

CURRICULUM VITAE

RICHARD A. JOHNSON

Education:	1960	B.E.E.	Electrical Engineering (Also Industrial Engineering Option) University of Minnesota
	1962	M.S.	Mathematics, University of Minnesota
	1966	Ph.D.	Statistics, University of Minnesota

Professional Experience:

9-1-74	-	8-31-08	Professor, Department of Statistics University of Wisconsin
8-1-08	-	present	Professor Emeritus
7-1-81	-	6-30-84	Chairman, Department of Statistics University of Wisconsin
2-1-72	-	6-30-72	Visitor, Institute of Mathematics University of Oslo
9-1-70	-	8-31-74	Associate Professor, Department of Statistics, Wisconsin
9-1-66	-	8-31-70	Assistant Professor, Department of Statistics, Wisconsin

Membership in Professional Societies

Fellow of the Institute of Mathematical Statistics
Fellow of American Statistical Association
Royal Statistical Society
International Statistical Institute

Editorship

Editor, *Statistics and Probability Letters*, 1982 - 2007

Associate Editor of *J. Amer. Statist. Assoc.*, 1976 - 1981, 1986 - 1989, 1993 - 1995.

Awards

Received the 2008 Carver Award for service to the Institute of Mathematical Statistics.

Listed in Who's Who in the World 2007-2016.

Received Frank Wilcoxon Award as co-author for best applications paper in *Technometrics* for 1991.

Listed in Who's Who in American 1986 and for over 25 years.

Professional Activities

IMS Council and Executive Committee Member, 1980-1986

IMS Program Secretary (1980-1986)

ASA Council 1982-1984

IMS Associate Program Secretary for Central Region (1972-1980)

ASA Regional Meetings Program Coordinator (1971-1972)

Other Professional Activities

Member of Conference committee, and speaker, Reliability 2002, Trondheim, Norway, July 2002

Member of Conference committee, session chair, and speaker, Reliability 2000, Bordeaux, France, July 2000

Co-organized Invited Paper session for 2nd World Congress of Nonlinear Analysts, Athens, Greece, June 1996

Member of Nominations Committee of IMS, 1993-1994

Member of Travel Awards for New Researchers Committee of IMS, 1994, 1995

Program Committee for IMS Regional Meeting, Houston, March 1991

Program Committee for IMS Pacific Regional Meeting, Honolulu, June 1988

Member of ASA Publications Management Committee 1988 - 1991

Program Committee for Annual IMS Meeting, San Francisco, August 1987

Organizer for Invited Paper Session ISI Meeting, Tokyo, September 1987

Re-activator of Madison Chapter of ASA and currently secretary-treasurer (1974-present)

Program Committee for Eastern Regional IMS Meeting, Spring 1972

ASA Regional Meetings Program Coordinator (1971-1972)

Program Committee for Eastern Regional IMS Meeting, Spring 1972

Program Chairman (Technometrics Section of ASA) for IMS-ASA Regional Meeting, April 1969, Iowa City

PUBLICATIONS

Published

1. Asymptotic expansions associated with the n -th power of a density. *Ann. Math. Stat.*, (1967), **38**, 1266-1272.
2. An asymptotic expansion for posterior distributions. *Ann. Math. Stat.*, (1967), **38**, 1899-1907.
3. A nonparametric approach to the detection of shift at an unknown time point. *Ann. Math. Stat.*, (1968), **39**, 1731-1743, with G. K. Bhattacharyya.
4. A re-examination of Hougen-Watson rate models including a weighted least squares approach, with R. Mezaki and N. Standal. *Industrial and Engineering Chemistry Fund.*, (1968) **7**, 181-183.
5. Approach to degeneracy and the efficiency of some multivariate tests. *Ann. Math. Stat.*, (1968), **39**, 1654-1660, with G. K. Bhattacharyya.
6. Asymptotically most powerful tests for Markov processes. *Ann. Math. Stat.*, (1969), **40**, 1207-1215, with G. Roussas.
7. On Hodges' bivariate sign test and a test for uniformity of a circular distribution. *Biometrika*, (1969), **56**, 446-448, with G. K. Bhattacharyya.
8. A note on weighted linear plots for discrimination of nonlinear rate models. *Can. J. Chem. Engr.*, (1969), 517-518, with R. Mezaki.
9. Asymptotic expansions associated with posterior distributions. *Ann. Math. Stat.*, (1970), **41**, 851-864.
10. Properties of a rank test of Cronholm and Revusky, *J. Amer. Statist. Assoc.*, (1970), **65**, 1308-1319, with G. K. Bhattacharyya.
11. Asymptotically optimal tests for Markov processes. *Ann. Math. Stat.*, (1970), **41**, 918-938, with G. Roussas.
12. A layer rank test for ordered bivariate alternatives. *Ann. Math. Stat.*, (1970), **41**, 1296-1310, with G. K. Bhattacharyya.
13. Applications of contiguity to multiparameter hypotheses testing. *Sixth Berkeley Symposium*, (1970), **1**, 195-226, with G. Roussas.
14. Percentage points of the normal score layer rank tests for independence and empirical power comparisons. *J. Amer. Statist. Assoc.*, (1970), **65**, 976-983, with G. K. Bhattacharyya and H. Neave.
15. A comparative power study of the bivariate rank sum test and T^2 . *Technometrics*, (1971), **13**, 191-198, with G. K. Bhattacharyya and H. Neave.

16. Locally most powerful rank tests for the two-sample problem with censored data. *Ann. Math. Stat.*, (1972), **43**, 823-831, with K. G. Mehrotra.
17. A nonparametric test for ordered alternatives in the bivariate case, *J. Multivariate Analysis*, (1972), **2**, 219-229, with K. G. Mehrotra.
18. On Robustness of rank tests in life testing. *J. Statistical Computation and Simulation*, (1973), **2**, 159-169, with G. K. Bhattacharyya.
19. On the violation of assumptions in nonlinear least squares by interchange of response and predictor variables. *I. and E. C. Fundamentals*, (1973), **12** 251-254, with N. Draper and R. Mezaki.
20. On a test of independence in a bivariate exponential distribution. *J. Amer. Statistical Assoc.*, (1973), **68**, 704-706, with G. K. Bhattacharyya.
21. Some c-sample nonparametric tests for ordered alternatives. *J. Indian Statistical Assoc.*, (1971), **9**, [printed in 1973] 8-23, with K. G. Mehrotra.
22. Some optimality results for one and two sample procedures based on the smallest r order statistics. *Reliability and Biometry*, (1974) 459-493, eds. F. Proschan and R. Serfling, S.I.A.M., Philadelphia.
23. The effect of serial correlation on the performance of cusum tests, *Technometrics*, (1974), **16**, 103-112, with M. Bagshaw.
24. Estimation of reliability in a multicomponent stress-strength model. *J. Amer. Statistical Assoc.*, (1974), **69**, (1974) 966-970, with G. K. Bhattacharyya.
25. Asymptotic results for inference procedures based on the r smallest order statistics. *Ann. Statist.*, (1974), **2**, 1138-1151.
26. The effect of serial correlation on the performance of cusum tests II. *Technometrics*, (1975), **17** (1975) 73-80, with M. Bagshaw.
27. The influence of reference values and estimated variance on the ARL of cusum tests. *J. Royal Statist. Soc.*, (1975), **B**, **37** 413-420, with M. Bagshaw.
28. Sequential detection of a drift change in a Wiener process. *Comm. Statist.*, (1975), **4**, 787-796, with M. Bagshaw.
29. Stress-strength models for system reliability. *Reliability and Fault Tree Analysis*, (1975), 509-532, eds. R. Barlow et. al. S.I.A.M., Philadelphia.
30. Asymptotic sufficiency and asymptotically most powerful tests for the two sample censored situation. *Ann. Statist.*, (1976), **4**, 589-596, with K. G. Mehrotra.
31. Linear discrimination and some further results on best lower dimensional representations. *Classification and Clustering*. (Editor: J. Van Ryzin) (1977) 371-394, Academic Press, with R. Hudlet.
32. On the completeness of minimal sufficient statistics with censored observations. *Ann. Statist.*, (1977), **5**, 547-553, with G. K. Bhattacharyya and K. G. Mehrotra.
33. Sequential procedures for detecting parameter changes in a time series model. *J. Amer. Statist. Assoc.*, (1977), **72**, 593-597, with M. Bagshaw.

34. Locally most powerful rank tests for multiple censored data. *Comm. Statist. Theor. Meth.*, (1977), **6**, 459-469, with G. K. Bhattacharyya and K. G. Mehrotra.
35. Measures and models for angular correlation and angular-linear correlations. *J. Royal Statistical Soc. B*, (1977), **39**, 222-229, with T. Wehrly.
36. Nonparametric estimation of reliability for an s out of k stress-strength system. *Bull. Greek Math. Soc.* (Memorial Volume for C. Papakyriakopoulos), (1977), **18**, 94-105, with G. K. Bhattacharyya.
37. Some angular-linear distributions and related regression models. *J. Amer. Statist. Assoc.*, (1978), **73**, 602-606, with T. Wehrly.
38. Differential Relations, in the original parameters, which determine the first two moments of the multiparameter exponential family. *Ann. Statist.*, (1979), **7**, 232-235, with J. Ladalla and S. T. Liu.
39. Extended hazard rate functions: properties and applications. *Comm. Statist. Theor. Meth.*, (1979), **8**, 1493-1510, with G. K. Bhattacharyya and K. G. Mehrotra.
40. Bayesian nonparametric estimation for age-dependent branching processes. *Stochastic Processes and Their Applications*, (1979), **9**, 307-318, with V. Susarla and J. Van Ryzin.
41. The large sample behavior of posterior distributions when sampling from multiparameter exponential family models, and allied results. *Sankhyā*, (1979), **41B**, 196-215, with J. Ladalla.
42. Current Statistical Methods for Estimating Lumber Properties by Proofloading. *Forest Products Journal*, (1980), **30**, 14-22.
43. Bivariate models for dependence of angular observations and a related Markov process. *Biometrika*, (1980), **67**, 255-256, with T. Wehrly.
44. The large sample behavior of transformations to normality. *J. Amer. Statist. Assoc.*, (1980), **75**, 855-861, with F. Hernandez.
45. Asymptotic inference in Levy processes of the discontinuous type, *Ann. Statist.*, (1981), **9**, 604-614, with M. Akritas.
46. Estimation of concomitant properties of lumber. *Metal Plate Wood Truss Conference Proceedings*, (1981), 65-70, Forest Products Research Society, with W. Galligan and J. Taylor.
47. Transformation of a discrete distribution to near normality. *Statistical Distributions in Scientific Work*, C. Taillie et al. (eds.) **5**, 257-270, D. Reidel Dordrecht, Holland, with F. Hernandez.
48. An extension of some optimal properties of principal components. *Ann. Inst. Stat. Math.*, (1982), **34**, 105-110, with R. Hudlet,
49. The contiguity of probability measures and asymptotic inferences in continuous time stationary diffusions and Gaussian processes with known covariance. *J. Multivariate Analysis*, (1982), **12**, 123-135, with M. Akritas.

50. Some reliability concepts useful in materials testing, with G. K. Bhattacharyya. *Reliability in the Acquisitions Process* (1983) D. J. DePriest and R. L. Launer (eds.), Marcel Dekker, 115-131,
51. Use of the Box-Cox transformation with binary response models. *Biometrika*, (1982), **69**, 309-314, with V. Guerrero.
52. Efficiencies of tests and estimates for p-order autoregressive processes when the error distribution is nonnormal. *Ann. Inst. Stat. Math.*, (1982), **34**, 579-589, with M. Akritas.
53. Transformations of survival data. *Survival Analysis*, eds. J. Crowley and R. Johnson (1982), Institute of Mathematical Statistics, 118-136.
54. Estimating the Concomitance of Lumber Strength Properties, *Wood and Fiber Science*, (1983), **15**, 235-244, with W. Galligan.
55. Sampling properties of estimators of a Weibull distribution of use in the lumber industry. *Canadian J. Statist.*, (1983), **11**, 155-169, with J. Haskell.
56. The selection of an extreme-value distribution and the problem of transforming to a specified distribution. *Operations Research*, (1984), **32**, 715-725, with F. Hernandez.
57. Estimating the correlation between properties measured by destructive testing or how to break the same board twice. *Technometrics*, (1984), **26**, 285-290, with J. Evans and D. Green.
58. Investigation of the procedure for estimating concomitance of lumber strength properties. *Wood and Fiber Science*, (1984), **16**, 427-440, with J. Evans and D. Green.
59. An approximate lower tolerance bound for the three-parameter Weibull applied to lumber property characterization. *Statistics and Probability Letters*, (1984), **2**, 67-76, with J. Haskell.
60. Transformation of grouped or censored data to near normality. *Insurance: Mathematics and Economics*, (1984), **3**, 257-262, with V. Guerrero.
61. Comment on "The Analysis of Transformed Data". *J. Amer. Statist. Assoc.*, (1984), **79**, 314-315.
62. Panel Discussion on Current Trends on Quality Control and Reliability in the Literature. (Proceedings of the International Quality Control Conference, Winnipeg). *Comm. Statistics*, (1985), 2815-2824.
63. Sequential probability ratio tests with application to quality control. Reliability and Quality Control Conference, North Holland, (1986), A. P. Basu Ed., 225-234, with S. Liu.
64. Experimental designs for estimating the correlation between two destructively tested variables. *J. Amer. Statist. Assoc.*, (1986), **81**, 807-812, with S. Amorim.
65. Two-sample rank tests for detecting changes that occur in a small proportion of the treated population. *Biometrics*, (1987), **43**, 641-656, with S. Verrill and D. Moore.

66. The asymptotic equivalence of some modified Shapiro-Wilk statistics - Complete sample and censored cases. *Ann. Statist.*, (1987) **15**, 413-419, with S. Verrill.
67. Transforming grouped bivariate data to near normality. *Statistics and Probability Letters*, (1988), **6**, 213-224, with V. Guerrero.
68. Stress-strength models with covariates. *Technometrics*, (1988), **30**, 161-168, with G. K. Bhattacharyya, I. Guttman and B. Reiser.
69. Tables and large-sample distribution theory for censored-data correlation statistics for testing normality. *J. Amer. Statist. Assoc.*, (1988), **83**, 1192-1197, with S. Verrill.
70. The large sample distribution of a quadratic form with application to goodness-of-fit. *Comm. Statist.*, (1988), **17**, 4011-4024, with S. Verrill.
71.] Properties of continuous analog estimators for a discrete reliability growth model. *IEEE Transactions of Reliability*, (1989), **38**, 373-378, with G. K. Bhattacharyya and A. Fries.
72. Two sample rank tests under a random truncation model. *Statistics Probability Letters*, (1990), **9**, 409-422, with C. Morrell.
73. Confidence estimation with discrete reliability growth models. *Statistical Planning and Control*, (1991), **29**, 87-97, Proceedings of International Reliability Conference.
74. Tests of fit for composite hypotheses with censored data. *Statistics and Decision*, (1991), **9**, 21-43, with Lajos Horvath.
75. A linear combination test for detecting serial correlation in multivariate samples. Dependence (1991). *Inst. Math Statist.* monograph on Dependence, Eds. Block et al., 299-313, with T. Langeland.
76. Random truncation and neutrinos. *Technometrics*, (1991), **33**, 429-440, with C. Morrell.
77. The large sample distribution of the Shapiro-Wilk statistics and its variations under type I and type II right censoring. *Statistics and Probability Letters*, (1991), **12**, 405-413, with S. Verrill.
78. Inferences about correlation based on proof loading experiments. Special issue of *Statistics and Probability Letters*, (1991), **12**, 517-524, ed. Sen Gupta, A. et al., with K. T. Wu.
79. Testing Reliability in a Stress-Strength Model When X and Y are Normally Distributed. *Technometrics*, (1992), **34**, 83-91, with S. Weerahandi.
80. Symmeterized rank tests with randomly censored data. *J. Inst. Statist. Math.*, (1992), **44**, 745-753, with M. Akritas.
81. Two sample nonparametric estimation and confidence intervals under truncation. *Biometrics*, (1992), **48**, 1043-1056, with C. Morrell and A. Schick.
82. Estimation with K independent randomly truncated samples: Application to Neutrino Energies. *Comm. in Statist.-Theory Meth.*, (1992), **21**, 3335-3350, with C. Morrell.

83. Estimating hot numbers and testing for uniformity in the lottery. *J. Amer. Statist. Assoc.*, (1993), **88**, 662-668, with J. Klotz.
84. A Bayesian decision theory approach to screening problems. *Advances in Reliability*, ed. A.P. Basu, (1993), 181-206, North Holland, with A. Mouhab.
85. The Influence of Random Effects on the Unconditional Hazard Rate and Survival Functions *Biometrika*, (1993), **80**, 910-914 with Y. Omori.
86. Testing independence of bivariate circular data and weighted degenerate U statistics. *Statistica Sinica*, (1994), **4**, 729-747, with G. Shieh and E. Frees.
87. Bayesian inference for stress-strength models with explanatory variables, *Gujarat Statistical Review* (Professor Khatri Memorial Volume) (1990 appeared 1994), 55-67, with G.K. Bhattacharyya, I. Guttman, and B. Reiser.
88. Goodness-of-fit using very small but related samples with application to censored data estimation of PCB contamination. *Environmetrics* (1995), **6**, 341-348, with P. Berthouex and R. Gan.
89. Predictive distributions for order statistics, *Recent Advances Life Testing* (1995), **9**, 506-521, Editors N. Balakrishnan, with J. Evans and D. Green.
90. Nonparametric Tests for Ordered c -sample Contaminated Distributions. *Communications in Statistics - Theory and Methods* (1995), **24**, 861-879, with S. Sim.
91. A Bayesian approach to multi-category screening problems, *World Congress of Non-linear Analysts* (1996), 2851-2859, ed. V. Lakshmikantham, de Grauter, Berlin, with A. Mouhab.
92. A Bayesian Decision Theory Approach to Classification Problems, *J. Multivariate Analysis* (1996), **56**, 232-244, with A. Mouhab.
93. Minimum Distance Estimation Using the Lotka Limit for Age Dependent Branching Processes, *Nonlinear Analysis, Theory, Methods & Applications* (1997), **30**, 447-458, with J. Taylor.
94. Goodness-of-Fit Tests for Two-Parameter and Three-Parameter Weibull Distributions, *Advances in the Theory and Practice of Statistics* (1997), 159-178, Editors, N. L. Johnson and N. Balakrishnan, with J. Evans and D. Green.
95. Multivariate Multisample Quantile Test for Ordered Alternatives, with S. Sim, B. Klein, and R. Klein. *J. American Statistical Assoc.* (1998) **93**, 807-818.
96. Comparisons of Spatially Correlated Binary Data, with S. Sim. *Statistics and Probability Letters* (1998) **39**, 81-97.
97. The Generalized Logistic Models with Transformations, with I. Yeo, *J. Korean Statistical Society* (1998), **27**, 495-506.
98. Nonparametric Bayesian Predictive Distributions for Future Order Statistics, with J. Evans and D. Green. *Statistics and Probability Letters* (Special issue in honor of V. Susarla) (1999), **41**, 247-254.

99. The Influence of Random Effects on Bivariate and Trivariate Survival Models, with Y. Omori. *J. Nonparametric Statist.* (Special issue) (1999), **11**, 137-160.
100. Some Consequences of Random Effects in Multivariate Survival Models, *Multivariate Analysis, Design of Experiments, and Survey Sampling- A tribute to Jagdish Srivastava*, editor, Subir Ghosh, Marcel Dekker, (1999), 301-347, with Y. Omori.
101. A New Multiple Proof Loads Approach for Estimating Correlation, Reliability 2000, *Recent Advances in Reliability Theory- Methodology, Practice, and Inference*, Editors N. Limnios and M. Nikulin, Birkhauser, (2000), 345-357, with W. Lu.
102. A New Family of Power Transformations to Improve Normality or Symmetry, *Biometrika* (2000), 954-959, with I. Yeo.
103. Uniform Strong Law of Large Numbers for U-statistics with application to Transforming to Near Symmetry, *Statistics and Probability Letters*(2000) **51**, 63-69, with I. Yeo.
104. Asymptotic Theory for Box-Cox Transformations in Linear Models, *Statistics and Probability Letters*(2001), **51**, 337-343, with K. Cho, I.-K. Yeo and W.-Y. Loh
105. Prediction Interval Estimation in Transformed Linear Models, *Statistics and Probability Letters*(2001), **51**, 345-350, with K. Cho, I.-K. Yeo and W.-Y. Loh
106. Nonparametric Estimation of Conditional Survival Under Destructive Testing, with K. T. Wu. Collection of Papers in Honor of George Roussas., Ed. Puri, M., Birkhauser.
107. On Tests of Independence for Spherical Data-Invariance and Centering, *Statistics and Probability Letters* (2002), **57**, 327-335, with G. Shieh.
108. Forecasting Peak Daily Ozone Levels-I. A Regression with Time Series Errors Model having a Principal Component Trigger to Fit 1991 Ozone Levels. *Journal of Air and Waste Management Association* (2002), **52**, 1064-1074, with Pao-Wen Grace Liu.
109. Comments on the paper by Lockhart, Chen and Stephens. *Journal of the Canadian Statistics Society* (2002), **30**, 215-219, with K. Doksum.
110. Some Exact and Approximate Confidence Regions for the Ratio of Percentiles from Two different Distributions (2003) *Mathematical and Statistical Methods in Reliability* Eds. Bo Lindqvist and Kjell Doksum, 455-468, World Scientific, New Jersey.
111. Forecasting Peak Daily Ozone Levels-II. A Regression with Time Series Errors Model having a Principal Component Trigger. *Journal of Air and Waste Management Association* (2003), **53**, 1472-1489, with Pao-Wen Grace Liu.
112. New tests for multivariate ordered alternatives for special issue of *Comm. Stat.* (2004) in honor of Z. Govindarajulu, 33 issue 8 2027-2040, with S. Sim.
113. Inferences Based on a Bivariate Von Mises Distribution, *Annals Institute Statistical Mathematics* (2005) 57 789-802 with G. Shieh.
114. Multivariate CUSUM Procedure and A Most Active Bivariate Chart, *Quality Technology and Quantitative Management* (2006) **3**, 401-414, with Ruoqia Li.
115. A Linear Combination CUSUM Statistic for Controlling a Multivariate Mean, special issue of *Statistical Planning and Inference* (2006) in honor of S. N. Roy, with Rouqia Li.

116. Confidence Regions for the Ratio of Percentiles, *Statistics and Probability Letters* (2006), **77**, with L. F. Hwang,
117. The influence of random effect on univariate and bivariate discrete proportional hazards models *Communications in Statistics-Theory and Methods* (2006) **35**, no. 9 with Y. Omori.
118. Bayesian nonparametric estimation of functions of quantiles, with S Sim. Collection of papers in honor of K. Doksum. Ed. V. Nair. (2007) World Scientific Publishers
119. Confidence bounds and hypothesis tests for normal distribution coefficients of variation, *Communications in Statistics-Theor. and Meth.* (2007), **36**, 2187-2206, with S. Verrill
120. Proof load designs for estimation of dependence in a bivariate weibull model, *Statistics and Probability Letters* (2008), **77**, 1061-1069, with W. Lu.
121. Preservation of some life length classes for age distributions associated with age-dependent branching processes, *Statistics and Probability Letters* (2008), **78**, 2981-1987, with J. Taylor.
122. Modeling and comparing the organization of circular genomes, *Bioinformatics* (2012), **27**, 912-918, with G. S Shieh, et. al.
123. An empirical characteristic function approach to selecting a transformation to Symmetry, *Contemporary Developments in Statistical Theory* (2014), S. Lahiri, A. Schick, A. SenGupta and T. Sriram, Eds., 191-202, *Springer*, with In-kwon Yeo.
124. An Empirical Characteristic Function approach to selecting a transformation to normality. *Communications for Statistical Analysis and Methods* (2014), **21**, 213-234, with In-Kwon Yeo.
125. Asymptotic results for Crosier's CUSUM tatistic, *J. Indian Statistical Assoc.*, (2014), **51**, 19-43, with R. Li.
126. Inference for Izawa'a bivariate gamma distribution. *Comm. Statist. Theor. Meth.*, (2019), **48**, 4350-4366, with S. Cho.

Books

STATISTICAL CONCEPTS AND METHODS, with G. K. Bhattacharyya. (1977)
John Wiley and Sons, New York.

APPLIED MULTIVARIATE STATISTICAL ANALYSIS, with D. Wichern. (1982) (6th edition 2007), Prentice Hall, New Jersey.

STATISTICS, PRINCIPLES AND METHODS, with G. K. Bhattacharyya, (1984), (7th edition 2014, 8th edition 2019 John Wiley and Sons, New York.

SURVIVAL ANALYSIS, Edited with J. Crowley. (1982)

PROBABILITY AND STATISTICS FOR ENGINEERS, with I. Miller and J. Freund. (1990, 1994, 2000,2005, 2011, 2017) Prentice Hall, New Jersey.

BUSINESS STATISTICS - Decision Making with Data, with D. Wichern (1997), John Wiley and Sons, New York.

STATISTICAL REASONING AND METHODS, with K. Tsui,(1998), John Wiley and Sons, New York.

Chapters and Encyclopedia Entries

Multivariate Analysis, with D. Wichern. *Encyclopedia of Statistical Sciences* (1985), **6**, 1-16, John Wiley and Sons.

Statistics and Probability Letters, *Encyclopedia of Statistics* (1988), **8**, John Wiley and Sons.

Stress-strength reliability models. *Handbook of Statistics*. (1988). **7**, North Holland.

Exponential Regression with Applications, *Handbook of the Exponential Distribution*, Editors N. Balakrishnan and A. P. Basu (1995), 403-428, with R. Chappell.

Regression Models for Survival Data, with J. Klein *Handbook of Statistics*, **18**, Editors P. K. Sen and C. R. Rao, Elsevier Science B. V., (2000) , 161-191.

Estimation of Correlation under Destructive Testing, *Handbook of Statistics*. vol 20, Eds. N. Balakrishnan and C. R. Rao, Elsevier, (2000), Chapter 24, 641-658.

Multivariate Statistical Process Control Schemes for Controlling a Mean. *Springer Handbook Engineering Statistics* (2006), Ed. H. Pham, 327-344, Springer, with Ruojia Li.

Multivariate Analysis, with D. Wichern. *Encyclopedia of Statistical Sciences* (2006), John Wiley and Sons.

Ph.D. Students Supervised

1. K.G. Mehrotra (Ph.D. 1/71) A Nonparametric Approach to the Problem of Ordered Alternatives with Emphasis on Locally Most Powerful Rank Tests for the Two-Sample Problem with Censoring.
2. Mike Bagshaw (Ph.D. 6/74) Effects of Correlation on Cusum Tests and the Sequential Detection of Time Series Model Changes.
3. Raul Hudlet (Ph.D. 5/76) Selecting Lower Dimensional Hyperplanes in Multivariate Analysis.
4. Tom Wehrly (Ph.D. 8/76) Models for Bivariate Directional Data and Angular-Linear Data with Applications to Statistical Inference.
(with Bhattacharyya)
5. J. Ladalla (Ph.D. 8/76) The Large Sample Behavior of Posterior Distributions When Sampling From Multivariate Exponential Families and Allied Results.
6. S. T. Liu (Ph.D. 12/76) Sequential Conditional Probability Ratio Tests in the Multiparameter Exponential Family.
7. Michael Akritas (Ph.D. 8/78) Contiguity of Probability Measures Associated with Continuous Time Stochastic Processes.
8. Fabian Hernandez (Ph.D. 8/78) The Large Sample Behavior of Transformations to Normal or Exponential Distributions.
9. James Taylor (Ph.D. 8/78) Some Useful Functionals of the Empirical Age Distribution for an Age Dependent Branching Process, and Corresponding Asymptotic Inference Procedures.
10. Victor Guerrero (Ph.D. 8/79) Extensions of the Box-Cox Transformation to Grouped-Data Situations.
11. Torre Langeland (Ph.D. 6/80) Tests for Dependence in Multivariate Observations.
12. Steve Verrill (Ph.D. 12/81) Large Sample Theory of Censored Goodness-of-Fit Tests.
13. Sebastiao Amorim (Ph.D. 12/82) Experimental Designs for Estimating the Correlation Between Two Destructively Tested Variables.
14. Mark Bobkoski (Ph.D. 5/83) Hypothesis Testing in Nonstationary Time Series.

15. Spencer Graves Edgeworth Expansions for Discrete Sums and Logistic
(Ph.D. 5/83) Regression.
16. Chris Morrell Statistical Inference Under a Random Truncation Model.
(Ph.D. 8/86)
17. A. Mouhab A Decision Theory Approach to Screening and Classification.
(Ph.D. 6/91)
18. Y. Omori Random Effects in Survival Analysis.
(Ph.D. 6/92)
19. K. T. Wu An Experimental Design for Nonparametric Estimation
(Ph.D. 5/93) of Correlation under Destructive Testing.
20. Song Yong Sim A Non Parametric Approach to Testing Against Ordered
(Ph.D. 7/94) Alternatives specified by Mixture Models.
21. In-Kwon Yeo A New Family of Power Transformations to Reduce
 Skewness or Approximate Normality
 Ph.D. 7/97
22. Wenqing Lu Estimation of Correlation Under Destructive Testing
 Ph.D. 7/00
23. Li-Fei Huang Confidence Regions for the Ratio of Percentiles
 Ph.D. 7/01
24. Ruojia Li Some New Multivariate Procedures for Sequentially Monitoring Means
 Ph.D. 12/04
25. Sang-hoon Cho Statistical Inference Under Hierarchical Models Based on Izawa's
 Bivariate Gamma Distribution with Applications to Gene Data
 Ph.D. 12/08 co-adviser Mike Kosorok

Recent Talks

Invited talk at IMS Meeting March 1991, Houston.

Invited talk by co-author, International Reliability Conference, Columbia, Mo. June 1991.

University of Tokyo, Tokyo, Japan, June 1991.

Institute of Statistical Mathematics, Tokyo, Japan, June 1991.

Beijing (Peking) University, Peking, China June 1991.

Chinese University of Hong Kong, Hong Kong, June 1991.

Invited talk at the Third International Environmetrics Conference, Madison, WI. October 1991.

Invited talk at the First World Congress of Nonlinear Analysts, Tampa, Florida, 1992.

North Carolina State University, November 1993.

University of Missouri, April 1994.

Auckland University and University of Canterbury, N.Z., June/July 1994.

Australian National University and University of Sydney, Australia, July 1994.

University College, London, England, July 1995.

Arizona State University and ASA chapter, March 1996

Invited talk. University of Minnesota Reunion. June 1996

Invited talk: "Minimum Distance Estimation Using the Lotka Limit for Age Dependent Branching Processes", Second World Congress of Nonlinear Analysts, Athens, Greece. July 1996.

Invited talk. Anniversary conference. Northern Illinois University, De Kalb. September 1996

Medical School of Wisconsin, Milwaukee, Wisc. , March 1997.

Stockholm School of Economics, Stockholm, Sweden, June 1997.

Steklov Institute, Moscow, Russia, June 1997.

ITAM, Mexico City, Mexico, November 1997.

Invited talk. International Reliability Conference, De Kalb. May 1998.

Kasetsart Univ., Bangkok, August 1998

Academia Sinica Taiwan, August 1998.

Tsing Hua Univ, Taiwan, August 1998.

Invited Talk at International Statistical Symposium in Taiwan, August 1998.

University of Lisbon, Portugal 1999.

Don Carlos III, University of Madrid, Spain, March 1999.

Invited talk at Reliability 2000, July 2000, Bordeaux, France.

University of West Virginia, September 2000

Invited talk at the Large Sample Theory Wookshop in Honor of G. G. Roussas, UC-Davis, May 2001

International Institute for Applied Systems Analysis, Vienna, Austria, July 2001

Mathematical Institute, Hungarian Academy of Sciences, Budapest, Hungary, July 2001

Keynote talk at the 30th Anniversary of Korean Statistical Society Conference, Seoul, Korea, November 2001

Institute of Statistical Mathematics, Tokyo, Japan, November 2001

Tokyo University, Tokyo, Japan, November 2001

Michigan State University, March 2002.

Invited talk special meeting on Canadian Statistical Society, Montreal, March 2002.

University of Minnesota, April 2002.

Invited talk at MMR2002, Trondheim, Norway, June 2002.

University of Georgia, October 2002.

Survival Analysis Conference, University of South Carolina, June 2004.

International Statistical Institute meeting, Berlin, Germany, August 2004.

Chulalongkron University, Bangkok, Thailand. April 2005

Keynote talk at the first Thai Applied Statistics Conference, Khon Kaen, Thailand, May 2005

University of Stellenbosch, Stellenbosch, South Africa, June 2006

University of the Free State, Bloemfontein, South Africa, June 2006

Symposium on Data Mining, Institute of Statistical Mathematics, Tokyo, Japan, October 2006

Workshop on Angular Data, Institute of Statistical Mathematics, Tokyo, Japan, October 2006

Hong Kong Science and Technology University, Hong Kong, China April 2007

Invited talk MM2007, Glasgow, Scotland, July 2007

Conference Mathematical Methods of Reliability, MMR2007, Glasgow, Scotland July 2007

University of Rome, Rome, Italy. December 2007

University of Naples, Naples, Italy, December 2007

Invited talk at Conference in Honor of Hira Koul, Michigan State University, May 2008

Cairo University, Cairo, Egypt, November 2008

Invited speaker 1st ISNPS Conference ,Chalkidiki, Greece, 2012

Invited talk at Conference in Honor of Hira Koul, Michigan State University, May 2018