'96

Statistics 328 (Applied Business Statistics) Su'00, Su'01, Su'02, Su'03, Su'04 (2 Sections Each Session, Sat. and Eve. MBA Programs), Su'05 (Sat. MBA)

Statistics 330X (Probability and Statistics for Computer Science) F'99, Sp'00

Statistics 431 (Statistical Methods in Quality Control) F'82, F'84

Statistics 447 (Statistical Theory for Research Workers) Sp'02

Statistics 511 (Statistical Methods II) Sp'03, Sp'04 (2 Sections and Distance), Sp'08 (Distance), Sp'09

Statistics/Industrial Engineering 531 (Quality Control and Engineering Statistics) Sp'83, Sp'85, Sp'87, Sp'91, Sp'93, Sp'95, Sp'97, Sp'99 (Distance), Sp'01 (Distance)

Statistics 542 (Theory of Probability and Statistics I) F'01, F'05

Statistics 543 (Theory of Probability and Statistics II) Sp'98, Sp'05 (Distance)

Statistics 544 (Bayesian Statistics) Sp'06, Sp'07, Sp '08

Statistics 643 (Advanced Theory of Statistical Inference) F'95, F'96, F'00, F'02, Sp'07, Sp'10

Statistics 648 (Seminar on the Theory of Statistics and Probability—Supervised Learning) Sp '09

Iowa State Department of Industrial and Manufacturing Systems

Engineering

Industrial Engineering 361 (Quality Control) F'85, Sp'86, F'86, F'87, Sp'88, F'88, F'89, F'90, F'91, F'92, F'93, F'94, F'96, F'97, F'98, Sp'00, F'00, F'01, F'02, Sp'04, F'04, F'05, F'06, F'07, F'08, F'09

Previous to ISU Statistics and IMSE

Undergraduate

Engineering Calculus I, II, III (ISU Mathematics)

Statistics for Business (MSU)

General Introductory Statistics (PU)

Statistics for Technology (PU)

Probability Theory (PU)

Statistical Theory (PU)

Graduate

Pre-Calculus Introductory Statistics (PU)

Post-Calculus Introductory Statistics (PU)

Analysis of Variance and Experimental Design (PU)

Applied Regression Analysis (PU)

Non-Parametric Statistical Methods (PU)

Applied Multivariate Analysis (PU)

Sampling Theory (PU)

Statistical Theory for Majors (PU)

Graduate Students Directed at ISU

M.S. Students

Name	Date	Creative Component or Thesis Topic
Tachia, Hon Richard	7/83	The Economic Design of Control Charts
Schuelka, Steven	12/83	Skip-Lot Sampling: What It Is and How To Use It
Kramer, Kevin	5/84	Multivariate Control Chart Techniques
Abdella, Blake	7/84	SAMPAC: An Analysis Package for Attributes Acceptance Sampling Plans (M.S. Thesis)
Ray, Di-ou	5/85	CUSUM Schemes for Exponential Observations
Boeh, Stephen	7/85	Using the Personal Computer in the Economic Design of Shewhart Control Charts
Hsieh, Chih-Ho	12/85	Bayesian Estimation of p Using Normal Observations and Beta Prior Distributions
Guo, Ren-Kuan	7/86	Using the Personal Computer in the Economic Design of General Shewhart Control Charts
Erland, Kim	7/86	Microcomputer-aided Statistical Error Analysis
Cranford, B. Keith	12/86	Microcomputer-aided Selection of Fractional Factorial Experimental Designs
Schroeder, Darrell	12/88	A Stochastic Feedback Control Simulator for the Microcomputer
Castrogiovanni, Carl	5/89	Monitoring the Performance of a Nominally Minimum Variance Process Controller via Shewhart Charting of Residuals
Prestwor, Amanda	7/89	Multiple Regression Analysis Applied to the Production of an Asphalt Paste
Peterka, Peter	12/89	Confounding Patterns for Standard and Non-standard Fractional Factorial Experimental Designs
Garcia, Cathalina	7/91	Economic Choice of a Military Standard 105D Sampling Plan (M.S. Thesis)
Helterbrand, Christine	7/91	A Fortran Implementation of Hoadley's QMP
Manke, Todd	5/92	Optimizing a Deterministic Function: A Look at the Emerging Design of Computer Experiments Literature
Meyer, Rick	5/92	A Likelihood Ratio Test for Uniformity Versus Periodicity in Gamma Ray Emissions from Pulsars
Dyer, Ann	7/92	Prediction Intervals for the Number of Failures in a Future Time Period
Dong, Qiong	7/93	The Performance of Confidence Bounds on Process Capability Indices Under Non-normal Process Distributions
Morse, Peter	12/93	A Comparison of Average Run Lengths of Optimally Designed Shewhart Charts with Supplementary Run Rules to EWMA and CUSUM Charts
VanValkenburg, Enid	5/94	Optimal Allocation of Measurements in a Gage Repeatability and Reproducibility Study
Peters, Mark	7/94	Bayesian Acceptance Sampling With a Discrete Prior

Rose, Dan	7/94	The Studentized Maximum Modulus Distribution: A Program for Calculating its Quantiles and Some Applications
Cardella, Aidan	12/94	A Comparison of Lot-by-Lot and Continuous Acceptance Sampling Plans
Rahardja, Dewi (IE)	7/96	Comparison of Individual and Moving Range Chart Combinations to Individual Charts After Designing for a Common "All OK" ARL
Paris, Brandon	12/96	Computation of Approximate Confidence Intervals for the Variance Components of Balanced ($Q-I$)-Fold Nested Designs
Lee, Chiang-Sheng (Johnson)	12/96	The Behavior of Interval Estimators of the Parameter μ When Rounded Normal Data are Used
Chiang, Kok Leong (Andy)	5/98	A Fortran Program for Quantifying the Precision of Estimation in Gage R&R Studies
Senoglu, Birdal	7/98	Development Programs for 1-Shot Systems: 2-State Reliability and Continuous (Normal) Development Test Results
Hammelef, David (GM)	7/98	Quantification of Passenger Compartment Road Noise Variation Within a Product Line
Ryan, Ken	5/99	Confidence Intervals for p Based on Symmetric Double Sampling
Dierkhising, Ross	5/99	Finding Optimal Designs for Gage R&R Studies
Rahardja, Dewi (Stat)	5/00	X Charts versus X/MR Chart Combinations: IID Cases and Non-IID Cases
Schmidt, Matt	7/01	Likelihood-Based Interval Estimation of C_{pk}
Kumar, Vinod (GM)	5/02	Interval Estimation in the Linear Calibration Problem
Zhao, Hua-Liang	5/03	Hierarchical Bayes Analysis of the Quasi-Static Compression of a Polymeric Material
Bonitz, Erin	7/03	A Bayes Analysis in a Random Effects Model for 1-5 Ratings of Metal Casting Radiographs
Xi, Peiyi	7/03	Analysis of a Quality Assurance Method for ELISA Plates
Vaca-Trigo, Iliana	5/04	Joint Confidence Sets for the Mean and Standard Deviation of a Normal Process from Rounded Data
Maxson, Melanie	7/04	Bayes Estimation of the Probability that a Single Unit Fails at Least One of Several Related Criteria and the Corresponding Probability that a Production Process Passes and Audit
Reising, Monica	5/05	Bayesian Analysis in a Model Including Carry-Over Effects for the Testing of Section Tires
Li, Ying	7/05	Maximum Likelihood Estimation and Scale Counting
Adair, Walter	7/06	Bayes Analysis of a Hierarchical Data Structure for the Contaminant Content in a Solid

Kisch, Wendy	12/08	Mixed Effects Method of Analysis for Detecting Disease in Animals Using an Electroretinogram Waveform Characteristic
Resch, Walter (3M)	5/09	GRR.I, a New Contributed R Package, Gauge R&R Estimates of Variance and Confidence Intervals
Thakore, Nimish		

Ph.D. Students

Name	Date	Dissertation Topic
Jobe, Marcus	7/84	Error Rates for Poisson Process Discrimination (Co with H.T. David)
Crowder, Stephen	5/86	Kalman Filtering and Statistical Process Control
Jensen, Karen	5/89	Optimal Adjustment in the Presence of Process Drift and Adjustment Error
Vander Wiel, Scott	5/91	Some Aspects of Monitoring and Control of Univariate Dynamic Systems
Lemke, Klaus	12/92	A Bayesian Approach to Sequential Assembly Experiments (Co with John Jackman)
Dunnigan, Gerri	7/94	Sampling Strategies for an Optimal Control Problem (Co with H.T. David)
Rana, Abdul Wajid	12/94	Variance Estimation in Repeated Samples of Size One
Huang, Mu-Yeh	5/95	Design of Developmental Test Programs for One Shot Systems With Two State Reliability (Co with Doug McBeth)
Lei, Ding-Hwa (Dean)	7/95	The LRT Method of Constructing a Two-Sided "Variables" Acceptance Region and its Comparison With Other Methods
Morse, Peter	12/97	A Comparison of One-Sided Variables Acceptance Sampling Methods When Measurements are Subject to Error
Devanathan, Sriram	12/97	New Approaches for Identification of Systematic Measurement Errors in Linear Steady State and Dynamic Processes (Co with Derrick Rollins)
Zheng, Zugeng	12/99	Studies in Heavy Traffic and in Production Systems (Co with H.T. David)
Dubin, Tom	5/00	Likelihood-Based Inference in Some Partially Non-Regular Exponential Families
Chiang, Kok Leong (Andy)	5/00	Confidence Intervals for Functions of Variance Components
Lee, Chiang-Sheng (Johnson)	7/01	Interval Estimation of Parameters for Normal One Sample and Balanced One-way Random Effects Models When Data are Rounded
Rahardja, Dewi	7/01	Statistical Modeling and Design for CMM-type Data Locating Known Two-Dimensional Geometries
Ryan, Ken	12/01	Engineering Applications of Bayesian Statistical Methods
Shevasuthisilp, Suntichai	12/01	Development Programs for One-Shot Systems Using Multiple-State Design Reliability Models

Landes, Reid	5/05	Statistical Methods for Application to Calibration Problems
Leyva-Estrada, Norma	7/06	Statistical Inference for Particle Systems from Sieving Studies
Reising, Monica	5/09	Modeling and Discrimination for Spectral-Temporal Data (Co with Max Morris)
Bingham, Melissa	5/09	Likelihood and Bayes Inference for a Class of Distributions on Orientations in 3 Dimensions (Co with Dan Nordman)
Page, Garritt	12/09	Bayesian Mixture Modeling and Outliers in Inter-laboratory Studies
Kisch, Wendy		(Co with Greg Maxwell and Max Morris)
Qui, Yu		(Co with Dan Nordman)
Vaca-Trigo, Iliana		

Papers Published and Accepted for Publication in Refereed Journals

Admissible solutions of finite state sequence compound decision problems. *Annals of Statistics*, 1978, Vol. 6, pp. 673-679.

Bounds on the empirical Bayes and compound risks of truncated versions of Robbins's estimator of a binomial parameter. *Journal of Statistical Planning and Inference*, 1978, Vol. 2, No. 3, pp. 245-252.

A note on the applicability of sequence compound decision schemes. *Scandinavian Journal of Statistics*, 1979, Vol. 6, No. 2, pp. 86-88.

$O(N^{\frac{1}{2}})$ convergence in the general bounded risk two state sequence compound decision problem. *Sankhya' Series A*, 1980, Vol. 42, pp. 88-102.

Admissible solutions of k -extended finite state set and sequence compound decision problems. *Journal of Multivariate Analysis*, 1980, Vol. 10, No. 3, pp. 426-441.

Empirical restricted Bayes estimation in a multivariate discrete exponential family. *Communications in Statistics*, 1981, Vol. A10, No. 1, pp. 79-100. With Ashok Singh.

Contextual classification of multispectral image data. *Pattern Recognition*, 1981, Vol. 13, No. 6, pp. 429-441. With Philip Swain and James Tilton.

On the small n performance of bootstrap and Bayes extended and unextended set compound rules for classification between $N(-1,1)$ and $N(1,1)$. *Journal of Statistical Computation and Simulation*, 1981, Vol. 13, No. 3&4, pp. 255-271.

Approximation to minimum k -extended Bayes risk in sequences of finite state decision problems and games. *Bulletin of the Institute of Mathematics Academia Sinica*, 1982, Vol. 10, No. 1, pp. 35-52.

Estimation of context for statistical classification of multispectral image data. *IEEE Transactions on Geoscience and Remote Sensing*, 1982, Vol. GE-20, No. 4, pp. 445-452. With James Tilton and Philip Swain.

Admissible estimators in finite population sampling employing various types of prior information. *Journal of Statistical Planning and Inference*, 1983, Vol. 7, No. 4, pp. 329-341. With Glen Meeden.

Admissible estimators of the population total using trimming and Winsorization. *Statistics and Probability Letters*, 1983, Vol. 1, pp. 317-321. With Glen Meeden.

Calibration, sufficiency and domination considerations for Bayesian probability assessors. *Journal of the American Statistical Association*, 1983, Vol. 78, No. 384, pp. 808-816. With Glen Meeden.

Admissible estimators for the total of a stratified population that employ prior information. *Annals of Statistics*, 1984, Vol. 12, No. 2, pp. 675-684. With Glen Meeden.

Statistics for quality and productivity: A new graduate level statistics course. *The American Statistician*, 1984, Vol. 38, No. 4, pp. 235-243. With Herbert T. David.

Bayes and admissible set estimation. *Journal of the American Statistical Association*, 1985, Vol. 80, No. 390, pp. 465-471. With Glen Meeden.

Some admissible nonparametric and related finite population sampling estimators. *Annals of Statistics*, 1985, Vol. 13, No. 2, pp. 811-817. With Glen Meeden and Malay Ghosh.

Average run lengths for CUSUM charts when observations are exponentially distributed. *Technometrics*, 1985, Vol. 27, No. 2, pp. 145-150. With Di-ou Ray.

The legitimate role of inspection in modern SQC. *The American Statistician*, 1986, Vol. 40, No. 4, pp. 325-328.

A partial inventory of the statistical literature on quality and productivity through 1985. *Journal of Quality Technology*, 1987, Vol. 19, No. 2, pp. 90-97. With John A. Cornell.

An interactive program for the analysis of data from two level factorial experiments via probability plotting. *Journal of Quality Technology*, 1988, Vol. 20, No. 2, pp. 140-148. With Stephen Crowder, Karen Jensen and W. Robert Stephenson.

An interactive probability plotting program. *Journal of Quality Technology*, 1988, Vol. 20, No. 3, pp. 196-210. With Karen Jensen and Stephen Crowder.

On the refinement of the variable lead time/constant demand lot-sizing model: The effect of true average inventory level on the traditional solution. *International Journal of Production Research*, 1989, Vol. 27, No. 5, pp. 883-899. With Shih-Ming Lee, Eric Malstrom and Volker Peterson.

The admissibility of the Kaplan-Meier and other maximum likelihood estimators in the presence of censoring. *Annals of Statistics*, 1989, Vol. 17, No. 4, pp. 1509-1531. With Glen Meeden, Malay Ghosh and C. Srinivasan.

A noninformative Bayesian approach to interval estimation in finite population sampling. *Journal of the American Statistical Association*, 1991, Vol. 86, No. 416, pp. 972-980. With Glen Meeden.

Stochastic rendering of geometric forms in design for manufacturing. *Journal of Design and Manufacturing*, 1991, Vol. 1, pp. 57-66. With John Jackman and Way Kuo.

What about the other intervals? *The American Statistician*, 1992, Vol. 46, No. 3, pp. 193-197.

Optimal adjustment in the presence of deterministic process drift and random adjustment error. *Technometrics*, 1993, Vol. 35, No. 4, pp. 376-389. With Karen Jensen.

A discussion of "all or none" inspection policies. *Technometrics*, 1994, Vol. 36, No. 1, pp. 102-109. With Scott Vander Wiel.

A compliance measure for the alignment of cylindrical part features. *IIE Transactions*, 1994, Vol. 26, No. 1, pp. 2-10. With John Jackman, Jyh-jeng Deng, Hae-il Ahn and Way Kuo.

Independent student projects in undergraduate engineering statistics and quality control courses. *Communications in Statistics*, 1996, Vol. 25, No. 11, pp. 2633-2646.

Development-test programs for 1-shot systems: 2-state reliability and binary development-test results. *IEEE Transactions on Reliability*, 1996, Vol. 45, No. 3, pp. 379-385. With Mu-Yeh Huang and Doug McBeth.

The LRT method of constructing a two-sided "variables" acceptance region and its comparison with other methods. *Communications in Statistics*, 1998, Vol. 27, No. 2, pp. 329-351. With Ding-Hwa Lei.

A brief tutorial on the estimation of the process standard deviation. *IIE Transactions*, 1999, Vol. 31, No. 6, pp.503-507.

Development programs for 1-shot systems: Decoupled tests and redesigns, with the possibility of design degradation. *IEEE Transactions on Reliability*, 1999, Vol. 48, No. 2, pp. 189-198. With Mike Moon and Doug McBeth.

Two-way random-effects analyses and gauge R&R studies. *Technometrics*, 1999, Vol. 41, No. 3, pp. 202-211. With Enid VanValkenburg.

A simple hidden Markov model for Bayesian modeling with time dependent data. *Communications in Statistics*, 2000, Vol. 29, No. 8, pp. 1801-1826. With Glen Meeden.

A new approach for improved identification of systematic measurement errors. *Computers and Chemical Engineering*, 2000, Vol. 24, No. 12, pp. 2755-2764. With Sriram Devanathan and Derrick Rollins.

Interval estimation of a normal process mean from rounded data. *Journal of Quality Technology*, 2001, Vol. 33, No. 3, pp. 335-348. With Chiang-Sheng Lee.

Interval estimation of a normal process standard deviation from rounded data. *Communications in Statistics*, 2002, Vol. 31, No. 1, pp. 13-34. With Chiang-Sheng Lee.

Confidence intervals based on rounded data from the balanced one-way normal random effects model. *Communications in Statistics*, 2003, Vol. 32, No.3, pp. 835-856. With Chiang-Sheng Lee.

Statistics and ethics: Some advice for young statisticians. *The American Statistician*, 2003, Vol. 57, No. 1, pp. 21-26. With Max Morris.

Likelihood-based inference in some continuous exponential families with unknown threshold parameters. *Journal of the American Statistical Association*, 2003, Vol. 98, No. 463, pp. 741-749. With Tom Dubinin.

Development programs for one-shot systems using multiple-state design reliability models. *Naval Research Logistics*, 2004, Vol. 51, No. 6, pp. 873-892. With Suntichai Shevasuthisilp.

Development programs for 1-shot systems: 2-state reliability and continuous (normal) development test results. *Journal of Applied Statistical Science*, 2004, Vol. 13, No. 4, pp. 343-352. With Birdal Senoglu.

Likelihood-based statistical estimation from quantized data. *IEEE Transactions on Instrumentation and Measurement*, 2005, Vol. 54, No. 1, pp. 409-414. With Chiang-Sheng Lee.

The expected sample variance of uncorrelated random variables with a common mean and some applications in unbalanced random effects models. *Journal of Statistics Education* [Online], 2005, Vol. 13, No. 1, www.amstat.org/publications/jse/v13n1/wardeman.html With Joanne Wendelberger.

Sheppard's correction for variances and the "quantization noise model." *IEEE Transactions on Instrumentation and Measurement*, 2005, Vol. 54, No. 5, pp. 2117-2119.

Likelihood and Bayesian methods for accurate identification of measurement biases in pseudo steady-state processes. *Chemical Engineering Research and Design: Part A*, 2005, Vol. 83(A12), pp. 1391-1398. With Sriram Devanathan and Derrick Rollins.

Calibration, error analysis, and ongoing measurement process monitoring for mass spectrometry. *Quality Engineering*, 2006, Vol. 18, No. 2, pp. 207-217. With Joanne Wendelberger and Lily Wang.

Hierarchical Bayes statistical analyses for a calibration experiment. *IEEE Transactions on Instrumentation and Measurement*, 2006, Vol. 55, No. 6, pp. 2165-2171. With Reid Landes and Peter Loutzenhiser.

Uniformly hyper-efficient Bayes inference in a class of non-regular problems. *The American Statistician*, 2009, Vol. 63, No. 3, pp. 234-238. With Melissa Bingham and Dan Nordman.

Bayes one-sample and one-way random effects analyses for 3-d orientations with application to materials science. *Bayesian Analysis*, 2009, Vol. 4, No. 3, pp. 607 - 630, posted online 2009-08-11, DOI:10.1214/09-BA423. With Melissa Bingham and Dan Nordman.

Finite-sample investigation of likelihood and Bayes inference for the symmetric von Mises-Fisher distribution. *Computational Statistics and Data Analysis*, 2009, DOI:10.1016/j.csda.2009.11.020. With Melissa Bingham and Dan Nordman.

Modeling and inference for measured crystal orientations and a tractable class of symmetric distributions for rotations in 3 dimensions. *Journal of the American Statistical Association*, 2009, Vol. 104, No. 488, pp. 1385-1397. With Melissa Bingham and Dan Nordman.

Elementary statistical methods and measurement. To appear in *The American Statistician*. With Joanne Wendelberger, Tom Burr, Mike Hamada, Leslie Moore, Max Morris, J. Marcus Jobe, and Huaqing Wu.

Papers Submitted to Refereed Journals

Modeling spectral-temporal data. Under revision for *Technometrics*. With Monica Reising, Max Morris, and Shawn Higbee.

Approximate likelihood-based inference for weight-size distributions from sieving data. Under revision for *Technometrics*. With Norma Leyva-Estrada

Other Contributions to Refereed Journals

Comments on "Testing a point null hypothesis: The irreconcilability of P -values and evidence" by Berger and Sellke and "Reconciling Bayesian and frequentist evidence in the one-sided testing problem" by Casella and Berger. *Journal of the American Statistical Association*, 1987, Vol. 82, No. 1, pp. 130-131.

Comments on "Statistical process monitoring and feedback control- A discussion" by Box and Kramer. *Technometrics*, 1992, Vol. 34, No. 3, pp. 278-281. With Scott Vander Wiel.

Solution to Problem 10516. *American Mathematical Monthly*, 1997, Vol. 104, No. 9, pp. 878-880. With Dick Groeneveld.

Comments on "A one-semester, laboratory-based, quality-oriented statistics curriculum for engineering students" by Barton and Nowack. *The American Statistician*, 1998, Vol. 52, No. 3, p. 242.

Introduction to two classics in statistical process control, 40th Anniversary Issue, *Technometrics*, 2000, Vol. 42, No. 1, pp. 95-96.

Book Chapters

Applied statistical methods and the chemical industry. Chapter 4 in *Riegel's Handbook of Industrial Chemistry*, 9th Edition, J.A. Kent, Ed., Van Nostrand Reinhold, New York, 1992, pp. 83-117. With Bob Kasprzyk.

Applied statistical methods and the chemical industry. Chapter 4 in *Riegel's Handbook of Industrial Chemistry*, 10th Edition, J.A. Kent, Ed., Kluwer Academic, New York, 2003, pp. 50-81. With Bob Kasprzyk.

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