

Daniel B. Hall, Ph.D.

Department of Statistics

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Research Interests:

- Statistical modeling of longitudinal/clustered data
- Generalized linear models and their extensions
- Mixture models
- Zero-inflation
- Nonlinear regression
- Biological applications of statistics

Education:

- 1994 Ph.D. in statistics, Northwestern University
Advisor: T.A. Severini
Dissertation: Extended Generalized Estimating Equations for Longitudinal Data
- 1993 M.S. in statistics, Northwestern University
- 1988 B.A. in mathematics, Northwestern University

Work Experience*:

- Aug. 2002–Present: Associate Professor, Department of Statistics, University of Georgia.
- Aug. 2006–Jul. 2014: Associate Head, Department of Statistics, University of Georgia.
- Sep. 1996–Aug. 2002: Assistant Professor, Department of Statistics, University of Georgia.
- Aug. 2001–Aug. 2006: Co-Director, Statistical Consulting Center, University of Georgia.
- Fall, 2001–Present: Adjunct Faculty, Daniel B. Warnell School of Forest Resources, University of Georgia.
- Aug. 1995–Jul. 1996: Postdoctoral Associate, Clinical Trials Data Management Center, Department of Preventive Medicine and Environmental Health, University of Iowa.
- Aug. 1994–Aug. 1995: Postdoctoral Fellow, NIMH Psychiatric Epidemiology/Biometry Traineeship, Department of Preventive Medicine and Environmental Health, University of Iowa.
- Sep. 1993–Aug. 1994: Instructor, Department of Statistics, Northwestern University.

Refereed Publications*:

67. Martin, J. and Hall, D.B., Marginal zero-inflated regression models for count data. *Journal of Applied Statistics*, in press.
66. Ferreira, A.J., Laing, E.M., Hausman, D.B., Hall, D.B., McCabe, G.P., Martin, B.R., Hill, K.M., Warden, S.J., Weaver, C.M., Peacock, M., and Lewis, R.D. Vitamin D supplementation effects on insulin sensitivity and resistance in early pubertal white and black children. *Journal of Clinical Endocrinology & Metabolism*, in press.
65. Martin, J. and Hall, D.B. R^2 measures for zero-inflated regression models for count data with excess zeros. *Journal of Statistical Computation and Simulation*, in press.
64. Goodie, A.S., Meisel, M.K., Ceren, R., Hall, D.B., and Doshi, P. Evaluating and improving probability assessment in an ambiguous, sequential environment. *Current Psychology*, in press.
63. Hall, D.B. and Shen, J. (2015). Marginal projected multivariate linear models for clustered angular data. *Australian and New Zealand Journal of Statistics*, **57(2)**, 241–257.

This document last updated on 09/13/16.

* In reverse chronological order.

62. St. Helen, G., Aguilar-Villalobos, M., Adetona, O., Cassidy, B.E., Bayer, C., Hendry, R.J., Hall, D.B., Naeher, L.P. (2015). Exposure of pregnant women to cookstove related household air pollution in urban and peri-urban Trujillo, Peru. *Archives of Environmental & Occupational Health*, **70(1)**, 10–18.
61. Berger, P.K., Principe, J.L., Laing, E.M., Henley, E.C., Pollock, N.K., Taylor, R.G., Blair, R.M., Baile, C.A., Hall, D.B., and Lewis, R.D. (2014). Weight gain in college females is not prevented by isoflavone-rich soy protein: a randomized controlled trial. *Nutrition Research*, **34**, 66–73.
60. Lewis, R.D., Laing, E.M., Hill Gallant, K.M., Hall, D.B., McCabe, G.P., Hausman, D.B., Martin, B.R., Warden, S.J., Peacock, M., and Weaver, C.M. (2013). A Randomized Trial of Vitamin D3 Supplementation in Children: Dose-Response Effects on Vitamin D Metabolites and Calcium Absorption. *Journal of Clinical Endocrinology & Metabolism*, **98**, 4816–4825.
59. Commodore, A.A., Zhang, J., Chang, Y., Hartinger, S.M., Lanata, C.F., Musezahl, D., Gil, A.I., Hall, D.B., Aguilar-Villalobos, Vena, J.E., Wang, J.-S., Naeher, L.P. (2013). Concentrations of Urinary 8-Hydroxy-2'-deoxyguanosine and 8-isoprostane in Women Exposed to Woodsmoke in a Cookstove Intervention Study in San Marcos, Peru. *Environment International*, **60**, 112–122.
58. Ceren, R., Doshi, P., Meisel, M., Goodie, A., and Hall, D. (2013). On Modeling Human Learning in Sequential Games with Delayed Reinforcements. *Proceedings of the 2013 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, 3108-3113.
57. Commodore, A.A., Hartinger, S.M., Lanata, C.F., Musezahl, D., Gil, A.I., Hall, D.B., Aguilar-Villalobos, Naeher, L.P. (2013). A Pilot Study Characterizing Real Time Exposures to Particulate Matter and Carbon Monoxide from Cookstove Related Woodsmoke in Rural Peru. *Atmospheric Environment*, **79**, 380–384.
56. Adetona, O., Zhang, J., Hall, D.B., Wang, J.-S., Vena, J.E., Naeher, L.P. (2013). Occupational exposure to woodsmoke and oxidative stress in wildland firefighters. *Science of the Total Environment*, **449**, 269–275.
55. Adetona, O., Horton, K., Sjodin, A., Jones, R., Hall, D.B., Aguilar-Villalobos, M., Cassidy, B.E., Vena, J.E., Needham, L.L., Naeher, L.P. (2013). Concentrations of select persistent organic pollutants across pregnancy trimesters in maternal and in cord serum in Trujillo, Peru. *Chemosphere*, **91**, 1426–1433.
54. Commodore, A.A., Hartinger, S.M., Lanata, C.F., Musezahl, D., Gil, A.I., Hall, D.B., Aguilar-Villalobos, M., Butler, C.J., and Naeher, L.P. (2013). Carbon monoxide exposures and kitchen concentrations from cookstove-related woodsmoke in San Marcos, Peru. *International Journal of Occupational and Environmental Health*, **19(1)**, 43–54.
53. St. Helen, G., Holland, N.T., Balmes, J.R., Hall, D., Bernert, J.T., Vena, J.E., Wang, J.-S., and Naeher, L.P. (2013). Utility of urinary Clara cell protein (CC16) to demonstrate increased lung epithelial permeability in non-smokers exposed to outdoor secondhand smoke. *Journal of Exposure Science and Environmental Epidemiology*, **23(2)**, 183–189.
52. Adetona, O., Zheng, L., Sjodin, A., Romanoff, L.C., Aguilar-Villalobos, M., Needham, L.L., Hall, D.B., Cassidy, B.E., Naeher, L.P. (2013). Biomonitoring of polycyclic aromatic hydrocarbon exposure in pregnant women in Trujillo, Peru Comparison of different fuel types used for cooking. *Environment International*, **53**, 1–8.
51. St. Helen, G., Bernert, J.T., Hall, D.B., Sosnoff, C.S., Xia, Y., Balmes, J.R., Vena, J.E., Wang, J.-S., Holland, N.T., and Naeher, L.P. (2012). Exposure to secondhand smoke outside of a bar and a restaurant and tobacco exposure biomarkers in non-smokers. *Environmental Health Perspectives*, **120(7)**, 1010–1016.
50. Young, D.L., Goodie, A.S., Hall, D.B., and Wu, E. (2012). Decision making under time pressure, modeled in a prospect theory framework. *Organizational Behavior and Human Decision Processes*, **118(2)**, 179–188.
49. Adetona, O., Sjodin, A., Zheng, L., Romanoff, L.C., Aguilar-Villalobos, M., Needham, L.L., Hall, D., Luis, A., Cassidy, B.E., Simpson, C.D., Naeher, L.P. (2012). Personal Exposure to PM2.5 and Urinary Hydroxy-PAH Levels in Bus Drivers Exposed to Traffic Exhaust, in Trujillo, Peru. *Journal of Occupational and Environmental Hygiene*, **9(4)**, 217–229.
48. Adetona, O., Hall, D.B., and Naeher, L.P. (2011). Lung function changes in wildland firefighters working at prescribed burns. *Inhalation Toxicology*, **23(13)**, 835–841.
47. Adetona, O., Dunn, K., Hall, D.B., Achtemeier, G., Stock, A., Naeher, L.P. (2011). Personal PM2.5 exposure among wildland firefighters working at prescribed forest burns in southeastern United States. *Journal of*

- Occupational and Environmental Hygiene*, **8(8)**, 503–511.
46. St. Helen, G., Hall, D.B., Kudon, L.H., Pearce, J., Baptiste, S., Ferguson, S., Green, T., and Naeher, L.P. (2011). Particulate matter (PM_{2.5}) and carbon monoxide from secondhand smoke outside bars and restaurants in downtown Athens, Georgia. *Journal of Environmental Health*, **74(3)**, 8–17.
 45. Antony, F., Schimleck, L.R., Hall, D.B., Clark, A., and Daniels, R.F. (2011). Modeling the effect of midrotation fertilizer on specific gravity of loblolly pine (*Pinus taeda* L.). *Forest Science*. **57(2)**, 145–152.
 44. Breen, M.E., Laing, E.M., Hall, D.B., Hausman, D.B., Taylor, R.G., Isales, C.M., Ding, K., Pollock N.K., Hamrick M.W., Baile C.A., and Lewis R.D. (2011). 25-Hydroxyvitamin D, insulin-like growth factor-I and bone mineral accrual during growth. *The Journal of Clinical Endocrinology & Metabolism*, **96**, E89–E98.
 43. Pollock, N.K., Laing, E.M., Taylor, R.G., Baile, C.A., Hamrick, M.W., Hall, D.B., and Lewis, R.D. (2011). Bone and fat relationships in postadolescent black females: A pQCT study. *Osteoporosis International*, **22**, 655–665.
 42. Pollock, N.K., Laing, E.M., Taylor, R.G., Baile, C.A., Hamrick, M.W., Hall, D.B., and Lewis, R.D. (2011). Comparisons of trabecular and cortical bone in late adolescent black and white females. *Journal of Bone and Mineral Metabolism*, **29**, 44–53.
 41. Young, D.L., Goodie, A.S., and Hall, D.B. (2011). Modeling the impact of control on the attractiveness of risk in a prospect theory framework. *Journal of Behavioral Decision Making*, **24**, 47–70.
 40. Antony, F., Schimleck, L.R., Daniels, R.F., Clark, A., and Hall, D.B. (2010). Modeling the longitudinal variation in wood specific gravity of planted loblolly pine (*Pinus taeda*) in the United States. *Canadian Journal of Forest Research*, **40**, 2439–2451.
 39. Kim, S., Orpinas, P., Martin, R., Horne, A.M., Sullivan, T.N., and Hall, D.B. (2010). A typology of behavioral adjustment in ethnically diverse middle school student. *Journal of Psychoeducational Assessment*, **28**, 524–535.
 38. Irvin, E.A., Calafat, A.M., Silva, M.J., Aguilar-Villalobos, M., Needham, L.L., Hall, D.B., Cassidy, B., and Naeher, L.P. (2010). An estimate of phthalate exposure among pregnant women living in Trujillo, Peru. *Chemosphere*, **80**, 1301–1307.
 37. Hall, D.B. and Shen, J. (2010). Robust estimation for zero-inflated Poisson regression. *Scandinavian Journal of Statistics*, **37**, 237–252.
 36. Quinn, W.H., Hall, D.B., Smith, E.P., and Rabiner, D. (2010). Predictors of family participation in a multiple family group intervention for aggressive middle school students. *Journal of Community Psychology*, **38**, 227–244.
 35. Hall, J.C., Bernert, J.T., Hall, D.B., St.Helen, G., Kudon, L.H., Naeher, L.P. (2009). Assessment of exposure to secondhand smoke at outdoor bars and family restaurants in Athens, GA, using salivary cotinine. *Journal of Occupational and Environmental Hygiene*, **6**, 698–704.
 34. Antony, F., Jordan, L., Daniels, R.F., Schimleck, L.R., Clark, A., and Hall, D.B. (2009). Effect of midrotation fertilization on growth and specific gravity of loblolly pine (*Pinus taeda* L.). *Canadian Journal of Forest Research*, **39**, 928–935.
 33. Rodas, L.R., Jennison, C.A., Hall, D.B., and Barrett, G. (2009). Luring small mammals: a levels-of-organization perspective. *Southeastern Naturalist*, **8**, 387–398.
 32. Kruse, J.S., Miller, W.P., Schlossberg, M.J., Yanosky, D., and Hall, D.B. (2009). Predicting initial tall fescue root growth response to calcium/aluminum solution concentrations. *Communications in Soil Science and Plant Analysis*, **40**, 1227–1239.
 31. Jordan, L., Clark, A., Schimleck, L.R., Hall, D.B., and Daniels, R.F. (2008). Regional variation in wood specific gravity of planted loblolly pine in the United States. *Canadian Journal of Forest Research*, **38**, 698–710.
 30. Adin, D.M., Phillips, N.J., Gibson, B.W., Apicella, M.A., Ruby, E.G., McFall-Ngai, M.J., Hall, D.B., and Stabb, E.V. (2008). Characterization of htrB and msbB mutants of the light organ symbiont *Vibrio fischeri*. *Applied and Environmental Microbiology*, **74**, 633–644.
 29. Pollock, N.K., Laing, E.M., Baile, C.A., Hamrick, M.W., Hall, D.B., and Lewis, R.D. (2007). Is adiposity advantageous for bone strength? A pQCT study in late adolescent females. *American Journal of Clinical*

- Nutrition*, **86**, 1530–1538.
28. Jordan, L., Schimleck, L.R., Clark, A., Hall, D.B., and Daniels, R.F. (2007). Estimating optimum sampling size to determine weighted core specific gravity of planted loblolly pine. *Canadian Journal of Forest Research*, **37**, 2250–2259.
 27. Cassidy, B., Alabanza-Akers, M.A., Akers, T.A., Hall, D.B., Ryan, P.B., Bayer, C.W., and Naeher, L.P. (2007). Particulate matter and carbon monoxide multiple regression models using environmental characteristics in a high diesel-use area of Baguio City, Philippines. *Science of the Total Environment*, **381**, 47–58.
 26. Kominoski, J.S., Pringle, C.M., Ball, B.A., Bradford, M.A., Coleman, D.C., Hall, D.B., and Hunter, M.D. (2007). Nonadditive effects of leaf litter species diversity on breakdown dynamics in a detritus-based stream. *Ecology*, **88**(5), 1167–1176.
 25. Jordan, L., He, R., Hall, D.B., Clark, A., Daniels, R.F. (2007). Variation in loblolly pine ring microfibril angle in the southeastern United States. *Wood and Fiber Science*, **39**(2), 352–363.
 24. Willis, C.M., Laing, E.M., Hall, D.B., Hausman, D.B., and Lewis, R.D. (2007). A prospective analysis of plasma 25-hydroxyvitamin D concentrations in white and black prepubertal females in the southeastern United States. *The American Journal of Clinical Nutrition*, **85**, 124–130.
 23. Richardson, J.I., Hall, D.B., Bjorkland, R., Mason, P., Cai, Y., Andrews, K., and Bell, R. (2006). Eighteen years of saturation tagging data reveal a significant increase in nesting hawksbill turtles (*Eretmochelys imbricata*) on Long Island, Antigua. *Animal Conservation*, **9**(3), 302–307.
 22. Jordan, L., He, R., Hall, D.B., Daniels, R.F., Clark, A. (2006). Variation in loblolly pine cross-sectional microfibril angle with tree height and physiographic region. *Wood and Fiber Science*, **38**(3), 390–398.
 21. Stein, E.M., Laing, E.M., Hall, D.B., Hausman, D.B., Kimlin, M.G., Johnson, M.A., Modlesky, C.M., Wilson, A.R., Lewis, R.D. (2006). Serum 25(OH)D concentrations in girls aged 4 to 8 years living in the southeast United States. *The American Journal of Clinical Nutrition*, **83**(1), 75–81.
 20. Rose, C.E., Hall, D.B., Shiver, B.D., Clutter, M.L., and Borders, B. (2006). A multilevel approach to individual tree survival prediction. *Forest Science*, **52**, 31–43.
 19. Laing, E.M., Wilson, A.R., Modlesky, C.M., O’Connor, P.J., Hall, D.B., and Lewis, R.D. (2005). Initial years of recreational artistic gymnastics training improves lumbar spine bone mineral accrual in 4 to 8 year old females. *Journal of Bone and Mineral Research*, **20**, 509–519.
 18. Hall, D.B. and Wang, L. (2005). Mixtures of generalized linear mixed-effects models for cluster-correlated data. *Statistical Modelling*, **5**, 21–37.
 17. Rose, C.E., Clutter, M.L., Shiver, B.D., Hall, D.B., and Borders, B. (2004). A generalized methodology for developing flexible whole stand survival models. *Forest Science*. **50**, 686–695.
 16. Hall, D.B. and Zhang, Z. (2004). Marginal models for zero-inflated clustered data. *Statistical Modelling*, **4**, 161–180.
 15. Hall, D.B. and Clutter, M. (2004). Multivariate multilevel nonlinear mixed effects models for timber yield predictions. *Biometrics*, **60**, 16–24.
 14. Xie, L., Hall, D., Eiteman, M.A., and Altman, E. (2003). Optimization of recombinant *Escherichia coli* using factorial design. *Applied Microbiology and Biotechnology*, **63**, 267–273.
 13. Hall, D.B. and Berenhaut, K.S. (2002). Score tests for heterogeneity and overdispersion in zero-inflated Poisson and binomial regression models. *Canadian Journal of Statistics*, **30**, 415–430.
 12. Doebbeling, B.N., Jones, M.F., Woolson, R.F., Hall, D.B., Clarke, W.R., Crumley, T., Barrett, D.H., Falter, K.H., Torner, J.C., Burmeister, L.F., Merchant, J.A., Nusser, S., Anderson, D., and Schwartz, D.A. (2002). Methodological Issues in a Population-based Health Survey of Gulf War Veterans. *Journal of Clinical Epidemiology*, **55**, 477–487.
 11. Hall, D.B. and Præstgaard, J. (2001). Order-restricted score tests for homogeneity in generalised linear and nonlinear mixed models. *Biometrika*, **88**, 739–751.
 10. Hall, D.B. and Bailey, R.L. (2001). Modeling and prediction of forest growth variables based on multilevel nonlinear mixed models. *Forest Science*, **47**, 311–321.
 9. van Iersel, M., Oetting, R., Hall, D.B. and Kang, J.G. (2001). Application technique and watering method affect imidacloprid control of whiteflies (Homoptera: Aleyrodidae) on poinsettias. *Journal of Economic*

Entomology, **94**, 666–672.

8. Hall, D.B. (2001). On the application of extended quasilikelihood to the clustered data case. *Canadian Journal of Statistics*, **29**, 77–97.
7. Hall, D.B. (2000). Zero-inflated Poisson and binomial regression with random effects: a case study. *Biometrics*. **56**, 1030-1039.
6. van Iersel, M., Oetting, R., and Hall, D.B. (2000). Imidacloprid applications by subirrigation for control of silverleaf whitefly on poinsettia. *Journal of Economic Entomology*, **93**, 813–819.
5. Hall, D.B., Woolson, R.F., Clarke, W.R., and Jones, M.F. (2000). Cochran-Mantel-Haenszel techniques: applications involving epidemiologic survey data. *Handbook of Statistics, Volume 18: Bio-Environmental and Public Health Statistics*, Amsterdam: North-Holland, pp.483–500.
4. Hall, D.B. (1999). On GEE-based regression estimators under first moment misspecification. *Communications in Statistics: Theory and Methods*, **28**, pp.1021–1042.
3. Hall, D.B. and Severini, T.A. (1998). Extended generalized estimating equations for clustered data. *Journal of the American Statistical Association*, **93**, 1365–1375.
2. The Iowa Persian Gulf Study Group (1997). Self-reported illness and health status among Gulf War veterans: a population-based study. *Journal of the American Medical Association*, **277**, 238–245.
1. Davis, C.S. and Hall, D.B. (1996). A computer program for regression analysis of ordered categorical repeated measurements. *Computer Methods and Programs in Biomedicine*, **51**, 153–169.

Other Publications*:

21. Hall, D.B. (2015). Book review of *Linear Algebra and Matrix Analysis for Statistics*, by S. Bannerjee and A. Roy. *The Journal of the American Statistical Association*, **110**, 1322-1323.
20. Hall, D.B. (2010). Book review of *The EM Algorithm and Extensions (2nd ed.)*, by G.J. McLachlan and T. Krishnan. *The Journal of the American Statistical Association*, **105**, 878.
19. Hall, D.B. (2010). Book review of *Multilevel and Longitudinal Modeling Using Stata (2nd ed.)*, by S. Rabe-Hesketh and A. Skrondal. *The American Statistician*, **64**, 275.
18. Hall, D.B. (2010). Book review of *Statistical Modelling in R*, by M. Aitkin, B. Francis, J. Hinde, and R. Darnell. *The American Statistician*, **64**, 273–274.
17. Hall, D.B. (2010). Book review of *Random Effect and Latent Variable Model Selection*, D.B. Dunson, Ed. *Journal of the American Statistical Association*, **105**, 877.
16. Hall, D.B. (2010). Book review of *Nonlinear Regression with R*, by C. Ritz, and J.C. Streibig. *The American Statistician*, **64**, 91–92.
15. Hall, D.B. (2009). Book review of *Generalized, Linear, and Mixed Models (2nd ed.)*, by C.E. McCulloch, S.R. Searle, and J.M. Neuhaus. *The American Statistician*, **63**, 292–293.
14. Hall, D.B. (2009). Book review of *Data Analysis Using Regression and Multilevel/Hierarchical Models*, by A. Gelman and J. Hill. *Journal of the American Statistical Association*, **104**, 1275-76.
13. Hall, D.B. (2009). Book review of *Statistical Rules of Thumb (2nd ed.)*, by G. van Belle. *The American Statistician*, **63**, 293.
12. Hall, D.B. (2009). Book review of *Analysis of Correlated Data with SAS and R (3rd ed.)*, by M.M. Shoukri and M.A. Chaudhary. *The American Statistician*, **63**, 100.
11. Christman, M., Hall, D.B., Hall, M., Kinan, P., Lennert-Cody, C., Manly, B., McCracken, M., Minami, M., Sims, M., Thompson, S. (2008). Workshop on turtle bycatch mitigation for longline fisheries: experimental design and data analysis. Inter-American Tropical Tuna Commission Special Report 17.
10. Hall, D.B. (2008). Book review of *Analyzing Receiver Operating Characteristic Curves With SAS*, by M. Gönen. *The American Statistician*, **62**, 362.
9. Hall, D.B. (2008). Book review of *Measurement Error in Nonlinear Models: A Modern Perspective (2nd ed.)*, by R.J. Carroll, D. Ruppert, L.A. Stefanski, and C.M. Crainiceanu. *Journal of the American Statistical Association*, **103**, 427.
8. Hall, D.B. (2007). Book review of *Models for Intensive Longitudinal Data*, T.A. Walls and J.L. Schafer, Eds. *Journal of the American Statistical Association*, **102**, 1473.

7. Hall, D.B. (2007). Book review of *Models for Discrete Data, Revised Edition* by D. Zelterman. *Journal of the American Statistical Association*, **102**, 1483.
6. Hall, D.B. (2006). Book review of *Statistical Modelling in GLIM 4, Second Edition*, by M. Aitkin, B. Francis, and J. Hinde. *Journal of the American Statistical Association*, **101**, 1733–34.
5. Hall, D.B. (2006). Book review of *Celebrating Statistics: Papers in Honour of Sir David Cox on his 80th Birthday*, A.C.Davison, Y. Dodge, and N. Wermuth, Eds. *Journal of the American Statistical Association*, **101**, 1735.
4. Hall, D.B. (2006). Book review of *Proceedings of the Second Seattle Symposium in Biostatistics: Analysis of Correlated Data*, D.Y. Lin, and P.J. Heagerty, Eds. *Journal of the American Statistical Association*, **101**, 405.
3. Hall, D.B. (2003). Book review of *Advanced Linear Modeling, Second Edition*, by R. Christensen. *Journal of the American Statistical Association*, **98**, p.258.
2. Hall, D.B. and Bailey, R.L. (2000). On the use of nonlinear multilevel mixed models to predict dominant height growth in forest plantations. In *First International Conference on Measurements and Quantitative Methods and Management & The 1999 Southern Mensurationists Meeting, Proceedings*, 132–142.
1. Hall, D.B. (1998). Estimating equations for clustered data based on extended quasilielihood. In the *Collection of Invited Papers, XIXth International Biometric Conference*, pp.45–54.

Submitted Papers:

Working Papers and Unsubmitted Technical Reports:

- Tuglo, E. and Hall, D.B., Linear mixed effects models with censored and/or missing responses and non-spherical errors. Under revision.
- Tuglo, E. and Hall, D.B., Analysis of bivariate longitudinal data with censored responses. Under revision.
- Morris, A., St. Helen, G., Holland, N.T., Balmes, J.R., Adetona, O., Vena, J.E., Wang, J.-S., Hall, D.B., Naeher, L.P. Urinary 8-isoprostane as a measure of oxidative stress in healthy non-smokers exposed to outdoor secondhand smoke.
- St. Helen, G., Caldwell, K.L., Aguilar-Villalobos, M., Cassidy, B.E., Hall, D.B., Needham, L.L., and Naeher, L.P. Cadmium, lead, and total mercury in pregnant women from Trujillo, Peru: Influence of cooking fuels.
- St. Helen, G., Caldwell, K.L., Aguilar-Villalobos, M., Cassidy, B.E., Hall, D.B., Needham, L.L., and Naeher, L.P. Biomonitoring of cadmium, lead, and total mercury among a cohort of traffic workers in Trujillo, Peru.
- St. Helen, G., Aguilar-Villalobos, M., Cassidy, B.E., Blount, B., Bayer, C., Hall, D.B., Needham, L.L., Hendry, R.J., Naeher, L.P. Characterization of volatile organic compounds (VOCs) exposure from cooking fuels among a cohort of pregnant women in Trujillo, Peru.
- St. Helen, G., Aguilar-Villalobos, M., Cassidy, B.E., Blount, B., Bayer, C., Hendry, R.J., Ryan, P.B., Hall, D.B., Ding, Y.S., Needham, L.L., Dodson, C., Naeher, L.P. Environmental and biological monitoring of traffic workers exposure to volatile organic compounds (VOCs) in Trujillo, Peru.
- Irvin, E.A., Ownby, D.R., Aguilar-Villalobos, M., Hall, D.B., Cassidy, B.E., and Naeher, L.P. Maternal and cord blood IgE levels and mattress-dust endotoxin concentrations in pregnant women living in Trujillo, Peru.
- Young, D.L., Goodie, A.S., and Hall, D.B. Modeling the effects of control on the components of decision making.
- Spak, C.W., Hall, D.B., Magaret, A.S., Selke, S., Kuntz, S., Corey, L., and Wald, A. Increased genital reactivation of herpes simplex virus-2 after antiretroviral therapy initiation: potential marker of immune reconstitution inflammatory syndrome.
- Yurman, K.H., Laing, E.M., Wilson, A.R., Modlesky, C.M., Hall, D.B., and Lewis, R.D. Bone turnover markers predict changes in DXA measures of bone over three years in early pubertal, but not prepubertal females.
- Hall, D.B. and Zhang, Z. Model selection criteria for marginal models for zero-inflated clustered data.
- Hall, D.B. and Wang, L. Adjusted profile likelihood estimation in zero-inflated mixed-effects regression models.

- Shen, J., Hall, D.B., and Zhang, C. Minimum conditional Hellinger distance estimation in finite mixtures of generalized linear models.
- Laing, E.M., Wilson, A.R., Modlesky, C.M., O'Connor, P.J., Hall, D.B., and Lewis, R.D. Bone Mineral and Body Size of 4 to 8 Year Old Females at the Outset of Their First Gymnastics Class.
- Shen, J., Hall, D.B., and Amemiya, Y. Robust estimation for zero-inflated longitudinal data with application to IT system monitoring.
- Hall, D.B., Jordan, L., Lee, J., and Shen, J. Mixed effects models for clustered directional data.
- Gildea, R.A., Laing, E.M., Hall, D.B., Modlesky, C.M., Beck, T.J., Wilson, A.R., Baile, C.A., and Lewis, R.D. Changes in insulin-like growth factor-I with 24-months of artistic gymnastics training in prepubertal females: relationships to bone.

Invited and Contributed Presentations*:

- Marginal zero-inflated regression models for cross-sectional and clustered count data. Contributed talk at The XXVIIIth International Biometric Conference, Victoria, BC, Canada, July, 2016.
- Marginal zero-inflated regression models for cross-sectional and clustered count data. Invited talk at The 4th Institute of Mathematical Statistics Asia Pacific Rim Meeting, Hong Kong, June, 2016.
- Robust estimation for zero-inflated regression. Invited talk at the 21st Annual Conference of The International Environmetrics Society, Margarita Island, Venezuela, June, 2010.
- Robust estimation for zero-inflated Poisson regression. Invited talk at Department of Statistics, University of South Carolina, September, 2009.
- Projected multivariate linear mixed-effects models for clustered angular data. Contributed talk at ENAR Spring Meeting, Atlanta, GA, March, 2007.
- Robust estimation for zero-inflated regression. Invited talk, International Statistics Conference Malaysia. Held in Kuala Lumpur, Malaysia, Dec. 27–Dec. 30, 2005.
- A model selection criterion for marginal zero-inflated regression for clustered data. Topic contributed talk at JSM, 2004, Toronto.
- Model selection in marginal models for zero-inflated clustered data. Invited talk at SRCOS/ASA Summer Research Conference, Blacksburg, VA, June, 2004.
- Marginal models for zero-inflated clustered data. Invited talk at Department of Biostatistics, University of Iowa, November, 2003.
- Marginal models for zero-inflated clustered data. Talk at Department of Statistics, University of Georgia, September, 2003.
- Marginal models for zero-inflated clustered data. Topic contributed talk at the Joint Statistical Meetings, August, 2003. Session type is “Topic Contributed” but was invited to speak by the session organizer.
- On two-component mixtures of generalized linear models with random effects. Invited talk at The Centers for Disease Control and Prevention in Atlanta, GA, November, 2002.
- Score tests for heterogeneity and overdispersion in zero-inflated regression models. Contributed talk at the Spring Meeting of the International Biometrics Society, ENAR, March, 2002.
- Some finite mixture models with random effects for cluster-correlated data. Invited talk at Wake Forest University, Department of Mathematics, March, 2001.
- Some finite mixture models with random effects for cluster-correlated data. Contributed talk at the Spring Meeting of the International Biometric Society, ENAR, 2001.
- Nonlinear mixed-effects models for prediction of growth and yield in forest management. Keynote Address at the Plantation Management Research Cooperative Annual Meeting, March, 2000.
- On the use of nonlinear multilevel mixed models to predict dominant height growth in forest plantations. Invited talk at the International Conference on Measurements and Quantitative Methods and Management & The 1999 Southern Mensurationists Meeting, November, 1999.
- Zero-inflated Poisson and binomial regression with random effects: a case study. Invited talk at Emory University, Department of Biostatistics, October, 1999.

- Order-restricted score tests for homogeneity in nonlinear mixed models, Contributed talk at the Spring Meeting of The International Biometric Society, ENAR, March, 1999.
- Estimating equations for clustered data based on extended quaslikelihood. Invited talk at the XIXth International Biometric Conference in Cape Town, South Africa, December 1998.
- Order-restricted score tests for homogeneity in nonlinear mixed models, Invited talk at University of South Carolina, Department of Statistics, October 1998.
- Order-restricted score tests for homogeneity in nonlinear mixed models, Invited talk at Northwestern University, Department of Statistics, October 1998.
- Discussant, Session 217, Analysis of Longitudinal Data II, Joint Statistical Meeting, August, 1997.
- Variance estimators for Mantel-Haenszel estimators under stratified random sampling from a finite population. Contributed talk at the Third North American Conference of New Researchers in Statistics and Probability, July, 1997.
- Extended generalized estimating equations for clustered data. Invited talk at Emory University, Department of Biostatistics, February, 1997.
- Extended generalized estimating equations for longitudinal data. Contributed talk at the Spring Meeting of The International Biometric Society, ENAR, March, 1995.

Workshops and Short-Courses Given*:

1. Applied Linear and Nonlinear Mixed Models. Presented at Temple-Inland Forest Products, Inc., Diboll, TX, January 17–18, 2005.
2. Some Basics of Experimental Design and Analysis for Field Trials. Presented at the annual retreat of trials officers, Syngenta Seeds Inc., October 17, 2007.

Grant Support*:

10. Co-investigator, NIEHS Grant (1 R21 ES017845-01A1), Biomarkers of exposure to and health effects from SHS in outdoor smoking areas. Supported at 4% level for two years beginning Fall, 2010. Total award amount: \$222,750.
9. Co-investigator, U.S. Army Research Office Grant, Strategic state estimation in uncertain and mixed multi-agent environments. Supported for \$6,000/year for 3 years beginning on 9/1/09.
8. Co-PI, NICHD Grant (1 R01 HD057126-01A2), Supplemental vitamin D and functional outcomes in early adolescence. Supported at 10% level for two years beginning 08/15/09. Total award amount: \$2,220,326.
7. Co-PI, NICHD Grant (R03), Supplemental zinc and bone turnover in early pubertal females. Supported at 2% level for two years beginning 01/01/07.
6. Consultant, NIMH grant, Role of control in risk taking and pathological gambling, Adam Goodie, PI. I'm funded for \$1800/year for four years beginning 07/01/04.
5. Co-PI on National Osteoporosis Foundation grant, A prospective analysis of geometric changes in the proximal femur in young female gymnasts, Emma Laing, PI. Funded at 5% level for period 09/01/04–08/31/05.
4. Cooperative research on complex and nonstandard count data, an interagency personnel agreement with Centers for Disease Control and Prevention, 04/03–03/04 (\$20,233).
3. Nonlinear mixed effects models for increased precision in stand-level timber yield projections, The Timber Company, 2001 (\$25,000).
2. UGA Research Foundation Travel Grant, November, 1998 (\$1,575).
1. UGA Research Foundation Faculty Research Grant, Summer, 1997 (\$4,770).

Professional Activities and Affiliations:

- Session Chair, *Session T11, Statistics in Agriculture*, the 21st Annual Conference of The International Environmetrics Society, Margarita Island, Venezuela, June 2010.
- Associate Editor, *The American Statistician*, 2008–present.
- Associate Editor, *JASA Reviews*, 2005–2010.
- ENAR Student Paper Committee, 2004–05.
- Secretary, Atlanta Chapter, American Statistical Association, 1997–2005.
- Member, American Statistical Association, International Biometric Society

- Session organizer, *Session 7, Categorical Data Analysis*, SRCOS/ASA Summer Research Conference in Statistics, Navarre Beach, FL, June 1998.
- Session Chair, *Session 17, Estimating Functions*, University of Georgia Symposium on Inference for Stochastic Processes, Athens, GA, May 2000.
- Session Chair, *Session 75, Design*, Joint Statistical Meetings, Atlanta, GA, August 2001.
- Judge, IISA Student Research Paper Competition, 2004.
- Session Chair, *Session 4, Design of Experiments*, SRCOS/ASA Summer Research Conference in Statistics, Blacksburg, VA, June 2004.

Refereeing, Reviewing, and External Evaluations:

- External evaluator of Ph.D. thesis, Department of Post Graduate Studies and Research in Statistics, Mangalore University, India.
- Grant proposal reviewer for National Science Foundation (2001, 2003, 2004).
- Book reviewer for *Journal of the American Statistical Association* (12).
- Book reviewer for *The American Statistician* (7).
- Book proposal reviewer for
 1. Springer Publishing;
 2. Wiley Publishing;
 3. Chapman & Hall/CRC Press.
- Reviewer of statistical software for Elsevier, Science and Technology Books.
- Referee for
 1. *American Journal of Epidemiology*;
 2. *Annals of Applied Statistics* (2);
 3. *Annals of the Institute of Statistical Mathematics*;
 4. *Biometrical Journal* (2);
 5. *Biometrics* (7);
 6. *Biometrika* (2);
 7. *Biostatistics*;
 8. *Brazilian Journal of Probability & Statistics*;
 9. *Canadian Journal of Forest Research* (2);
 10. *Canadian Journal of Statistics*;
 11. *Colombian Journal of Statistics*;
 12. *Communications in Statistics: Theory and Methods* (2);
 13. *Computational Statistics and Data Analysis* (3);
 14. *Electronic Journal of Statistics* (2);
 15. *Environmental and Ecological Statistics* (4);
 16. *Forest Ecology and Management*;
 17. *Forest Science* (2);
 18. *Journal of Agricultural, Biological, and Environmental Statistics* (2);
 19. *Journal of Applied Statistics* (4);
 20. *Journal of Biopharmaceutical Statistics*;
 21. *Journal of Educational and Behavioral Statistics*;
 22. *Journal of Multivariate Analysis*;
 23. *Journal of Probability and Statistics*;
 24. *Journal of Statistical Computation and Simulation*;
 25. *Journal of Statistical Planning and Inference* (5);
 26. *Journal of the American Statistical Association* (8);
 27. *Journal of the Korean Statistical Society*;
 28. *Journal of the Royal Statistical Society: Series B* (3);
 29. *Journal of the Royal Statistical Society: Series C (Applied Statistics)* (2);

30. *Methods of Information in Medicine*;
31. *Metrika*;
32. *Sankhya* (2);
33. *Scandinavian Journal of Statistics*;
34. *Selected Proceedings of the UGA Symposium on Estimating Functions*;
35. *Selected Proceedings of the UGA Symposium on Inference for Stochastic Processes*;
36. *Statistics*;
37. *Statistics & Probability Letters* (3);
38. *Statistics in Biosciences*;
39. *Statistics in Medicine* (7);
40. *Statistical Modelling: An International Journal* (3);
41. *Test*.

Experience with Graduate Education:

Courses Taught at UGA*:

61. STAT 8620, Categorical Data Analysis and Generalized Linear Models, Fall, 2016.
60. STAT 6360, Statistical Software Programming, Maymester, 2016.
59. STAT 8200, Design of Experiments for Research Workers, Fall, 2015.
58. STAT 8230, Applied Nonlinear Regression, Fall 2015.
57. STAT 8620, Categorical Data Analysis and Generalized Linear Models, Fall, 2015.
56. STAT 6360, Statistical Software Programming, Maymester, 2015.
55. STAT 4/6360, Statistical Software Programming, Spring, 2015.
54. STAT 8620, Categorical Data Analysis and Generalized Linear Models, Fall, 2014.
53. STAT 4/6360, Statistical Software Programming, Fall, 2014.
52. STAT 6360, Statistical Software Programming, Maymester, 2014.
51. STAT 4/6360, Statistical Software Programming, Spring, 2014.
50. STAT 8200, Design of Experiments for Research Workers, Fall, 2013.
49. STAT 8630, Mixed-Effect Models and Longitudinal Data Analysis, Spring 2013.
48. STAT 8620, Categorical Data Analysis and Generalized Linear Models, Fall, 2012.
47. STAT 8230, Applied Nonlinear Regression, Fall 2011.
46. STAT 8620, Categorical Data Analysis and Generalized Linear Models, Fall, 2011.
45. STAT 8630, Mixed-Effect Models and Longitudinal Data Analysis, Spring 2011.
44. STAT 8200, Design of Experiments for Research Workers, Fall, 2010.
43. STAT 8230, Applied Nonlinear Regression, Fall 2009.
42. STAT 8620, Advanced Statistical Applications I, Fall, 2009.
41. STAT 8200, Design of Experiments for Research Workers, Summer, 2009.
40. STAT 8630, Advanced Statistical Applications II, Spring 2009.
39. STAT 8620, Advanced Statistical Applications I, Fall, 2008.
38. STAT 8200, Design of Experiments for Research Workers, Summer, 2008.
37. STAT 8260, Theory of Linear Models, Spring, 2008.
36. STAT 8230, Applied Nonlinear Regression, Fall 2007.
35. STAT 8200, Design of Experiments for Research Workers, Summer, 2007.
34. STAT 8260, Theory of Linear Models, Spring, 2007.
33. STAT 8200, Design of Experiments for Research Workers, Fall, 2006.
32. FRES 1010, Mythbusting, Skepticism, and Statistics, Spring, 2006.
31. STAT 8630, Advanced Statistical Applications II, Spring 2006.
30. STAT 8230, Applied Nonlinear Regression, Fall 2005.
29. STAT 8000, Supervised Statistical Consulting, Spring, 2005.
28. STAT 6200, Introduction to Biostatistics, Fall, 2004.
27. STAT 8200, Design of Experiments for Research Workers, Summer, 2004.

26. STAT 8630, Advanced Statistical Applications II, Spring 2004.
25. STAT 8230, Applied Nonlinear Regression, Fall 2003.
24. STAT 8260, Theory of Linear Models, Spring 2003.
23. STAT 8200, Design of Experiments for Research Workers, Fall, 2002.
22. STAT 8000, Supervised Statistical Consulting, Summer, 2002.
21. STAT 8200, Design of Experiments for Research Workers, Summer, 2002.
20. STAT 8260, Theory of Linear Models, Spring 2002.
19. STAT 8230, Applied Nonlinear Regression, Fall 2001.
18. STAT 8260, Theory of Linear Models, Spring, 2001.
17. STAT 8620, Advanced Statistical Applications I, Fall, 2000.
16. STAT 8250, Multivariate Methods, Fall, 2000.
15. STAT 8200, Design of Experiments for Research Workers, Summer, 2000.
14. STAT 8630, Advanced Statistical Applications II, Spring, 2000.
13. STAT 8250, Multivariate Methods, Fall, 1999.
12. STAT 7770, Graduate Assistantship Teaching in Statistics, Fall, 1999.
11. STAT 8200, Design of Experiments for Research Workers, Summer, 1999.
10. STAT 8630, Advanced Statistical Applications II, Spring, 1999.
9. STAT 8200, Design of Experiments for Research Workers, Fall, 1998.
8. STAT 8000, Supervised Statistical Consulting, Fall, 1998.
7. STA 621, Statistical Methods I, Summer, 1998.
6. STA 863, Advanced Statistical Applications II, Spring, 1998.
5. STA 820, Design of Experiments for Research Workers, Spring, 1998.
4. STA 825, Multivariate Methods, Winter, 1998.
- 2–3. STA 622, Statistical Methods II, Winter, 1997 (two sections).
1. STA 820, Design of Experiments for Research Workers, Fall, 1996.

Dissertation Direction of Ph.D. Students*

7. Tawanda Benesi. Dissertation topic: To be determined. Current student.
6. Jacob Martin. Dissertation topic: Topics in Zero-inflated Poisson Regression: Coefficients of Determination and Marginalized Models. Degree awarded in August, 2016.
5. Emmanuel Tuglo. Dissertation topic: Analysis of multivariate longitudinal data subject to limits of detection. Degree awarded in August, 2014.
4. Jing (Jasper) Xu. Dissertation topic: Semiparametric zero-inflated regression models: estimation and inference. Degree awarded in December, 2009.
3. Jing Shen. Dissertation topic: Robust estimation and inference in finite mixtures of generalized linear models. Degree awarded in May, 2006.
2. Zhengang Zhang. Dissertation topic: Marginal models for zero-inflated longitudinal data. Degree awarded in December, 2004.
1. Lihua Wang. Dissertation title: Parameter Estimation for Mixtures of Generalized Linear Mixed-Effects Models. Degree awarded in May, 2004.

Thesis Direction of Master's Students*

6. Chao Song. Thesis topic: To be determined. Current student.
5. Sudip Shrestha. Thesis topic: Robust estimation and inference in forest growth and yield models. Former student.
4. Jeremiah Johnson. Thesis topic: Predicting Outcomes of Mixed Martial Arts Fights with Novel Fight Variables. Degree awarded in August, 2012.
3. Johnathan Dean. Thesis topic: Statistical analysis of sea turtle-bycatch rates. Degree awarded in December, 2008.
2. Lewis Jordan. Thesis title: Mixed-Effects Models for a Directional Response: A Case Study with Loblolly Pine Microfibril Angle. Degree awarded in August, 2005.

1. Fabio Sartori. Thesis title: Temporal Autocorrelation in Modeling Soil Potentially Mineralizable Nitrogen. Degree awarded in May, 2004.

Advisory Committee Service

- Ph.D. Advisory Committee for the following 50 students: Wenjiong Zhou, Statistics (degree obtained in Spring, 1998); Zixing Fang, Forestry and Natural Resources (degree obtained in Spring, 1999); Laura Pankow, Social Work (degree obtained in Spring, 2000); Penelope Gibbs, Medical Microbiology (former student); Guorong Chen, Animal and Dairy Science (former student); Mohamed Hussein, Educational Psychology (degree obtained in Spring, 2001); Eyas Abu-Raddad, Pharmacy (degree obtained in Summer, 2001); Monica Grandison, Pharmacy (degree obtained in Fall, 2001); Charles Rose, Forestry and Natural Resources (degree obtained in August, 2002); Hector de los Santos-Pasada, Forest Resources (degree obtained in August, 2003); Chris Fonnesebeck, Forestry and Natural Resources (degree obtained in August, 2003); YuanHui Xiao, Statistics (degree obtained in August, 2003); Dehai Zhao, Forestry and Natural Resources (degree obtained in August, 2003); Rechun He, Forestry and Natural Resources (degree obtained in May, 2004); Qiqi Lu, Statistics (degree obtained in August, 2004); Douglas Jackson, Social Work (degree obtained in December, 2004); Fabio Sartori, Forestry and Natural Resources (degree obtained in December, 2004); Yan Jiang, Statistics (degree obtained in Spring, 2005); Chengcai Ni, Forestry and Natural Resources (degree obtained in August, 2005); Sammy Yatich, Forestry and Natural Resources (degree obtained in December, 2009); Brock Stewart, Forestry and Natural Resources (degree obtained in December, 2007); Desale Habtzghi, Statistics (degree obtained in May, 2006); Dipankar Bandyopadhyay, Statistics (degree obtained in May, 2006); Sun-Joo Cho, Educational Psychology (degree obtained in December, 2007); Daniel Yanosky, Educational Psychology (degree obtained in May, 2007); Norman Pollock, Foods and Nutrition (degree obtained in August, 2008); Lingling Han, Statistics (degree obtained in May, 2007); Jien Chen, Statistics (degree obtained in August, 2008); Guoying Sun, Statistics (degree obtained in December, 2008); Xiaoa Zhen, Statistics (degree obtained in August, 2008); Ellen Breazel, Statistics (degree obtained in August, 2008); Finto Antony, Forestry and Natural Resources (degree obtained in May, 2010); Ben Neustifter, Statistics (degree obtained in August, 2009); Lin Sun, Statistics (degree obtained in August, 2013); Ozgu Issever, Statistics (former student); Gideon St.Helen, Environmental Health Sciences (degree obtained in August, 2011); Olorunfemi Adetona, Environmental Health Sciences (degree obtained in August, 2011); Ashley Ferira, Foods and Nutrition (degree obtained in December, 2011); Adwoa Agyepong, Environmental Health Sciences (degree obtained in December, 2012); Yijie Xue, Statistics (degree obtained in August, 2012); Peilin Yang, Forestry and Natural Resources (former student); Hsin-Ping Wu, Statistics (degree obtained in May, 2014); Sudip Shrestha, Forestry and Natural Resources (degree obtained in August, 2014); Christy Brown, Research, Evaluation, Measurement, and Statistics (degree obtained in August, 2013); Nat Kulvanich, Statistics (degree obtained in May, 2013); Adam Jaeger, Statistics (degree obtained in May, 2015); Wei Zhang, Statistics (current student); Minsoo Kim, Statistics (current student); Li-Yu Wang, Statistics (current student); Anna Hejl, Environmental Health Sciences (current student).
- Masters Advisory Committee for the following 9 students: Patrick Kilgo, Statistics (degree obtained in Spring, 1998); Ruth Gildea, Foods and Nutrition (degree obtained in Summer, 2005); Jillian Davenport, Biological and Agricultural Engineering (did not finish); Catherine Marie Voorhees, Foods and Nutrition (degree obtained in May, 2006); Jessica Principe, Foods and Nutrition (degree obtained in December, 2006); Chase Hall, Environmental Health Science (degree obtained in August, 2008); Anderson Morris, Environmental Health Science (degree obtained in May, 2012); Yining Huang, Statistics (degree obtained in August, 2016); Chao (Beatrice) Zhang, Statistics (current student).

Honors and Awards:

- Faculty advisor for student team that was a finalist in the 2016 SAS Analytics Shootout. Team members: Rich Ross (captain), Yaotong Cai, Chunla He, Shiyu Ye, and Wenhao Pan. Final ranking was third place out of 78 teams.