Stephen Bruce Vardeman

Personal Data

Citizenship: U.S.A.
Security Clearance: L (Department of Energy/Los Alamos National Lab)
ORCID iD: http://orcid.org/0000-0001-5481-9423

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

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-
Kingland Data Analytics Faculty Fellow	2017-2019
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
LAS Award for Outstanding Graduate Teaching	2010
Foreign Travel Grant (Stu Hunter Conference, Leuven Belgium)	2015
Exemplary Faculty Mentor	2019

Editorial Experience

Associate Editor	*The American Statistician*	'84-'87,'96-'08
Associate Editor	*Technometrics*	'86-'91
Editor-Elect	*Technometrics*	1992
Editor	*Technometrics*	'93-'95
Associate Editor	*Naval Research Logistics*	'03-'06
Associate Editor	*Statistics Surveys*	'11-'13

Other Professional Experience

Owner and Principal Statistician	Analytics Iowa LLC	2011-present
	http://www.analyticsiowa.com/	
Los Alamos National Lab	Visiting Faculty Member	2000-present
Statistical Horizons	Two-Day Machine Learning Short Courses	2016, 2017
Genencor	Three-Day Engr. Stat and SPC Short Course	2005
GM/Saturn/NSF	Four-Week Faculty Research Visit	1998
John Deere	One-Week Advanced SPC Short Course	1985
Hewlett-Packard	5 One-Week Advanced SPC Short Courses	1984

Private Consulting (Prior to Analytics Iowa LLC) with Amana Refrigeration, Proctor and Gamble, Maytag, Dow Chemical, Westinghouse, Minitab, Pall, Mg Biologics

Professional Societies and Honors

American Statistical Association, Fellow	Elected 1988
International Statistical Institute, Elected 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,'11,'15
ASA Task Force on Statistical Significance and Reproducibility	'20

Public/Community Service

Greater Iowa Credit Union Board of Directors	'06-'15 (Treasurer '11-'14)

External 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, '09-'10, '10-11, '11-'12 "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"
Co-PI, Syngenta Seeds, '17-'18, "Exploratory Research on Critical Factors, Potential Methods, Software, and Usability-Utility Tradeoff"
Co-PI, Syngenta Seeds, '18-'19, "Advanced Decision Support for Data-Driven Plant Breeding"
Co-PI, NASA, '18-'19, "Adaptive Stress Training for Hazardous Conditions"

Recent Program Participation at Professional Meetings and Conferences

Invited Workshop Speaker: Data Science Essentials: Skills to Become a Data Scientist (Academic Perspective), October 2019, University of Texas El Paso Mathematical Sciences, El Paso, TX
Conference Co-Chair: 2nd Midwest Statistical Machine Learning Colloquium, May 2019, Ames, IA
Conference Chair: 1st Midwest Statistical Machine Learning Colloquium, May 2018, Ames, IA
Invited Speaker: *IIE Transactions* Best Paper Session (2015 Quality and Reliability Engineering Paper Award Honorable Mention), June 2015, Nashville, TN
Invited Speaker: Modern Measurement, Probability, and Statistics: Some Generalities and Multivariate Illustrations, Stu Hunter Research Conference, March 2015, Leuven, Belgium

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, F'10, F'11, F'13

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 401/587 (Statistical Methods for Research-Engineering, Physical Sciences and Mathematical Sciences Section) F'15, F'16, S'17 (Online), F'17, S'18 (Online), F'18

Statistics 415 (Advanced Statistical Methods-Statistics for Metrology) F'12

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

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

Statistics 502 (Applied Modern Multivariate Statistical Learning) Sp'14 (Co with Max Morris and Huaiqing Wu), Sp'16, Sp'18, Sp '20

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), Sp'16

Statistics 544 (Bayesian Statistics) Sp'06, Sp'07, Sp'08, Sp'12

Statistics 551 (Time Series Analysis) F'12

Statistics 590 (Special Topic: Financial Analytics Project) F'18 (Co with Max Morris)

Statistics 602 (Modern Multivariate Statistical Learning) Sp'11, Sp'13, Sp'15, Sp'17, Sp'19

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

Statistics 690B (Advanced Special Topic in Statistical Methods—Unsupervised Learning) Sp'12

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,F'10, Sp'11, F'11, F'12, S'18 (Half of Class Projects Only), S'19 (Half of Class Projects Only)

Industrial Engineering 305 (Engineering Economy) F'13

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

Dewi Rahardja (IE)	7/96	Comparison of Individual and Moving Range Chart Combinations to Individual Charts after Designing for a Common "All OK" ARL
Brandon Paris	12/96	Computation of Approximate Confidence Intervals for the Variance Components of Balanced (*Q-1*)-Fold Nested Designs
Chiang-Sheng Lee (Johnson)	12/96	The Behavior of Interval Estimators of the Parameter μ When Rounded Normal Data are Used
Kok Leong Chiang (Andy)	5/98	A `Fortran` Program for Quantifying the Precision of Estimation in Gage R&R Studies
Birdal Senoglu	7/98	Development Programs for 1-Shot Systems: 2-State Reliability and Continuous (Normal) Development Test Results
David Hammelef (GM)	7/98	Quantification of Passenger Compartment Road Noise Variation within a Product Line
Ken Ryan	5/99	Confidence Intervals for *p* Based on Symmetric Double Sampling
Ross Dierkhising	5/99	Finding Optimal Designs for Gage R&R Studies
Dewi Rahardja (Stat)	5/00	*X* Charts versus *X/MR* Chart Combinations: IID Cases and Non-IID Cases
Matt Schmidt	7/01	Likelihood-Based Interval Estimation of C_{pk}
Vinod Kumar (GM)	5/02	Interval Estimation in the Linear Calibration Problem
Hua-Liang Zhao	5/03	Hierarchical Bayes Analysis of the Quasi-Static Compression of a Polymeric Material
Erin Bonitz	7/03	A Bayes Analysis in a Random Effects Model for 1-5 Ratings of Metal Casting Radiographs
Peiyi Xi	7/03	Analysis of a Quality Assurance Method for ELISA Plates
Iliana Vaca-Trigo	5/04	Joint Confidence Sets for the Mean and Standard Deviation of a Normal Process from Rounded Data
Melanie Maxson	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 an Audit
Monica Reising	5/05	Bayesian Analysis in a Model Including Carry-Over Effects for the Testing of Section Tires
Ying Li	7/05	Maximum Likelihood Estimation and Scale Counting
Walter Adair	7/06	Bayes Analysis of a Hierarchical Data Structure for the Contaminant Content in a Solid
Wendy Kisch	12/08	Mixed Effects Method of Analysis for Detecting Disease in Animals Using an Electroretinogram Waveform Characteristic
Walter Resch (3M)	5/09	`GRRI`, a New Contributed `R` Package, Gauge R&R Estimates of Variance and Confidence Intervals
Paula Madgett	7/10	A Data Simulator for Teaching about Measurement Error in Basic Statistics Courses
Yu Qui	12/10	A Pseudo-likelihood Analysis for Incomplete Warranty Data (Co with Dan Nordman)
Jingfang Tang	12/16	An `R-jags` Implementation of Bayesian Neural Network Fitting
Yalin Rao	5/17	Simulation for UARS Distributions and Bayesian

		Inference for the MFUARS Distribution
Amy Crawford	7/17	Performance of 2-Class Classifiers on Data for which Labels are Missing by a Non-Random Mechanism
Xiangmei Zhang	12/17	Bayesian Crater-Counting Analysis Accounting for Observation Error
Jesse Darlington	7/19	Two Case Studies on the Effectiveness of Alternative Ensemble Methods for Machine Learning Prediction
Scott Stumbaugh		(Co with Dan Nordman)

Ph.D. Students

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

Reid Landes	5/05	Statistical Methods for Application to Calibration Problems
Norma Leyva-Estrada	7/06	Statistical Inference for Particle Systems from Sieving Studies
Monica Reising	5/09	Modeling and Discrimination for Spectral-Temporal Data (Co with Max Morris)
Melissa Bingham	5/09	Likelihood and Bayes Inference for a Class of Distributions on Orientations in 3 Dimensions (Co with Dan Nordman)
Garritt Page	12/09	Bayesian Mixture Modeling and Outliers in Inter-laboratory Studies
Yu Qiu	5/13	Isotropic Distributions for 3-Dimensional Rotations and One-Sample Bayes Inference (Co with Dan Nordman)
Chuanlong Du (Ben)	5/14	Modeling, Inference and Clustering for Equivalence Classes of 3-D Orientations (Co with Dan Nordman)
Wen Zhou (Rick)	5/14	Some Bayesian and Multivariate Analysis Methods in Statistical Machine Learning and Applications (Co with Huaiqing Wu)
Jing Li	12/14	Bi-clustering Methods and a Bayesian Approach to Fitting Boltzmann Machines in Statistical Learning
Cory Lanker	5/15	Local Prediction and Classification Techniques for Machine Learning and Data Mining (Co with Max Morris)
Andrea Kaplan	7/17	On Advancing MCMC-based Methods for Markovian Data Structures with Applications to Deep Learning, Simulation, and Resampling (Co with Dan Nordman)
Katie Rey	12/18	Some Bayesian Methods for Univariate Density Estimation (Co with Dan Nordman)
Abhishek Chakraborty	7/19	Some Bayes Methods for Biclustering and Vector Data with Binary Coordinates
Ian Mouzon		(Co with Dan Nordman)
Wendy Kisch		(Co with Greg Maxwell and Max Morris)

Ph.D. Students Mentored in ISU Preparing Future Faculty Program

Peter Loutzenhiser	2004	Mechanical Engineering
Lucas Beverlin	2009	Statistics
Maria Joseph	2009	Statistics
Wei-Chen Chen	2010	Statistics
Steve Lund	2010	Statistics
Dan Fortin	2011	Statistics
Adam Loy	2011	Statistics

Papers Published and Accepted for Publication in Refereed Journals

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

2. 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.

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

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

5. 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.

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

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

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

9. 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.

10. 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.

11. 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.

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

13. 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.

14. 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.

15. 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.

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

17. 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.

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

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

20. 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.

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

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

23. 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.

24. 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.

25. 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.

26. 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.

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

28. 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.

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

30. 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.

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

32. 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.

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

34. 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.

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

36. 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.

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

38. 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.

39. 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.

40. 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.

41. 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.

42. 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.

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

44. 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.

45. 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.

46. 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.

47. 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.

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