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Department of Statistics
University of California at Irvine, 92697

EDUCATION

- Ph.D., Statistics, University of Minnesota, 1979.
- M.S., Statistics, California State University, Hayward, 1974.
- B.S., Mathematics, University of Washington, 1972.

EXPERIENCE:

- 2016-pres Emeritus Professor AS, Department of Statistics, UC Irvine.
- 2005-2016 Professor, Department of Statistics, UC Irvine.
- 1993-2004 Professor, Department of Statistics, UC Davis.
- 1997-2002 Chair, Graduate Group in Epidemiology, UC Davis.
- 1986-1993 Associate Professor, Division of Statistics, UC Davis.
- 1980-1986 Assistant Professor, Division of Statistics, UC Davis.
- 1974-1975 Statistician, Texas Instruments' Ecological Services Group, Verplanck, NY.

HONORS AND AWARDS:

- Elected Director, Executive Board, *International Biometrics Society*, 2013-2015
- Elected President, Western North American Region of the International Biometrics Society, 2003-2004
- Elected Chair-Elect, 2015-16; Chair, 2016-17, Past Chair, 2017-18. ISBA Section on Bayesian Nonparametrics
- Elected Chair, Section of Bayesian Statistical Science, 2011-2012
- Elected Fellow, International Society for Bayesian Analysis
- Elected Fellow, Institute of Mathematical Statistics
- Elected Fellow, American Statistical Association
- Elected Ordinary Member of the International Statistical Institute
- Fellow of the Royal Statistical Society
- Jim Press Lecturer, 2014
- Seymour Geisser Lecturer, 2010
- Edward Rotan Distinguished Visiting Professor, Dept. of Biostatistics, MD Anderson Cancer Center, 2003
- Dean's Award for Excellence in Research, Bren School of Computer and Information Science, University of California, Irvine (UCI), 2009-2010

- “Most Outstanding Faculty/Staff Award” in Epidemiology, University of California, Davis (UCD), 1995-1996 (voted by Epi. Grad. Students)
- “Most Outstanding Faculty/Staff Award” in Epidemiology, UCD, 2001-2002 (voted by Epi. Grad. Students)
- University of Minnesota Dissertation Fellowship

RESEARCH INTERESTS:

- Bayesian and Predictive Inference.
- Informative Priors in Regression.
- Bayesian Nonparametrics.
- Regression Diagnostics and Predictive Influence.
- Asymptotics.
- Longitudinal and Spatial Data.
- Biostatistical and Epidemiological Applications.
- Diagnostic Screening Test Methodology and Protocols.
- Risk Analysis and Certification of Disease Freedom.

SOCIETIES:

- American Statistical Association.
- Institute of Mathematical Statistics.
- Royal Statistical Society.
- International Statistical Institute.
- International Biometrics Society, WNAS.

PUBLICATIONS

Books:

1. Lee, J.C., **Johnson, W.O.**, and Zellner, A., Editors (1996). *Modeling and Prediction: Honoring Seymour Geisser*. Springer-Verlag, New York.
2. Geisser, S. (2006). *Modes of Parametric Statistical Inference* (with the assistance of **W.O. Johnson**). John Wiley and Sons.
3. Christensen, R., **Johnson, W.O.**, Branscum, A.J. and Hanson, T.E. (2010). *Bayesian Ideas and Data Analysis: An Introduction for Scientists and Statisticians*. CRC Press.

Articles:

1. **Johnson, W.O.** and Geisser, S. (1982). Assessing the predictive influence of observations. *Essays in Honor of C.R. Rao*. Edited by G. Kallianpur, et al., North-Holland, Amsterdam, 343-358.
2. **Johnson, W.O.** and Geisser, S. (1983). A predictive view of the detection and characterization of influential observations in regression analysis. *Journal of the American Statistical Association* **78**, 137-144.

3. **Johnson, W.O.** and Geisser, S. (1985). Estimative influence measures for the multivariate general linear model. *Journal of Statistical Planning and Inference* **11**, 33-56.
4. **Johnson, W.O.** (1985). Influence measures for logistic regression: Another point of view. *Biometrika* **72**, 59-65.
5. **Johnson, W.O.**, Utts, J. and Pearson, L. (1986). Bayesian robust estimation of the mean. *Journal of the Royal Statistical Society: Series C* **35**, 63-72.
6. **Johnson, W.O.** and Christensen, R. (1986). Bayesian nonparametric survival analysis for grouped data. *Canadian Journal of Statistics* **14**, 307-314.
7. **Johnson, W.O.**, Pearson, L. and Utts, J. (1986). A Monte Carlo comparison of Bayesian estimators and trimmed means. *Journal of Statistical Computation and Simulation* **25**, 167-192.
8. **Johnson, W.O.** (1987). Diagnostics for allocation, separation, and the determination of probabilities in a Bayesian framework. *Journal of Business and Economic Statistics* **5**, 369-381.
9. Christensen, R. and **Johnson, W.O.** (1988). Modeling accelerated failure time with a Dirichlet process. *Biometrika* **75**, 693-704.
10. Gastwirth, J. and **Johnson, W.O.** (1988). Testing the homogeneity of small error rates: Application to the sensitivity of different ELISA tests for AIDS antibodies. *Statistics and Probability Letters* **7**, 225-228.
11. **Johnson, W.O.** and Christensen, R. (1989). Bayesian nonparametric survival analysis for the accelerated failure time model. *Statistics and Probability Letters* **8**, 179-184.
12. Lassauzet, M.-L., **Johnson, W.O.** and Thurmond, M. (1989). Regression models for time-to-seroconversion following experimental bovine leukemia virus infection. *Statistics in Medicine* **8**, 725-741.
13. Lassauzet, M.-L., **Johnson, W.O.**, Thurmond, M. and Stevens, F. (1989). Protection of colostrum antibodies against bovine leukemia virus infection in calves on a California dairy. *Canadian Journal of Veterinary Research* **53**, 424-430.
14. Lassauzet, M.-L., **Johnson, W.O.**, Thurmond, M. and Picanso, J. (1990). Factors associated with decay of colostrum antibodies in bovine leukemia virus. *Preventive Veterinary Medicine* **9**, 45-58.
15. Lassauzet, M.-L., Thurmond, M., **Johnson, W.O.**, Stevens, F. and Picanso, J. (1990). Effect of Brucellosis vaccination and dehorning on transmission of bovine leukemia virus in heifers on a California dairy. *Canadian Journal of Veterinary Research* **54**, 184-189.
16. **Johnson, W.O.** and Gastwirth, J. (1991). Bayesian inference for medical screening tests: Approximations useful for the analysis of AIDS data. *Journal of the Royal Statistical Society, Series B* **53**, 427-439.
17. Gastwirth, J. L., **Johnson, W.O.** and Reneau, D.M. (1991). Bayesian analysis of screening data: Application to AIDS in blood donors. *Canadian Journal of Statistics* **19** 135-150.
18. Lassauzet, M.-L., Thurmond, M., **Johnson, W.O.**, Stevens, F. and Picanso, J. (1991). Factors associated with transmission of bovine leukemia virus by contact in cows on a California dairy. *American Journal of Epidemiology* **133**, 164-176.

19. Lassauzet, M.-L., Thurmond, M.C., **Johnson, W.O.** and Holmberg, C.A. (1991). Factors associated with in utero or periparturient transmission of bovine leukemia virus in calves on a California dairy. *Canadian Journal of Veterinary Research* **55**, 264-268.
20. Geisser, S. and **Johnson, W.O.** (1992). Optimal administration of dual screening tests for detecting a characteristic. *Biometrics* **48**, 839-852.
21. Christensen, R., Pearson, L.M. and **Johnson, W.O.** (1992). Case deletion diagnostics for mixed models. *Technometrics* **34**, 38-45.
22. Christensen, R., **Johnson, W.O.** and Pearson, L.M. (1992). Predictive influence measures for spatial linear models. *Biometrika* **79**, 583-591.
23. Geisser, S. and **Johnson, W.O.** (1992). Testing Hardy-Weinberg equilibrium on allelic data from VNTR loci. *American Journal of Human Genetics* **54**, 1084-1088.
24. Christensen, R., **Johnson, W.O.** and Pearson, L.M. (1993). Covariance function diagnostics for spatial linear models. *Mathematical Geology* **25**, 145-160.
25. Geisser, S. and **Johnson, W.O.** (1993). Testing independence of fragment lengths within VNTR loci. *American Journal of Human Genetics* **53**, 1103-1106.
26. **Johnson, W.O.** and Kokolakis, G. (1994). Bayesian classification based on multivariate binary data. *Journal of Statistical Planning and Inference* **35**, 21-35.
27. Geisser, S. and **Johnson, W.O.** (1994). Interim Analysis for normally distributed observables. *Multivariate Analysis and Its Applications*, IMS Lecture Notes - Monograph Series, **24**, 263-279.
28. Gastwirth, J.L. and **Johnson, W.O.** (1994). Quality control for screening tests: Applications to HIV and drug use detection. *Journal of the American Statistical Association* **89**, 972-981.
29. Geisser, S. and **Johnson, W.O.** (1995). Testing independence when the form of the bivariate distribution is unspecified. *Statistics in Medicine* **14**, 1621-1639.
30. Geisser, S. and **Johnson, W.O.** (1996). Sample size considerations in multivariate normal classification. In *Bayesian Analysis of Statistics and Econometrics*, Edited by D.A. Berry, K.M. Chaloner and J.K. Geweke. John Wiley and Sons, New York, 287-296.
31. **Johnson, W.O.** (1996). Predictive Influence in the Log Normal Survival Model. In *Modeling and Prediction in Statistics and Econometrics Honoring Seymour Geisser*, Edited by J.C. Lee, A. Zellner and W.O. Johnson. Springer-Verlag, New York, 104-121.
32. Bedrick, E.J., Christensen, R. and **Johnson, W.O.** (1996). A new perspective on priors for generalized linear models. *Journal of the American Statistical Association* **91**, 1450-1460.
33. Westfall, P.H., **Johnson, W.O.** and Utts, J.M. (1997). A Bayesian look at the Bonferroni correction. *Biometrika* **84**, 419-427.
34. Deely, J. and **Johnson, W.O.** (1997). Normal means revisited. In *Advances in Statistical Decision Theory*. Edited by S. Panchapakesan and N. Balakrishnan, Birkhauser, Berlin, 9-31.

35. Bedrick, E.J., Christensen, R. and **Johnson, W.O.** (1997). Bayesian methods for binomial regression. *The American Statistician* **51**, 211-218.
36. **Johnson, W.O.** (1998). Multivariate Binary Data. *Encyclopedia of Statistical Sciences*, Update Volume 2. John Wiley and Sons, New York, 426-434.
37. Waller, N.G. and **Johnson, W.O.** (1998). The non-significance of straw man arguments. *Behavior and Brain Sciences* **21**, 225-226.
38. Singer, R.S., Boyce, W.M., Gardner, I.A., **Johnson W.O.** and Fisher, A.S. (1998). Evaluation of bluetongue virus diagnostic tests in free-ranging bighorn sheep, *Preventive Veterinary Medicine* **35**, 265-282.
39. Cavanaugh, J.E. and **Johnson, W.O.** (1999). Assessing the predictive influence of cases in a state-space process. *Biometrika* **86**, 183-190.
40. **Johnson, W.O.** and Pearson, L.M. (1999). Dual screening. *Biometrics* **55**, 276-282.
41. **Johnson, W.O.** (1999). Survival analysis for interval data. IMA Volume *Statistics in the Health Sciences: Diagnosis and Prediction*. Eds. P. Grambsch and S. Geisser. Springer-Verlag.
42. Cowling, D.W., Gardner, I. and Johnson W.O. (1999). Comparison of methods for estimation of individual-level prevalence based on pooled samples. *Preventive Veterinary Medicine* **39**, 211-225.
43. Singer, R.S., **Johnson, W.O.** et al. (2000). A statistical model for assessing sample size for bacterial colony selection: A case study of Escherichia Coli and avian cellulitis. *Journal of Veterinary Diagnostic Investigation* **12**, 118-125.
44. Singer, R.S., Jeffrey, J.S., Carpenter, T.E., Cooke, C.L., Atwill, R.E., **Johnson, W.O.** and Hirsh, D.C. (2000). Persistence of cellulitis-associated Escherichia coli DNA fingerprints in successive broiler flocks. *Veterinary Microbiology* **75**, 59-71.
45. Bedrick, E.J., Christensen, R. and **Johnson, W.O.** (2000). Bayesian accelerated failure time analysis with application to veterinary epidemiology. *Statistics in Medicine* **19**, 221-237.
46. **Johnson, W.O.** and Gastwirth, J.L. (2000). Dual group screening. *Journal of Statistical Planning and Inference* **83**, 449-473.
47. Muoz-Zanzi, C.A., **Johnson, W.O.**, Thurmond, M.C. and Hietala, S.K. (2000). Detection of bovine viral diarrhea virus (BVDV) persistently infected cattle using pooled-sample testing. *Journal of Veterinary Diagnostic Investigation* **12**, 195-203.
48. Georgiadis, M.P., Hedrick, R.P., **Johnson, W.O.** and Gardner, I.A. (2000). Growth of white sturgeon (*Acipenser transmontanus*) following recovery from the stunted stage in a commercial farm in California, USA. *Preventive Veterinary Medicine* **43**, 283-291.
49. Georgiadis, M.P., Hedrick, R.P., **Johnson, W.O.** and Gardner, I.A. (2000). Mortality and recovery of runt white sturgeon (*Acipenser transmontanus*) in a commercial farm in California, USA. *Preventive Veterinary Medicine* **43**, 269-281.
50. Enöe, C., Georgiadis, M.P. and **Johnson, W.O.** (2000). Estimation of sensitivity and specificity of diagnostic tests and disease prevalence when the true disease state is unknown. *Preventive Veterinary Medicine* **45**, 61-81.

51. Hanson, T.E., **Johnson, W.O.** and Gardner, I.A. (2000) Log-linear and logistic modeling of dependence among serologic tests for paratuberculosis, toxoplasmosis and brucellosis. *Preventive Veterinary Medicine* **45**, 123-137.
52. Georgiadis, M.P., Hedrick, R.P., **Johnson, W.O.**, Yun, S. and Gardner, I.A. (2000). Risk factors for white sturgeon iridovirus (WSIV) and white sturgeon herpesvirus-2 (WSHV-2) outbreaks in 3 commercial sturgeon farms. *American Journal of Veterinary Research* **61**, 1232-1240.
53. **Johnson, W.O.**, Gastwirth, J.L. and Pearson, L.M. (2001). Screening without a gold standard: The Hui-Walter paradigm revisited. *American Journal of Epidemiology* **153**, 921-924.
54. Watnik, M.R., **Johnson, W.O.** and Bedrick, E.J. (2001). Non-nested linear model selection revisited. *Communications in Statistics: Theory and Methods* **30**, 1-20.
55. **Johnson, W.O.**, Hanson, T.E., Gastwirth, J.L. and Gardner, I.A. (2001). Pooled screening with quality control. *Bayesian Methods with Applications to Science, Policy, and Official Statistics* (selected papers from ISBA2000), 493-501.
56. Singer, R.S., Atwill, R.E., Carpenter, T.E., Jeffrey, J.S., **Johnson, W.O.** and Hirsch, D.C. (2001). Selection bias in infectious disease epidemiologic studies using *Escherichia coli* and avian cellulitis as an example. *Epidemiology and Infection* **126**, 139-145.
57. Bedrick, E.J., Exuzides, A., **Johnson, W.O.** and Thurmond, M. (2002). Predictive influence in the accelerated failure time model. *Biostatistics* **3**, 331-346.
58. Watnik, M.R. and **Johnson, W.O.** (2002). The behavior of linear model selection tests under globally non-nested hypotheses. *Sankhya* **64**, 109-138.
59. Thurmond, M.C., **Johnson, W.O.**, Muoz-Zanzi, C., Su, C.L. and Hietala, S. (2002). Probability diagnostic assignment for serologic measures, with application to *Neospora caninum* infection. *American Journal of Veterinary Research* **63**, 318-325.
60. Muoz-Zanzi, C.A., Thurmond, M.C., **Johnson, W.O.** and Hietala, S.K. (2002). Predicted ages of dairy calves when colostrum-derived bovine viral diarrhoea virus antibodies would no longer offer protection against disease or interfere with vaccination. *Journal of the American Veterinary Medical Association* **221**, 678-685.
61. Suess, E., Gardner, I.A. and **Johnson, W.O.** (2002). Hierarchical Bayesian modeling for certification of a country as "free" from an animal pathogen. *Preventive Veterinary Medicine* **55**, 155-171.
62. Hanson, T.E. and **Johnson, W.O.** (2002). Modeling regression error with mixtures of Polya trees. *Journal of the American Statistical Association* **97**, 1020-1033.
63. Yee, J., **Johnson, W.O.** and Samaniego, F.J. (2002). Asymptotic approximations to posterior distributions via latent-data driven conditional moment equations. *Biometrika* **89**, 755-767.
64. Fosgate, G.T., Adesiyun, A.A., Hird, D.W., **Johnson, W.O.**, Hietala, S.K., Schurig, G.G. and Ryan, J. (2002). Bayesian Comparison of Brucellosis Serologic Tests without a Gold Standard in Cattle and Water Buffalo (*Bubalus bubalis*) of Trinidad. *American Journal of Veterinary Research* **63**, 1598-1605.
65. Hanson, T.E., **Johnson, W.O.** and Gardner, I.A. (2003). Hierarchical models for the estimation of disease prevalence and the sensitivity and specificity of dependent tests in the absence of a gold-standard. *Journal of Agricultural, Biological and Environmental Statistics* **8**, 223-239.

66. Hanson, T.E., Bedrick, E.J., **Johnson, W.O.** and Thurmond, M.C. (2003). A mixture model for bovine abortion and fetal survival. *Statistics in Medicine* **22**, 1725-1739.
67. Hanson, T.E., **Johnson, W.O.**, Gardner, I.A. and Georgiadis, M. (2003). Determining the disease status of a herd. *Journal of Agricultural, Biological and Environmental Statistics* **8**, 469-485.
68. Gönen, M., Westfall, P.W. and **Johnson, W.O.** (2003). Bayes multiple testing of multiple endpoints. *Biometrics* **59**, 76-82.
69. Georgiadis, M.P., **Johnson, W.O.**, Singh, R. and Gardner, I.A. (2003). Correlation-Adjusted Estimation of sensitivity and specificity of two diagnostic tests. *Journal of the Royal Statistical Society, Series C* **52**, 63-76.
70. Muoz-Zanzi, C.A., Hietala, S.K., Thurmond, M.C. and **Johnson, W.O.** (2003). Quantification, risk factors, and health impact of natural congenital infection with bovine viral diarrhoea virus in dairy calves. *American Journal of Veterinary Research* **64**, 358-365.
71. Fosgate, G.T., Adesiyun, A.A., Hird, D.W., **Johnson, W.O.**, Hietala, S.K., Schurig, G.G. and Ryan, J. (2003). Receiver-operating characteristic (ROC) curves for detection of Brucella infection using a competitive enzyme-linked immunosorbent assay in cattle and water buffalo (*Bubalus bubalis*). *American Journal of Veterinary Research* **64**, 57-64.
72. **Johnson, W. O.** (2003). Comment on 'Could Fisher, Jeffreys, and Neyman Have Agreed on Testing?' by J. O. Berger. *Statistical Science* **18**, 1-32.
73. Fosgate, G.T., Adesiyun, A.A., Hird, D.W., **Johnson, W.O.**, Hietala, S.K., Schurig, G.G., Ryan, J. and Diptee, M.D. (2003). Evaluation of Brucellosis RB51 Vaccine for Domestic Water Buffalo (*Bubalus bubalis*) in Trinidad. *Preventive Veterinary Medicine* **58**, 211-225.
74. **Johnson, W.O.** (2003). Comment on 'Frequentist Model Averaging' by Hjort and Claeskens. *Journal of the American Statistical Association* **98**, 919-921.
75. McInturff, P., **Johnson, W.O.**, Gardner, I.A. and Cowling, D.W. (2004). Bayesian modeling of risk based on outcomes that are subject to error. *Statistics in Medicine* **23**, 1095-1107.
76. Hanson, T.E. and **Johnson, W.O.** (2004). A Bayesian semi parametric AFT model for interval censored data. *Journal of Computational and Graphical Statistics* **13**, 341-361.
77. Thurmond, M.C. and **Johnson, W.O.** (2004). Effect of multiple sampling on diagnostic sensitivity. *Journal of Veterinary Diagnostic Investigation* **16**, 233-236.
78. **Johnson, W.O.**, Su, C.L., Gardner, I.A. and Christensen, R. (2004). Sample size calculations for surveys to substantiate freedom of populations from infectious agents. *Biometrics* **60**, 165-171
79. Liu, Y., **Johnson, W.O.**, Gold, E.B. and Lasley, B.L. (2004). Effect of Risk Factors on Probabilities of Anovulation in Cycling Women. *Statistics in Medicine* **23**, 1901-1919.
80. Su, C.L., Gardner, I.A. and **Johnson, W.O.** (2004). Estimating diagnostic test accuracy and prevalence based on finite population sampling in the absence of a gold standard test. *Statistics in Medicine* **23**, 2237-2255.

81. Liu, Y., Gold, E.B., Lasley, B.L. and **Johnson, W.O.** (2004). Factors affecting menstrual cycle characteristics. *American Journal of Epidemiology* **160**, 131-140.
82. Branscum, A.J., Gardner, I.A. and **Johnson, W.O.** (2004). Bayesian modeling of animal and herd-level prevalence. *Preventive Veterinary Medicine* **66**, 101-112.
83. Branscum, A., Gardner, I.A. and **Johnson, W.O.** (2005). Estimation of diagnostic test sensitivity and specificity through Bayesian modeling. *Preventive Veterinary Medicine* **68**, 145-163.
84. **Johnson, W.O.** and Hanson, T.E. (2005). Comment on 'On model expansion, model contraction, identifiability and prior information: Two illustrative scenarios involving mismeasured variables'. *Statistical Science* **20**, 111-140.
85. Georgiadis, M.P., **Johnson, W.O.** and Gardner, I.A. (2005). Sample size for estimation of the accuracy of two diagnostic tests in the absence of a gold standard. *Preventive Veterinary Medicine* **71**, 1-10.
86. Thurmond, M.C., Branscum, A.J., **Johnson, W.O.**, Bedrick, E.J. and Hanson, T.E. (2005). Factors Associated with Abortion in Dairy Cows: a Hierarchical Bayesian Logistic-survival Model Using Sequential Pregnancy Data. *Preventive Veterinary Medicine* **68**, 223-239.
87. Hanson, T., Branscum, A. and **Johnson, W.O.** (2005). Bayesian nonparametric modeling and data analysis: an introduction. In *Bayesian Thinking: Modeling and Computation, Handbook of Statistics* **25**, 245-278. Edited by D.K. Dey and C.R. Rao. Amsterdam: Elsevier.
88. Gönen, M., **Johnson, W.O.**, Lu, T. and Westfall, P.W. (2005). A Bayesian two-sample t-test. *The American Statistician* **59**, 252-257.
89. Christensen, R. and **Johnson, W.O.** (2005). Seymour Geisser Obituary. *Encyclopedia of Biostatistics*, Vol. 3, 2045-2048. Second Edn. John Wiley and Sons, Chichester.
90. Ji, M., Huster, W., Bekele, N., **Johnson, W.O.** and Rocke, D. (2005). Large sample bias in two-phase sampling caused by external validation. *Far East Journal of Theoretical Statistics* **16**, 177-204.
91. Branscum, A.J., **Johnson, W.O.** and Gardner, I.A. (2006) Sample size calculations for disease freedom and prevalence estimation surveys. *Statistics in Medicine* **25**, 2658-2674.
92. Deely, J.J. and **Johnson, W.O.** (2006). Inferences for hierarchical models with partial prior information. *Journal of Statistical Planning and Inference* **136**, 2327-2339.
93. Choi, Y.K., **Johnson, W.O.**, Gardner, I.A. and Collins, M. (2006). Bayesian estimation of ROC curves in the absence of a gold standard. *Journal of Agricultural and Biological Statistics* **11**, 210-229.
94. Choi, Y.K., **Johnson, W.O.** and Thurmond, M.C. (2006). Diagnosis Using Predictive Probabilities without Cutoffs. *Statistics in Medicine* **25**, 699-717.
95. Hanson, T.E., **Johnson, W.O.** and Gastwirth, J.L. (2006). Bayesian inference for prevalence and diagnostic test accuracy based on dual pooled screening. *Biostatistics* **7**, 41-57.

96. Hanson, T.E., **Johnson, W.O.** and Laud, P.W. (2006). Bayesian semiparametric inference for the accelerated failure time model with time dependent covariates. *Bayesian Statistics and its Applications*, edited by S.K. Upadhyay, Umesh Singh and Dipak Dey. 254-269.
97. Muoz-Zanzi, C., **Johnson, W.O.** and Thurmond, M.C. (2006). Factors Affecting Sensitivity and Specificity of pooled-sample testing for low prevalence infections. *Preventive Veterinary Medicine* **74**, 309-322.
98. Su, C.L. and **Johnson, W.O.** (2006). Large Sample Joint Posterior Approximations when Full Conditionals are Approximately Normal: Application to Generalized Linear Mixed Models. *Journal of the American Statistical Association* **101**, 795-811.
99. Tavoranpanich, S., Gardner, I.A., Carpenter, T.E., **Johnson, W.O.** and Anderson, R.J. (2006). Evaluation of Cost Effectiveness of Targeted Sampling Methods for Detection of Mycobacterium Avium subsp Paratuberculosis Infection in Dairy Herds. *Am. J. of Vet. Research* **67**, 821-828.
100. Waetjen, E., Liao, S., **Johnson, W.O.**, Sampsel, C., Sternfield, B., Harlow, S. and Gold, E.B. (2007). Factors Associated with Prevalent and Incident Urinary Incontinence in a Cohort of Mid-life Women: A Longitudinal Analysis of Data from the Study of Women's Health Across the Nation (SWAN). *American Journal of Epidemiology* **165**, 309-318.
101. Branscum, A.J., **Johnson, W.O.** and Gardner, I.A. (2007). Sample size calculations for studies designed to evaluate diagnostic test accuracy. *Journal of Agricultural and Biological Statistics* **12**, 112-127.
102. Su, C.L., Gardner, I.A. and **Johnson, W.O.** (2007). Bayesian Estimation of Aggregate Test Accuracy Based on Different Sampling Schemes. *Journal of Agricultural and Biological Statistics* **12**, 250-271.
103. Branscum, A.J., **Johnson, W.O.** and Thurmond, M.C. (2007). Bayesian Beta Regression: Applications to Household Expenditure Data and Genetic Distance Between Foot and Mouth Disease Viruses. *Australian and New Zealand Journal of Statistics* **49**. 287-301.
104. Christensen, R. and **Johnson, W.O.** (2008). A conversation with Seymour Geisser. *Statistical Science* **22**, 621-636.
105. Tavoranpanich, S., Muoz-Zanzi, C.A., Well, S.J., Raizman, E.A., Carpenter, T.E., **Johnson, W.O.**, and Gardner, I.A. (2008). Simulation model for evaluation of testing strategies for detection of paratuberculosis in Midwestern US dairy herds. *Preventive Veterinary Medicine* **83**, 65-82.
106. Branscum, A.J., Perez, A.M., **Johnson, W.O.** and Thurmond, M.C. (2008). Bayesian spatiotemporal analysis of foot-and-mouth disease data from the Republic of Turkey. *Epidemiology and Infection* **136**, 833-842.
107. Waetjen, L.E., Feng, W.-Y., Ye, J., **Johnson, W.O.**, Sampsel, C., Greendale, G.A., Sternfield, B., Harlow, S.D. and Gold, E.B. (2008). Factors Associated with Worsening and Improving Urinary Incontinence Across the Menopausal Transition. *Obstetrics and Gynecology* **111**, 167-177.
108. Garabed, R., **Johnson, W.O.**, Perez, A. and Thurmond, M.C. (2008). Exploration of Associations between Governance and Economics and Country-Level Foot-and-Mouth-Disease Status subsp. populations Using Bayesian Model Averaging. *Journal of the Royal Statistical Society, Series A* **171**, 699-722.

109. Branscum, A.J., **Johnson, W.O.**, Hanson, T.E. and Gardner, I.A. (2008). Bayesian Semiparametric ROC Curve Estimation and Diagnosis. *Statistics in Medicine* **27**, 2474-2496.
110. Tavornpanich, S., **Johnson, W.O.**, Anderson, R.J. and Gardner, I.A. (2008). Herd characteristics and management practices associated with seroprevalence of Mycobacterium avium subsp. paratuberculosis in California dairy herds. *American Journal of Veterinary Research* **67**, 904-911.
111. Gillen, D. and **Johnson, W.O.** (2008). 'Comment on "The nested Dirichlet Process" by Rodriguez, Dunson and Gelfand.' *Journal of the American Statistical Association* **103**, 1144-1146.
112. Utts, J. and **Johnson, W.O.** (2008). The Evolution of Teaching Bayesian Statistics to Nonstatisticians: A Partisan View from the Trenches. *The American Statistician* **62**, 199-201.
113. Hanson, T.E., **Johnson, W.O.** and Laud, P.W. (2009). A unified approach to semi-parametric inference for survival models with step process covariates. *Canadian Journal of Statistics* **37**, 60-79.
114. Wheeler, S.S., Barker, C.M., Fang, Y., Armijos, M., Carroll, B.D., Husted, S., **Johnson, W.O.** and Reisen, W.K. (2009). Differential Impact of West Nile Virus on California Birds Varies by Species. *The Condor* **111**, 1-20.
115. Garabed, R., **Johnson, W.O.** and Thurmond, M.C. (2009). Analytical Epidemiology of Genomic Variation among Pan Asia strains of Foot-and-Mouth Disease Virus. *Transboundary and Emerging Diseases* **56**, 142-156.
116. **Johnson, W.O.**, Gardner, I.A., Metoyer, C. and Branscum, A. (2009). Insight into interpretation of test sensitivity estimates from latent class analyses based on one or two tests in single or Multiple subsp. populations. *Preventive Veterinary Medicine* **91**, 116-121.
117. Garabed, R., Perez, A., **Johnson, W.O.** and Thurmond, M.C. (2009). Modeling use of expert opinion for the prediction of foot-and-mouth disease. *Preventive Veterinary Medicine* **92**, 10-20.
118. Norris, M., **Johnson, W.O.** and Gardner, I.A. (2009). Modeling Bivariate Longitudinal Diagnostic Outcome Data in the Absence of a Gold Standard. *Statistics and its Interface* **2**, 171-185.
119. DeIorio, M., **Johnson, W.O.**, Müller, P. and Rosner, G. (2009). Bayesian Nonparametric Non-Proportional Hazards Survival Modeling. *Biometrics* **65**, 762-771.
120. Vink, D., Jones, G., **Johnson, W.O.**, Brown, I., Demirkan, I., Carter, S. and French, N.P. (2009). Development and application of serological screening for bovine digital dermatitis. *Preventive Veterinary Medicine* **92**, 235-248.
121. Jones, G., **Johnson, W.O.** and Vinck, D. (2009). Evaluating a Continuous Biomarker for Infection using Observed Disease Status with Covariate Effects on Disease. *Journal of the Royal Statistical Society, Series C* **58**, 705-717.
122. Waetjen, L.E., Ye, J., Feng, W.Y., **Johnson, W.O.**, Greendale, G.A., Sampsel, C.M., Sternfeld, B., Harlow, S.D. and Gold, E.B. (2009). Association Between Menopausal Transition Stages and Developing Urinary Incontinence. *Obstetrics and Gynecology* **114**, 989-998.

123. Barker, C., **Johnson, W.O.**, Eldridge, B., Park, B., Melton, F. and Reisen, W. (2010). Temporal connections between *Culex tarsalis* abundance and transmission of western equine encephalomyelitis virus in California. *American Journal of Tropical Medicine and Hygiene* **82**, 1185-1193.
124. Norton, S., **Johnson, W.O.**, Jones, G. and Heuer, C. (2010). Evaluation of diagnostic tests for Johne's disease (*Mycobacterium bovis*, subspecies paratuberculosis) in New Zealand dairy cows. *Journal of Veterinary Diagnostic Investigation* **22**, 341-351.
125. Jones, G., **Johnson, W.O.**, Hanson, T.E. and Christensen, R. (2010). Identifiability of Models in Multiple Diagnostic Testing in the Absence of a Gold Standard. *Biometrics* **66**, 155-163.
126. Jafarzadeh, S.R., **Johnson, W.O.**, Utts, J.M. and Gardner, I.A. (2010). Bayesian estimation of the receiver operating characteristic curve for a diagnostic test with a limit of detection in the absence of a gold standard. *Statistics in Medicine* **29**, 2090-2106.
127. Dhand, N., **Johnson, W.O.** and Torribo, J.A. (2010). A Bayesian approach to estimate OJD prevalence from pooled faecal samples of variable pool size. *Journal of Agricultural, Biological and Environmental Statistics* **15**, 452 - 473.
128. Buijze, G., Hanson, T., **Johnson, W.O.**, and Ring, D. (2010). Latent class analysis to determine the accuracy of diagnostic tests in orthopaedics. *Orthopaedic Journal at Harvard Medical School* **12**, 106 - 108.
129. Hanson, T.E., Branscum, A.J. and **Johnson, W.O.** (2011). Bayesian semi-parametric methods for joint modeling of event time and longitudinal data, with Discussion. *Lifetime Data Analysis* **17**, 3-18.
130. **Johnson, W.O.**, Branscum, A.J. and Hanson, T.E. (2011). Rejoinder to Discussion of Bayesian semi-parametric methods for joint modeling of event time and longitudinal data. *Lifetime Data Analysis* **17**, 37 - 42.
131. Trippa, L., Müller, P. and **Johnson, W.O.** (2011). The Multivariate Beta Process and an Extension of the Polya Tree Model. *Biometrika* **98**, 17 - 34.
132. Gastwirth, J.L. and **Johnson, W.O.** (2011). Dare you buy a Henry Moore on E-bay? Statistics can tell you what to avoid. *Significance* **8**, 10 - 14.
133. Su, X., Meneses, K., McNees, P. and **Johnson, W.O.** (2011). Tree-Structured Subgroup Analysis for Understanding the Effect of an Intervention Program for Improving Quality of Life of Breast Cancer Survivors. *Journal of Royal Statistical Society, Series C* **16**, 457 - 74.
134. Gastwirth, J.L., **Johnson, W.O.** and Hikawa, H. (2011). Estimating the fraction of genuine artwork by Henry Moore for sale on E-BAY using the latent class screening test model. *Journal of the Royal Statistical Society, Series A* **175**, 805 - 22.
135. Waetjen, L.E., **Johnson, W.O.**, Xing, G., Feng, W., Greendale, G.A., and Gold, E.B. (2011). Serum Estradiol Levels Are Not Associated with Urinary Incontinence in Mid-life Women Transitioning through Menopause. *Menopause: The Journal of The North American Menopause Society* **18**, 1283-90.
136. Buijze, G., Mallee, W., Beeres, F., Hanson, T., **Johnson, W.**, and Ring, D. (2011). Diagnostic performance tests for suspected scaphoid fractures differ with conventional and latent class analysis. *Clinical Orthopaedics and Related Research* **469**, 3400-3407.

137. Bem, Daryl, Utts, Jessica and **Johnson, W.O.** (2011). Must Psychologists Change the Way They Analyze Their Data? A Response to Wagenmakers, Wetzels, Borsboom and Van der Mass. *Journal of Personality and Social Psychology* **101**, 716-19.
138. Bartell, S. and **Johnson, W.O.** (2011). Estimating Equations for Biomarker Based Exposure Estimation under Non-steady-state Conditions. *Environmental Health* **10**:57.
139. Choi, Y.K., **Johnson, W.O.**, Jones, G., Perez, A. and Thurmond, M.C. (2012). Modeling and predicting temporal foot-and-mouth disease incidence in endemic countries. *Journal of the Royal Statistical Society, Series A* **175**, 619-36.
140. Jones, G., **Johnson, W.O.**, Vinck, D. and French, Nigel. (2012). A framework for the joint modeling of longitudinal diagnostic outcome data and latent infection status: application to investigating the temporal relationship between infection and disease. *Biometrics* **68**, 371-9.
141. Cheng, D., Branscum, A.J. and **Johnson, W.O.** (2012) Sample Size and Power Calculations for ROC Studies: Parametric Robustness and Bayesian Nonparametrics. *Statistics in Medicine* **31**, 131-42.
142. Lombard, J.E., Gardner, I.A., Jafarzadeh, S.R., Fossler, C.P., Harris, B., Capsel, R.T., Wagner, B.A. and **Johnson, W.O.** (2013). Herd-level prevalence of Mycobacterium avium subsp. paratuberculosis infection in United States dairy herds in 2007. *Preventive Veterinary Medicine*, 108, 234-38.
143. **Johnson, W.O.** (2013). Bayesian Statistics in the Twenty First Century. *American Statistician*, **67**, 7-9.
144. Shahbaba, B. and **Johnson, W.O.** (2013). Bayesian Nonparametric Variable Selection as an Exploratory Tool for Discovering Differentially Expressed Genes. *Statistics in Medicine*, **32**, 2114 - 26.
145. Dhand, N., **Johnson, W.O.**, Eppleston, J., Whittington, R. and Windsor, P. (2013). Comparison of pre- and post-vaccination ovine Johne's disease prevalence by incorporating information from multiple sources using Bayesian methods. *Preventive Veterinary Medicine*, **111**, 81-91.
146. Stringer, Lesley A., Jones, Geoffrey, Jewell, Chris, Noble, Alasdair, Heuer, Heuer, Wilson, Peter, **Johnson, Wesley** (2013). Bayesian estimation of the sensitivity and specificity of individual faecal culture and Paralisa to detect Mycobacterium avium subsp. paratuberculosis infection in young farmed deer. *Journal of Veterinary Diagnostic Investigation* **25**, 699-704.
147. Branscum, A.J., **Johnson, W.O.** and Baron, A. (2013). Robust Medical Test Evaluation Using Flexible Bayesian Semiparametric Regression Models. *Epidemiology Research International*. Article ID 131232, 8 pages.
148. Shahbaba, B., Lan, S., **Johnson, W.O.** and Neal, R. (2014). Split Hamiltonian Monte Carlo. *Statistics and Computing*, **24**, 3039-49.
149. Kim, S.S., Richman, D.P., **Johnson, W.O.**, Hald, J.K. and Agius, M.A. (2014). Limited utility of current MRI criteria for distinguishing multiple sclerosis from its mimickers. *Multiple Sclerosis Journal*, **20**, 56-62.
150. Jones, Geoff and **Johnson, Wesley** (2014). Prior Elicitation: Interactive Spreadsheet Graphics with Sliders Can Be Fun, and Informative. *American Statistician*, **68**, 42-51.

151. Hanson, T. E., Branscum, Adam and **Johnson, W.O.** (2014). Informative g -Priors for Logistic Regression. *Bayesian Analysis*, **9**, 597-612.
152. Norris, M., **Johnson, W.O.** and Gardner, I.A. (2014). A Semiparametric Model For Bivariate Longitudinal Diagnostic Outcome Data In The Absence Of A Gold Standard. *Statistics and its Interface*, **7**, 417-438.
153. Colling, A., Morrissy, C., Barr, J., Meehan, G., Wright, L., Goff, W., Gleeson, L.J., van der Heide, B., Riddell, S., Yu, M., Eagles, D., Doughty, W., Daniels, P., Khounsy, S., Thanlong, Ngo, Vu, Pham Phong, Phuong, Nguyen Than, Tung, Nguyen, Lin-chongsubongkoch, W., Hammond, J., Johnson, M., **Johnson, W.O.**, Unger, H., and Crowther, J. (2014). Development and validation of a 3ABC FMD antibody ELISA. *The Australian Veterinary Journal*, **92**, 192-9.
154. Verdugo, Cristobal, Jones, Geoff, **Johnson, Wesley**, Wilson, Peter, Stringer, Leslie and Heuer, Cord (2014). Estimation of flock/herd-level true Mycobacterium avium subspecies paratuberculosis prevalence on sheep, beef cattle and deer farms in New Zealand using a novel Bayesian model. *Preventive Veterinary Medicine*, **117**, 447-55.
155. **Johnson, Wesley O.** and de Carvalho, Miguel (2015). *Bayesian Nonparametric Biostatistics*. In, **Nonparametric Bayesian Methods in Biostatistics and Bioinformatics**. Eds. Riten Mitra and Peter Müller, Springer, New York, 15-53.
156. Waetjen, L. Elaine, Xing, Guibo, **Johnson, Wesley O.**, Melnikow, Joy and Gold, Ellen B. (2015). Factors associated with seeking treatment for urinary incontinence during the menopausal transition. *Obstetrics and Gynecology*, **125**, 1071-1079.
157. Branscum, Adam, **Johnson, W.O.**, Hanson, T.E. and Baron, A. (2015). Flexible Models for ROC and Risk Analysis, with or without a Gold Standard. *Statistics in Medicine*, **34**, 3997-4015.
158. Jafarzadeh, R., **Johnson, W.O.** and Gardner, I.A. (2016). Bayesian modeling and inference for diagnostic accuracy and probability of disease based on multiple diagnostic biomarkers with and without a perfect reference standard. *Statistics in Medicine*, **35**, 859-76.
159. Jones, Geoffrey, and **Johnson, Wesley O.** (2016). A Bayesian Superpopulation Approach to Inference for Finite Populations Based on Imperfect Diagnostic Outcomes. *Journal of Agricultural, Biological and Environmental Statistics*, **21**, 314-27.
160. Quintana, F., **Johnson, W.O.**, Waetjen, E. and Gold, E.B. (2016). Bayesian Nonparametric Longitudinal Data Analysis. *Journal of the American Statistical Association*, **515**, 1168-81.
161. Wong, Jason Y.Y., Gold, Ellen B., **Johnson, W. O.** and Lee, Jennifer S. (2016). Circulating Sex Hormones and Risk of Uterine Fibroids: Study of Women's Health Across the Nation (SWAN). *Journal of Clinical Endocrinology & Metabolism*, **101**, 123-30.
162. Chang P.Y., Gold E.B., Cauley J.A., **Johnson W.O.**, Karvonen-Gutierrez C., Jackson E.A., Ruppert K.M., Lee J.S.(2016). Triglyceride Levels and Fracture Risk in Midlife Women: Study of Women's Health Across the Nation (SWAN). *J Clin Endocrinol Metab*, **101**, 3297-305.
163. Wong, Jason Y.Y., Chang P.Y., Gold, Ellen B., **Johnson, W. O.** and Lee, Jennifer S. (2016). Environmental Tobacco Smoke and Risk of Late-Diagnosis Incident Fibroids in the Study of Women's Health Across the Nation. *Fertility and Sterility*, **106**, 1157-64

164. Luderer, Ulrike, Christensen, Fletcher, **Johnson, W.O.**, She, Jianwen, Sai, Ho, Ip, S, Zhou, Junqiang, Alvaran, Josephine, Krieg, Edward F. and Kesner, James S. (2017). Associations between urinary biomarkers of polycyclic aromatic hydrocarbon exposure and reproductive function during menstrual cycles in women. *Environmental International*, **100**, 110-20.
165. Kostoulas, Polychronis, Nielsen, Sren S., Branscum, Adam J., **Johnson, W.O.**, Dendukurie, Nandini, Dhand, Navneet K., Toft, Nils and Gardner, I.A. (2017). STARD-BLCM: Standards for the Reporting of Diagnostic accuracy studies that use Bayesian Latent Class Models. *Preventive Veterinary Medicine*, **138**, 37-47.
166. Kostoulas, Polychronis, Nielsen, Sren, Branscum, Adam, **Johnson, W.O.**, Dendukuri, Nandini, Dhand, Navneet, Toft, Nils, Gardner, Ian. (2017). Reporting guidelines for diagnostic accuracy studies that use Bayesian latent class models (STARD-BLCM). *Statistics in Medicine*, **36**, 3603-4.
167. Waetjen, L.E., Xing, G., **Johnson, W.O.**, Melnikow, J. and Gold, E.B. (2017). Factors associated with reasons incontinent mid-life women report for not seeking urinary incontinence treatment over 9 years across the menopausal transition. *Menopause - The Journal of The North American Menopause Society*, **25**, 29-37.
168. **Johnson, W.O.**, Ward, Elizabeth and Gillen, D.L. (2017). Bayesian Methods in Public Health. *Handbook on Statistics: Disease Modeling and Public Health*, **36**, 407-42.
169. Guindani, M. and **Johnson, W.O.** (2018). More Nonparametric Bayesian Inference in Applications. *Statistical Methods and Applications* (on line)
170. Gönen, Mithat, **Johnson, W.O.**, Lu, Yonggang and Westfall, Peter H. (2018). Comparing Objective and Subjective Bayes Factors for the Two-Sample Comparison: The Classification Theorem in Action. *American Statistician*. (on line)
171. **Johnson, W.O.**, Jones, Geoff and Gardner, I.A. (2018). Gold standards are out and Bayes is in: Implementing the cure for imperfect reference tests in diagnostic accuracy studies. *Preventive Veterinary Medicine* (invited Schwabe Symposium Paper; revised)
172. Giles, Julia, **Johnson, Wesley**, Jones, Geoff, Heuer, Cord, Perrott, Mathew and Dunowska, Magdalena. (2018). Detection of antibody to wobbly possum disease virus in archival sera of wild Australian brushtail possums (*Trichosurus vulpecula*) in New Zealand. *New Zealand Veterinary Journal*. (in press)
173. Ward, Elizabeth, Gold, E.B., **Johnson, W.O.**, Ding, F., Chang, Po-Yin, Song, P., El Khoudary, S., Karvonen-Gutierrez, C., Ylitalo, K.L. and Lee, Jennifer (2018). Patterns of Cardiometabolic Health as Midlife Women Transition to Menopause: A Prospective Multi-Ethnic Study. *The Journal of Clinical Endocrinology and Metabolism*. (in press).

Book Review

1. **Johnson, W. O.** (2009). Review of **Monte Carlo Statistical Methods**, by Christian Robert and George Casella. *Journal of the American Statistical Association* **104**, 423-424.

GRANTS:

Agency: USDA "A quantitative risk analysis on the movement of animal pathogens through the import or export of infected animals." Grant Activity with VM: Medicine and Epidemiology 10/1/97-9/30/00, \$190,000, Co-PI.

Agency: UC Davis Center for Food Animal Health “Epidemiology of White Sturgeon Iridovirus and Herpesvirus-2 in 3 Commercial Facilities” 7/1/98-9/30/99, \$9,822, Collaborator.

Agency: UC Davis Formula Funds “Quantitative methods to certify freedom of animals from pathogens, applications to animal trade, food safety, and emerging diseases.” 4/20/99-1/31/00, \$31,492, Collaborator.

Agency: UC Davis Formula Funds “Epidemiology of bovine viral diarrhea virus in dairy cattle.” 7/1/98-6/30/99, \$35,000, Collaborator.

Agency: UC Davis Formula Funds “Epidemiology of bovine viral diarrhea virus in dairy cattle.” 7/1/99-6/30/00, \$8,000, Collaborator.

Agency: USDA “Epidemiology of bovine viral diarrhea virus infection in dairy cows.” 9/1/98-9/30/00, \$150,000, Co-PI.

Agency: USDA “Epidemiology of bovine viral diarrhea virus infection in dairy cows.” 10/1/00-9/30/02, \$150,000, Co-PI.

Agency: USDA “Test correlation affects diagnosis and surveillance of animal disease” 12/1/98-11/30/02, \$149,906, Co-PI.

Agency: USDA “Certification of disease freedom in animal populations: use of Bayesian methods.” 10/15/01-10/31/03, \$205,000, Co-PI.

Agency: USDA Cooperative “Multi-level risk analysis of infectious animal diseases affecting food safety.” 4/17/00-9/30/02, \$149,000, Co-PI.

Agency: USDA “Novel Methods for Improved Classification of herd Disease Status with Applications to Bovine Paratuberculosis” 8/01/03-7/31/05, \$157,000, Co-PI.

Agency: AFMIC USDA “Global surveillance models to forecast risk of foot-and-mouth disease” 8/1/03-7/30-05, \$1,100,215, Co-PI.

Agency: NIH “Cannabis for Spasticity/Tremor in Multiple Sclerosis: Placebo-Controlled Study” 5/1/03-4/30/05, \$305,526, Consultant.

Agency: NIH/NIA ”Study of Women’s Health Across the Nation-UC Davis” 9/30/94-11/30/08, \$2,820,000, Statistician.

USDA: Global Models and Surveillance to Forecast Risk of Foot-and-Mouth Disease. UC Davis. Subcontract 8/1/05-7/30/07, \$32,000, PI.

NIH-Mid-life Aging and Urinary Incontinence. UC Davis. Subcontract 2/15/2006-1/31/2010, \$20,000/yr, PI.

NIH-Mid-life Aging and Metabolic Syndrome. Stanford University. Subcontract 9/1/2012-8/31/2015, 20,000/yr PI.

Study of Women’s Health Across the Nation III. UC Davis. Subcontract 05/01/2005-04/30/2019, \$20,000/yr, PI.

MANUSCRIPTS and Work in Progress:

- Rosner, Gary, Laud, Purushottam, and **Johnson, Wesley**. **Introduction to Bayesian Biostatistics**. CRC Press.
- De Carvalho, Vanda Inacio, De Carvalho, Miguel and **Johnson, Wesley**). **Flexible Bayesian Methods for Diagnosis and ROC Curve Estimation**. CRC Press.

- Christensen, R., **Johnson, W.O.** and Laud, P.W.. Partial Information Priors. *Bayesian Analysis*.
- Garabed, R.B., **Johnson, W.O.** and Thurmond, M.C. High-Resolution Global Bayesian Model to Predict Probability of Foot-and-Mouth Disease Presence.
- Dubin, J., Scott, F., **Johnson, W.O.**, Liu, Y., Lasley, B.L., and Gold, E.B. Factors affecting excretion profiles of urinary steroid hormone metabolites in premenopausal women.
- Kreuder, C., **Johnson, W.O.**, Harris, M.D., Ames, J.A., Estes, J.A., Carpenter, T.E., Jessup, D.A. and Mazet, J.A.K. Variability in detection probability of sea otters: A model for evaluating the relative efficiency of survey methods.

PH.D. STUDENTS: Adviser or Co-Adviser*:

(1987) Marie-Liesse Lassauzet*, Senior Director, XenoPort, San Francisco, CA. Thesis Topic: Assessing the factors Associated with BLV transmission. (Co-supervised with M. Thurmond, Dept. of Epidemiology and Medicine.)

(1996) Alex Exuzides. Senior Statistician, Exponent Inc. Thesis Topic: Prediction diagnostics for survival models.

(1996) Mitchell Watnik. Associate Professor. Department of Statistics. California State University, Hayward. Thesis Topic: Characterizations and Properties of Tests for Comparing Non-nested Linear and Non-linear Models.

(1997) Julie Yee. Senior Statistician. U.S. Geological Survey, Sacramento, CA. Thesis Topic: Large and small sample Bayesian inference and diagnostics for models with latent variables.

(1999) David Cowling*. Senior Epidemiologist. California Department of Health Services Sacramento, CA Thesis Topic: Bayesian approaches to diagnostic testing. (Co-supervised with I. Gardner, Dept. of Epidemiology and Medicine, UCD.

(2000) Timothy Hanson. Professor. Department of Statistics. University of South Carolina. Thesis Topic: Bayesian nonparametric survival analysis.

(2001) Chun-Lung Su. Assistant Professor, Tunghai University, Taiwan. Thesis Topic: Asymptotic posterior approximations with Applications to Generalized Linear Mixed Models.

(2002) Patrick McInturff*. Deceased. Thesis Topic: Statistical models and methods for assessing risk factors associated with ram attrition. (Co-supervised with Nancy East and Sharon Hietala.)

(2003) Yan Liu*. Research Assistant Professor, School of Medicine, University of Miami. Thesis Topic: Statistical models and methods for assessing the impact of smoking on female hormone functioning. (Co-supervised with Ellen Gold, Department of Public Health and Bill Lasley, Department of Population Health and Reproduction.)

(2003) Scott Bartell. Associate Professor. University of California, Irvine. Program in Public Health. Thesis Topic: Statistical methods for non-steady state exposure inference using biomarkers.

(2005) Adam Branscum. Professor. Department of Health Sciences. Oregon State University. Thesis Topic: Contributions to statistical methods in epidemiology: Bayesian semi-parametric and nonparametric approaches.

(2005) Young-Ku Choi. Senior Researcher. University of Illinois, Chicago. Thesis Topic: Bayesian semi parametric methods for longitudinal data: Applications to modeling CD4 counts and women's hormone functioning over repeated cycles.

(2008) Michelle Norris. Associate Professor. California State University, Sacramento. Thesis Topic: Bayesian semi-parametric inference for longitudinal diagnostic test outcome data.

(2012) Reza Jafarzadeh. Thesis Topic: Bayesian Methods for Diagnostic Testing. (co-supervised with Ian Gardner, School of Veterinary Medicine, Prince Edward Island). Postdoctoral researcher. Washington University.

(2014) Yan He. Thesis Topic: Bayesian semiparametric modeling of curve data: Applications to longitudinal diagnostic test outcome data. Staff Scientist. Yahoo Corp.

(2017) Fletcher Christensen. Thesis Topic: New Approaches to Model Selection in Bayesian Mixed Modelilng. Assistant Professor. University of New Mexico.

Current Statistics Students:

Brandon Berman. Thesis Topic: Methods of improving Markov chain Monte Carlo sampling. Joint with Weining Shen

Epidemiology Thesis Committee Member/Mentor:

(1999) Randy Singer. Associate Professor, University of Minnesota Veterinary School. Thesis Topic: Molecular Epidemiology of Cellulitis-Associated Escherichia Coli in Broiler Chickens.

(2000) Marios Georgiadis, Scientific Officer, European Food Safety Authority. Thesis Topic: Epidemiology of Iridovirus in White Sturgeon.

(2002) Geoffery Fosgate. Professor, University of Pretoria, Veterinary School. Thesis Topic: Diagnosis and Control of Brucella Abortus.

(2002) Claudia Munoz-Zanzi. Associate Professor, University of Minnesota Veterinary School. Thesis Topic: Diagnosis, Characterization, and Impact of Bovine Viral Diarrhea Virus (BVDV) Infection in Dairy Cattle under Field Management Conditions.

(2005) Saraya Tavornpanich. Norwegian Veterinary Institute. Thesis Topic: Strategies for detection of Mycobacterium avium subsp Paratuberculosis.

(2008) Rebecca Garabed. Associate Professor, Ohio State Univ, Thesis Topic: Global Foot and Mouth Disease Modeling.

PROFESSIONAL SERVICE:

Associate Editor, *Biostatistics*, 2015-pres

Associate Editor, *American Statistician*, 2011-2015

Associate Editor, *Statistics in Medicine*, 2009-2015

Associate Editor, *Biometrics*, 2008-2012

Associate Editor, *Bayesian Analysis*, 2004-2009

Associate Editor, *Journal of the American Statistical Association*, 2002-2008

Elected Chair Elect, Chair, Past Chair, ISBA Section on Bayesian Nonparametrics, 2015-18

Elected Member, Executive Board, International Biometrics Society; 2012-2014

Member of ISBA Fellows Committee, 2017-20

Member of Board of Directors, *Journal of Agricultural, Biological and Environmental Statistics*, 2006-2010

Elected Member of Board of Directors of *International Society for Bayesian Analysis*, 2006-2008; 2012-2014

BNP 2017, Program Committee

ISBA 2015, Program Committee

ISBA Prize Committee, Member 2013-14, Chair 2014-15.

IMS Program Chair, Western North American Regional Meeting, Honolulu, June 2014

WNAR Program Chair, Western North American Regional Meeting, San Luis Obispo, June 2011

WNAR Program Chair: 2001-2002

Chair, Organizing Committee, UC Davis Conference in Epidemiology, January, 2001

SBSS Program Chair Elect: 1998-1999; Program Chair: 1999-2000

Member, IBS Program Committee, 2004-2006

Local Arrangements Chair for ISBA1, San Francisco, 1993

Member, ISBA Mitchell Award Committee: 2011-2013

Member, ISBA Savage Thesis Selection Committee: 1999-2000; 2006-2007

ASA-SBSS representative to the Savage Board, 2000-2004, and Chair, 2002-2004

Member, Steering Committee for the formation of SBSS, 1990

Assistant Secretary for IMS, 1986-1987

AIDS Research Panel, National Institutes of Health

Member, NIH Statistical Methodology Review Panel, June 2006

Workshop on Bayesian Statistics for Veterinary Epidemiologists (5 days): Epi Centre of the Veterinary School, Massey University, 2016.

Workshop on Bayesian Statistics for Veterinary Epidemiologists (5 days): Veterinary School, University of Prince Edward Island, 2016.

Workshop on Bayesian Statistics for Veterinary Epidemiologists (3 days): Veterinary School, University of Kansas, 2015.

Co-Director and presenter, International Summer School, Statistical Inference in Biology and Human Sciences, Asti Italy, Summer 2006, Summer 2008.

Workshop on Bayesian Statistics for Veterinary Epidemiologists (2.5 days): EPI Center, Massey University, NZ, December, 2009.

Workshop on Bayesian Statistics for Veterinary Epidemiologists (3 days): Veterinary School, University of Sydney, Australia, 2008.

Workshop on Bayesian Statistics for Veterinary Epidemiologists (5 days): EPI Center, Massey University, NZ, 2007.

Workshop on Bayesian Statistics for Veterinary Epidemiologists (5 days): Veterinary School, University of Prince Edward Island; Canada, 2004.

Workshop on Bayesian Statistics for Veterinary Epidemiologists (4 days): International Society for Veterinary Epidemiology and Economics; Santiago Chile, 2003.

Workshop on Bayesian Statistics for Veterinary Epidemiologists (2 days): Veterinary School, University of California at Davis; Davis CA, 2003.

Editorial Collaborator: *Annals of Statistics*, *Journal of the American Statistical Association*, *The American Statistician*, *Biometrics*, *Biometrika*, *Canadian Journal of Statistics*, *Journal of Econometrics*, *Naval and Logistics Quarterly*, *Statistica Sinica*, *Journal of the Royal Statistical Society*, *Journal of Statistical Planning and Inference*, *Technometrics*, *Communications in Statistics*, *Journal of the American Veterinary Medical Association*, *American Journal of Human Genetics*, George Barnard Volume, Arnold Zellner Volume, Seymour Geisser Volume, *Journal of Computational and Graphical Statistics*, Bayesian Nonparametrics Volume, Diagnostics and Prediction Volume, Shanti Gupta Volume, Multiple NSF Grant Proposal Reviews, NSERC Grant Proposal Review, USDA Grant Proposal Reviews, *Biometrical Journal*, *Statistics and Probability Letters*, *American Journal of Human Genetics*, *Preventive Veterinary Medicine*.

UNIVERSITY SERVICE:

Member, UCI Committee on Committees, 2010-2011.

Vice Chair of Executive Committee, Bren School of Information and Computer Science, UCI, 2010-2011.

Vice Chair of Statistics, Bren School of Information and Computer Science, UCI, 2006-2015.

Member, Graduate Policy Committee, 2008-2009.

Member, Undergraduate Educational Policy Committee, Bren School of Information and Computer Sciences, UCD, 2006-2007.

Member, Executive Committee, Bren School of Information and Computer Sciences, UCI, 2005-2006; 2007-2008; 2010-2011

Chair, Graduate Group in Epidemiology, UCD, 1997-2002.

Chair, Graduate Group in Epidemiology Executive Committee, UCD, 1997-2002.

Chair, Department of Statistics Educational Policy Committee, UCD, 2001-2002.

Member, Steering Committee for the Formation of MPH Program at UCD, 2001-2002.

Chair, Graduate Group in Epidemiology Seminar Committee, UCD, 2001-2002.

Member, Dean of Mathematical and Physical Sciences Advisory Council, UCD, 1998-present.

Member, Graduate Council Academic Planning and Development Subcommittee, UCD, 2001-2002.

Chair, Graduate Group in Epidemiology Examination Committee, UCD, 2000.

Member, Academic Senate Graduate Council, UCD, 1995-1999.

Chair, Graduate Council Subcommittee for Program Review, UCD, 1999.

Chair, Ad Hoc Committee for the Review of the Psychology Graduate Program, UCD, 1998-1999

Member and Chair of multiple Ad Hoc Committees for Promotion Actions, UCD.

Chair, Graduate Group in Statistics Admissions and Recruitment Committee, UCD, 1994-1998.

Graduate Group in Statistics Teaching Assistant Coordinator, UCD, 1994-1998.

Graduate Group in Statistics Master Graduate Advisor, UCD, 1981-1982, 1994-1998.

Member, Graduate Council Subcommittee for Program Review, UCD, 1997-1998.

Chair, Graduate Council Courses Subcommittee, UCD, 1995-1997.

Member, Academic Senate Courses Committee, UCD, 1985-1986 and 1995-1997.

Chair, Graduate Group in Epidemiology Educational Policy Committee, UCD, 1996-1997.

Chair, Graduate Group in Epidemiology Admissions Committee, UCD, 1990-1996.

Undergraduate Adviser in Statistics, UCD, 1989-1994.

INVITED TALKS:

2018 Workshop on Bayesian Statistics in the Department of Public Health, University of Arizona; Session Honoring John Deely at the Purdue Symposium 9; ECOSTAT Conference in Hong Kong;

2017 Statistics4@Florence; CMO Workshop, Oaxaca; Schwabe Symposium Plenary; Department of Statistics, Cal State San Diego; Department of Statistics, UCI

2016 International Society for Bayesian Analysis, Sardinia; Pontificia Universidad de Catolica, Santiago; National Institutes of Health, Washington DC;

2015 Dept. of Mathematics and Statistics, University of Texas, El Paso; Third International Meeting on Statistics, Athens, Greece; University of Colorado, Denver; Study of Women's Health Across the Nation (SWAN) Annual Meeting, Washington DC;

2014 ISBA International Meeting, Cancun; Johns Hopkins University, Baltimore MD;

2013 Eastern North American Regional meeting of the International Biometrics Society, Orlando; Statistical Society of Canada Annual Meeting, Edmonton; Conference in Honor of George Kokolakis, Athens, Gr.; Department of Statistics, University of Texas, Austin; Department of Mathematics and Statistics, Arizona State University; Conference in Memory of John Klein, Milwaukee, Wisc; Seventh Annual Distinguished Professor S. James Press Endowed Lecture, UC Riverside

2012 Duke University, School of Information and Decision Sciences; Joint Statistical Meetings, San Diego; Plenary Session, Fifth Annual Bayesian Biostatistics Conference, M.D. Anderson Cancer Center; California State University, Fullerton; Latin American Congress of Probability and Mathematical Statistics, Viña del Mar.

2011 Dept. of Statistics, University of Missouri; University of Minnesota, School of Statistics 40 year Reunion; Plenary talk, Conference in Honor of Adrian Smith, Crete; International Society of Clinical Biostatistics conference, Ottawa; Department of Biostatistics, University of Iowa; Department of Statistics, University of South Carolina .

2010 Geisser Lecture, University of Minnesota; Joint Statistical Meetings, Vancouver BC; Conference on Nonparametric Statistics and Statistical Learning, Ohio State University; Two plenary talks at the Semiparametric Bayesian Inference: Applications in Pharmacokinetics and Pharmacodynamics Program, SAMSI Conference; Plenary talk at Conference on Bayesian Nonparametric Statistical Methods at Santa Cruz; Seminar on Bayesian Inference in Econometrics and Statistics, Austin Texas; UCLA Department of Biostatistics.

2009 University of Florida Annual Statistics Meeting, plenary speaker; Joint Statistical Meetings, Wash. DC; ASA meeting at Univ. of Central Florida; San Francisco Bay Area ASA Meeting; Canadian Statistical Society, Vancouver BC.

2008 Joint Statistical Meetings, Denver, CO (invited session speaker and invited discussant); MD Anderson Cancer Center; American Public Health Association Meeting, San Diego; Dept. of Statistics, Pacific Catholic University, Santiago Chile

2007 Joint Statistical Meetings, Salt Lake City; ISBIS 2007, Azores Portugal; Workshop on Bayesian Nonparametric Statistics, Cambridge UK; WNAR 2007, Irvine CA; Australia-NewZealand annual meeting, Christchurch NZ; Dept. of Statistics, University of Central Florida; Department of Statistics, University of Waterloo; Milwaukee regional statistical association; MD Anderson Cancer Center, Houston TX (invited for 2 week visit); Dept. of Statistics, Pacific Catholic University, Santiago Chile; Department of Statistics, Massey University, NZ; American Association of Veterinary Diagnosticians; ENAR, Atlanta GA.

2006 Joint Statistical Meetings, Seattle; 5th Bayesian Nonparametrics Workshop, Jeju Korea; University of Sydney Veterinary School; Massey University Statistics Department. Department of Statistics, University of Bologna.

2005 Objective Bayes 5, Branson, Mo.; International meeting on the design and analysis of diagnostic evaluation studies, Nairn, Inverness, Scotland. Plenary talk plus two technical presentations; International workshop on Bayesian statistics and its applications, Vananasi, India; Department of Biostatistics, UCLA; 5th IASC Asian Conference on Statistical Computing, Hong Kong.

2004 Joint Statistical Meetings, Toronto; Dept. of Statistics, Iowa State University, Ames IA; SVEPM workshop on diagnostic tests, Martigny Switzerland; Dept. of Statistics, UC Santa Cruz; Five days of presentations for course on Bayesian methods in veterinary epidemiology, University of Prince Edward Island.

2003 Workshop in Bayesian Statistics, Calcutta, India; Joint session of Western North American Regional meeting of the *Biometrics* Society and IMS, Golden, CO; Joint Statistical Meetings, San Francisco; Houston Area Chapter of ASA; Dept. of Biostatistics, MD Anderson Cancer Center; Department of Biostatistics, Yale University; Graduate Group in Epidemiology, UCD (2 seminars); Dept. of Statistics, Purdue University; Plenary talk, SVEPM workshop on diagnostic tests, Warwick, England.

2002 Eastern North American Regional Meeting of the *Biometrics* Society, Washington D.C.; School of Veterinary Medicine, Iowa State University; International Conference on Teaching Statistics, Cape Town, South Africa; Plenary talk, School of Statistics Conference Honoring Seymour Geisser, Minneapolis, MN; University of New Mexico; two presentations at Workshop on Validation of Veterinary Laboratory Diagnostic Tests, American Association of Veterinary Laboratory Diagnosticians Annual Meeting, St. Louis, MO.; FDA invited solo workshop on no-gold standard diagnostics, Washington DC; Dept. of Statistics, UCD.

2001 Eastern North American Regional Meeting of the *Biometrics* Society, Charlotte, NC; Department of Statistics, Cal. Poly. SLO; Department of Mathematics and Statistics, Portland State University; Department of Mathematics, Sonoma State University; Plenary Talk, Third International Bayesian Nonparametrics Conference, University of Michigan; Department of Statistics, University of Wyoming; Conference in Nonparametric Statistics Honoring George Roussas, Davis, CA; Western North American Regional Meeting of the *Biometrics* Society, Vancouver, Canada; International Conference of the Indian Statistical Society, New Delhi India.

2000 Third Meeting of the International Society for Bayesian Analysis, Crete, GR; Department of Biostatistics, UCLA; International Society for Veterinary Epidemiology and Economics Meeting, Breckenridge, CO.

1999 Plenary Talk, Second International Bayesian Nonparametrics Conference, University of Reading, UK; Department of Epidemiology and Biostatistics, University of New Mexico; Department of Biostatistics, UCLA; Department of Mathematics, University of Nevada, Reno; Department of Mathematics and Statistics, University of New Mexico; Western North American Regional Meeting of the *Biometrics* Society, Seattle, WA.

1998 Invited Session Chair, Valencia 6, Las Fuentes, Spain; Department of Mathematics and Statistics, California State University at Chico.

1997 Western Regional American Region of the *Biometrics* Society, Park City UT; INFORMS Conference, Dallas TX; National Bureau of Economic Research-NSF-Seminar in Bayesian Inference in Econometrics Conference, Columbus, OH; Department of Mathematics and Statistics, California State University at Chico; Department of Statistics, University of Missouri, Columbia; School of Business, University of Wisconsin, Milwaukee; Plenary Speaker, IMA summer Program on "Statistics in the Health Sciences, Week 3 - Diagnosis and Prediction", Minneapolis, MN; Department of Mathematics, University of Missouri, Rolla.

1996 National ASA Meeting, Chicago ILL; Plenary Speaker, Kullback Conference on Information Theory, Washington DC; Plenary Speaker, University of Minnesota School of Statistics Conference, Minneapolis, MN; University of Canterbury, Christchurch NZ.

1980-95 National ASA Meeting, Detroit MI; Rand Corporation; University of Texas at Dallas; Simon Fraser University; City University of New York; Carnegie Mellon University; NBER-NSF-SBIE Conferences at the University of Minnesota, Duke, Cornell, UC Riverside, Rutgers, University of Florida, University of Michigan; Mexico City, St. Louis, University of Missouri, and George Washington University; University of Iowa; Montana State University; California State University at Hayward; George Washington University; Arizona State University; UC Riverside; UC Santa Barbara; University of Wichita; University of New Mexico; U.C. Berkeley; New Zealand Statistical Association, Christchurch; Conference on Forecasting and Prediction, Hsingchu, Taiwan;

University of Hong Kong; National ASA Meeting, Orlando FLA; National ASA Meeting, SF CA; Discussant, Second International Society for Bayesian Analysis Meeting, Spain.

TOPICS TAUGHT IN COURSES:

- Undergraduate All levels of basic applied and theoretical probability and statistics, statistics for Engineers, probability and mathematical statistics for graduate students in econometrics, Bayesian statistics, categorical data analysis, multivariate analysis, regression analysis, analysis of variance.
- Graduate: PhD level estimation, testing, asymptotics and decision theory, survival analysis, generalized linear models, multivariate analysis, linear models, spatial data, longitudinal data, Bayesian nonparametric theory, methodology and computation, Bayesian modeling and data analysis, Epidemiologic methods, bootstrap methods, EM/SEM algorithms, MCMC sampling and theory, Markov chain theory.

CONSULTING:

(1992-1994) State of California, Department of AIDS.

(1998-2000) State of California, Department of Mental Health.

(1998-2000) NIH Bacteremia Study Grant, Nathan Kuppermann, PI.

(2001-2003) NIH Multiple Sclerosis Grant, Mark Agius, PI.

(2002) Pacific Gas and Electric; Weintraub, Genshlea, Chediak and Sproul Law Corp.