

Jason A. Osborne  
Associate Professor  
Department of Statistics  
North Carolina State University  
osborne@stat.ncsu.edu

## EDUCATION

- Ph.D. Statistics, 1997, Northwestern University, Evanston, IL.
- M.S. Statistics, 1994, Northwestern University, Evanston, IL.
- B.S. Mathematics (Honors), 1991, University of California at Santa Barbara, CA.

## PROFESSIONAL AND RESEARCH EXPERIENCE

- 1997-2001: Assistant Professor, Dept. of Discrete & Statistical Science, Auburn University.
- 2001-2006: Assistant Professor, Dept. of Statistics, North Carolina State University.
- 2003-present: Science Team Member, ArrayXpress, Raleigh, NC.
- 2006-present: Associate Professor, Dept. of Statistics, North Carolina State University.

## TEACHING

- Undergraduate:
  - Mathematical statistics I & II (ST421,ST422), Nonparametrics
- Graduate:
  - Experimental statistics for biological sciences I & II (ST511, ST512)
  - Statistical consulting (ST622)
  - Design of Experiments (ST711)
  - Design and Analysis of Microarray Experiments (ST810)
  - Applied stochastic processes
  - Multivariate analysis
- Other
  - Summer Institute in Statistical Genetics, NCSU: Regression and ANOVA Module: 2003,2004,2005.
  - Logistic Regression module, Lean Six Sigma Master Black Belt Program, College of Textiles, NC State Univ, 2012.
  - Design of Experiments module, Lean Six Sigma Master Black Belt Program, College of Textiles, NC State Univ. (with Dr. Stu Hunter), 2013, 2014.
  - Intro. statistics course for Xiamen University exchange program (@ NCSU, 2011, 2012, 2013).

## REFEREED JOURNAL PUBLICATIONS

1. Franck, C.T. and Osborne, J.A., 2016, "Testing for hidden additivity with the hiddenf package," *The R Journal*, 8(2).
2. Concha, C, Palavesam, A, Guerrero, FD, Sagel, A, Li, F, Osborne, JA Hernandez, Y, Pardo, T, Quintero, G, Vasquez, M, Keller, GP, Phillips, PL, Welch, JB, McMillan, WO, Skoda, SR, and Scott, MJ, "A transgenic male-only strain of the New World screwworm for an improved control program using the sterile insect technique," *to appear, BMC Biology*.
3. Caldwell, J.M., Perez-Diaz, I.M., Sandeep, K.P., Simunovic, J, Harris, K, Osborne, J, Hassan, H.M., 2015, "Mitochondrial DNA Fragmentation as a Molecular Tool to Monitor Thermal Processing of Plant-Derived, Low-Acid Foods and Biomaterials," *Journal of Food Safety*, 80(8):M1804-14.
4. Martinez, M.R., Osborne, J., Jayeola, V., Katic, V. and Kathariou, S., 2016, "Capacity of *Listeria monocytogenes* strains from the 2011 cantaloupe outbreak to adhere, survive and grow on cantaloupe," accepted, *Journal of Food Protection*.
5. Liu, W., Lanier, T.C., and Osborne, J.A., 2016 "Capillarity Proposed as the Predominant Mechanism of Water and Fat Stabilization in Cooked Comminuted Meat Batters," *Meat Science*, 111:67-77.
6. Da Costa, M, Oviedo-Rondon, E, Wineland, M, Classen, K., Osborne, J, 2016, "Effects of incubation temperatures and trace mineral sources on chicken live performance and footpad skin development," accepted, *Poultry Science*.
7. Das, L., Kolar, P., Osborne, J.A., Sharma-Shivappa, R.R. and Classen, J.J., 2015, "Selective oxidation of lignin into aromatic aldehydes using niobium oxalate," accepted em ASABE.
8. De la Cruz, F.B., Osborne, J.A., and Barlaz, M., 2015, "Determination of Sources of Organic Matter in Solid Waste by Analysis of Phenolic Copper Oxide Oxidation Products of Lignin," accepted *Journal of Environmental Engineering*.
9. Hu, D., Wang-Li, L., Simmons III, O.D., Classen, J.J., and Osborne, J.A., 2015, "Spatiotemporal Variations of Bioaerosols in the Vicinity of an Animal Feeding Operation Facility in the U.S.," *Journal of Environmental Protection*, 6, 614-627.
10. Caldwell, J.M., Perez-Diaz, I.M., Sandeep, K.P., Simunovic, J., Harris, K., Osborne, J. and Hassan, H.M., 2015, "Mitochondrial DNA Fragmentation as a Molecular Tool to Monitor Thermal Processing of Plant-Derived, Low-Acid Foods and Biomaterials," accepted *Journal of Food Science*.
11. Jernigan, Shaphan R, Osborne, Jason A, Mirek, Christopher J, and Buckner, Gregory, 2015, "Selective Internal Radiation Therapy: Quantifying Distal Penetration and Distribution of Resin and Glass Microspheres in a Surrogate Arterial Model," provisionally accepted, *Journal of Vascular and Interventional Radiology*.

12. Oviedo-Rondon, E. and Osborne, J.A., 2015, "Effect of broiler breeder feeding programme and feeder space change at photostimulation using maize or wheat-based diets on broiler progeny growth performance and leg health," *British Poultry Science* 56(3): 345-60.
13. Boos, D.D. and Osborne, J.A., 2015. "Assessing Variability of Complex Descriptive Statistics in Monte Carlo Studies using Resampling Methods", accepted, *International Statistical Review*.
14. Watson, EM, Johanningsmeier, SD and Osborne, JA, 2015, "Consumer Acceptability of Cucumber Pickles Produced Using an Environmentally-Friendly Fermentation in Calcium Chloride Brine," accepted, *Journal of Food Science*, 80(6):S1360-S1367.
15. Shah, SB, Yao, H and Osborne, JA, 2014, Storage Method Impacts on Ammonia Flux from Broiler Cake and Acid Scrubbers for High Ammonia Concentration Measurements," *Water, Air, & Soil Pollution*, 225:1840.
16. Dutta, V, Elhanafi, D, Osborne, J, Rakic-Martinez, M, and Kathariou, S., 2014. Genetic Characterization of Plasmid-Associated Triphenylmethane Reductase in *Listeria monocytogenes*, *Applied Environmental Microbiology*, 80(17):5379-85.
17. Su, Y, Zhu, L, Menius, A and Osborne, J, 2014. Mixture models for gene expression experiments with two species, *Human Genomics*, 8:12.
18. Wang-Li, L., Hu, D., Classen, J., Osborne, J.A., 2014. Bioaerosol concentrations and emissions from tunnel ventilated high-rise layer operation houses in the United States, *Transactions of the ASABE*, 57(3):915-925.
19. Breidt, F., Kay, K., Osborne, J., Ingham, B. and Arritt, F., 2014. Thermal Processing of Acidified Foods with pH 4.1 to pH 4.6, *Food Protection Trends*, 34(3) 132-138.
20. Etheridge, J. R., Birgand, F., Osborne, J.A., Osburn, C.L., Burchell, M.R and Irving, J., 2014. Using in situ ultraviolet-visual spectroscopy to measure nitrogen, carbon, phosphorus, and suspended solids concentrations at a high frequency in a brackish tidal marsh. *Limnology and Oceanography: Methods*.
21. Shah, S.B., Yao, H. and Osborne, J.A., 2014. Storage Method Impacts on Ammonia Emission from Broiler Cake, *Water, Air & Soil Pollution*, 225(1).
22. Koc, H., Cakir, E., Vinyard, C.J., Essick, G., Daubert, C.R., Drake, M.A., Osborne, J. and Foegeding, E.A., 2014, Adaptation of Oral Processing to the Fracture Properties of Soft Solids, *Journal of Texture Studies*, 45(1): 47-61.
23. Gullledge, B.M., Marcellin-Little, D.J., Levine, D., Tillman, L., Harrysson, O.L.A., Osborne, J.A. and Baxter, B., 2013. Comparison of two stretching methods and optimization of stretching protocol for the piriformis muscle, *Medical Engineering Physics*, 36(2):212-8.
24. Jairam, S., Kolar, P., Sharma-Shivappa, R., and Osborne, J.A., 2013. Synthesis of solid acid catalyst from tobacco stalk for esterification of oleic acid. *Applied Engineering in Agriculture*.

25. Brill, N.L., Osborne, J. and Abney, M.R., 2013. A spatial ecology study on the effects of field conditions and crop rotation on the incidence of *Plectris aliena* Chapin (Coleoptera: Scarabaeidae) grub damage to sweetpotato roots. *Environmental Entomology*, 42:1046-1051.
26. Franck, C., Nielsen, D., and Osborne, J.A., 2013. A method for detecting hidden additivity in two-factor unreplicated experiments, *Computational Statistics and Data Analysis*, 67:95-104.
27. Anderson, K.E., Havenstein, G.B., Jenkins, P.K. and Osborne, J, 2013. Changes in commercial laying stock performance, 1958-2011: thirty-seven flocks of the North Carolina random sample and subsequent layer performance and management tests. *World's Poultry Science Journal*, 69:489-513.
28. Breidt, F., Kay, K., Cook, J., Osborne, J., Ingham, B. and Arritt, F., 2013. Determination of 5-log reduction time for *Escherichia coli* O157:H7, *Salmonella enterica* or *Listeria monocytogenes* in acidified foods with pH 3.5 or 3.8, *Journal of Food Protection*, 76(7):1245-1249.
29. Classen, J., Chandler, W., Huie, R. and Osborne, J. 2013. A centrifuge-based procedure for suspended solids measurements in animal wastes, *Transactions of the ASABE*, 56(2):747-752.
30. Srikanth, H., and Osborne, J. and Williams, L, 2013. Towards the Prioritization of System Test Cases, *Software Testing, Verification and Reliability*, 10.1002/stvr.1500.
31. Su, Y., Nielsen, D., Zhu, L., Richards, K., Suter, S., Breen, M., Motsinger-Reif, A. and Osborne, J., 2013. Gene selection and cancer type classification of diffuse large-B-cell lymphoma using a bivariate mixture model for two-species data, *Human Genomics*, 7:2.
32. Das, L., Kolar, P., Classen, J.J. and Osborne, J.A, 2013. Adsorbents from pine wood via K<sub>2</sub>CO<sub>3</sub>-assisted low temperature carbonization for adsorption of p-cresol. *Industrial Crops and Products*, 45:215-222.
33. Das, L., Kolar, P., Osborne, J.A. and Classen, J. 2012. Adsorption of p-cresol on Granular Activated Carbon, *Agricultural Engineering International: CIGR Journal* 14:37-49.
34. Fields, EL, Robertson ID, Osborne, JA, Brown, JC Jr., 2012. Comparison of Abdominal Computed Tomography and Abdominal Ultrasound in Sedated Dogs. *Vet Radiol Ultrasound* 53:513-517.
35. Ratani, S., Siletzky, R., Dutta, V., Yildirim, S., Osborne, J., Lin, W., Hitchins, A., Ward, T. and Kathariou, S., 2012. Heavy Metal and disinfectant resistance of *Listeria monocytogenes* from foods and food processing plants. *Applied and Environmental Microbiology* 78(19):6938-6945.
36. Sharma, R., Palled, V., Sharma-Shivappa, R. and Osborne, J., 2012. Potential of Potassium Hydroxide Pretreatment of Switchgrass for Fermentable Sugar Production, *Applied Biochemistry and Biotechnology*, 169:761-772.
37. Biai, C.J., Garzon J.G., Osborne, J.A., Schultheis, J. R., Gehl, R.J. and Gunter, C.C., 2012. Bell Pepper Seedling Phytotoxicity due to abscisic acid drench applications, *International Journal of Vegetable Science*, 19(1): 4-12.

38. Jairam, S., Kolar, P., Sharma-Shivappa, R., Osborne, J.A. and Davis, J., 2012. KI-impregnated oyster shell as a solid catalyst for soybean oil transesterification. *Bioresource Technology*, 104:329-335.
39. Kim, J., Dutta, V., Elhanafi, D., Lee, S., Osborne, J., and Kathariou, S., 2012. A novel restriction- modification system is responsible for temperature- dependent phage resistance in *Listeria monocytogenes* ECII, *Applied and Environmental Microbiology* 78(6):1995-2004.
40. Biai, C.J., Garzon J.G., Osborne, J.A., Schultheis, J. R., Gehl, R.J. and Gunter, C.C., 2011. Height Control in Three Pepper Types Treated with Drench-applied Abscisic Acid, *HortScience*, 46(9): 12651269.
41. Shin, Y, Meneely, A., Williams, L. and Osborne, J.A., 2011. Evaluating Complexity, Code Churn, and Developer Activity Metrics as Indicators of Software Vulnerabilities, *IEEE Transactions on Software Engineering*, 37(6): 772-787.
42. Guerdat, T.C., Losordo, T., DeLong, D., and Osborne, J.A., 2011. Evaluating the effect of organic carbon on biological filtration performance in a large scale recirculating aquaculture system,” *Aquacultural Engineering* 44(1):10-18.
43. Yurgec, M.J., Osborne, J., Steffe, J.F. and Daubert, C.R., 2011. Quantifying Shear Effects on a Model Emulsion System. *Journal of Food Process Engineering*, 35(6): 905-914.
44. De los Reyes III, F., He, X., and Osborne, J.A. 2011. Physico-chemical Characterization of Grease Interceptors with and without Biological Product Addition. *Water Environment Research* 84(3):195-201.
45. Purser, M.F., Richards, A.L., Cook, R.C., Osborne, J.A. and Cormier, D.R., 2011. A Novel Shape Memory Alloy Annuloplasty Ring for Minimally Invasive Surgery: Design, Fabrication and Evaluation. *Annals of Biomedical Engineering*, Volume 39(1), pp. 367-377.
46. Lu, H.J., Breidt, Jr., F. Perez-Diaz, I.M. and Osborne, J.A. 2011. Antimicrobial effects of weak acids on the survival of *Escherichia coli* O157:H7 under anaerobic conditions, *Journal of Food Protection*, Volume 74, Number 6, pp 893-898.
47. Haslauer, CM, Moghe, AK, Osborne, JA, Gupta, BS, Lobo EG. 2010. Collagen-PCL Sheath-core bicomponent electrospun scaffolds increase osteogenic differentiation and calcium accretion of human adipose-derived stem cells. *J Biomater Sci Polym Ed* 22(13):1695-712.
48. Guerdat, T.C., Losordo, T.M., Classen, J.J., Osborne, J.A., and DeLong, D.P. 2010. An evaluation of commercially available biological filters for recirculating aquaculture systems, *Aquacultural Engineering*, Volume 42, Issue 1, Pages 38-49.
49. McNett, J.K., Hunt, W.F. and Osborne, J.A. 2010. Establishing Storm-Water BMP Evaluation Metrics Based upon Ambient Water Quality Associated with Benthic Macroinvertebrate Populations. *J. Envir. Engrg.* Volume 136, Issue 5, pp. 535-541.

50. Stephens AM, Dean LL, Davis JP, Osborne JA, Sanders TH. 2010. Peanuts, peanut oil, and fat free peanut flour reduced cardiovascular disease risk factors and the development of atherosclerosis in Syrian golden hamsters. *J Food Sci.* 75(4):H116-22.
51. Levine, D., Marcellin-Little D.J., Millis, D.L., Tragauer, V., and Osborne J.A., 2010. "Effects of immersion on weight-bearing and weight distribution in dogs," *Am J Vet Res* 71:1413-1416.
52. Fitzwater, K.L., Marcellin-Little, D.J., Harrysson, O.L.A., Osborne, J.A. and Poindexter, E.C. Evaluation of the effect of computed tomography scan protocols and freeform fabrication methods on bone biomodel accuracy. *American Journal of Veterinary Research*, 72(9):1178-1185. 2011.
53. Olby, N.J., MacKillop, E., Cerda-Gonzalez, S., Moore, S., Munana, K.R., Grafinger, M., Osborne, J.A. and Vaden, S.L., 2010. Prevalance of Urinary Tract Infection in Dogs After Surgery for Thoracolumbar Intervertebral Disc Extrusion. *Journal of Veterinary Internal Medicine* 24(5):1106-1111.
54. Kelly, M., Vardhanabhuti, B., Luck, P., Drake, M.A., Osborne, J.A. and Foegeding, E.A., 2010. Role of protein concentration and protein-saliva interactions in the astringency of why proteins at low pH. *Journal of Dairy Sciences* 93(5):1900-1909.
55. Chanoit, G., Singhani, N.N., Marcellin-Little, D.J., and Osborne, J.A., 2010. Comparison of five radiographic views for assessment of the medial aspect of the humeral condyle in dogs with osteochondritis dissecans. *American Journal of Veterinary Research*, 71(7).
56. Liska, W.D., Doyle, N., Marcellin-Little, D.J. and Osborne, J.A., 2009. Total Hip Replacement in three cats: surgical technique, short term outcome and comparison to femoral head ostectomy. *Veterinary and Comparative Orthopaedics and Traumatology* 22(6): 505-510.
57. Azizoglu, RO, Osborne, J., Wilson, S and Kathariou, S. 2009. Role of Growth Temperature on Freeze-Thaw Tolerance of Listeria. *Applied and Environmental Microbiology* 75(16):5315-5320.
58. Osborne, J.A. and Grift, T.E., 2009. *M*-estimation of Boolean models for particle flow experiments. *Journal of the Royal Statistical Society Series C*, 58(2):197-210.
59. Purser, M.F, Richards, A.L., Cook, R.C., Osborne, J.A., Cormier, D.R. and Buckner, G.D. "Evaluation of a shape memory alloy reinforced annuloplasty band for minimally invasive mitral valve repair," *Annals of Thoracic Surgery*, 88(4):1312-1316, 2009.
60. Cerda-Gonzalez, S., Olby, N.J., Broadstone, R., McCullough, S. and Osborne, J.A., "Characteristics of cerebrospinal fluid flow in Cavalier King Charles spaniels analyzed using phase velocity contrast CMRI," *Veterinary Radiology & Ultrasound*, 50(5):467-476, 2009.
61. Torbati, D., Totapally, B.R., Raszynski, A., Osborne, J., van Zyl, L., Kalomiris, S. and Wolfsdorf, J. "Age and Sex Differences in Brain Gene Expression in Neonatal Rats," *Neuropediatrics*, 39:219-225 (2008).

62. Youngsteadt, E., Baca, J.A., Osborne, J. and Schal, C. "Species-specific seed dispersals in an obligate ant-plant mutualism," *PLoS ONE* 4(2):e4335, 2009.
63. Bean, E., Chanoit, G., Jernigan, S., Bolotin, G., Osborne, J. and Buckner, G., 2008. Evaluation of a New Atrial Retractor for Minimally Invasive Mitral Valve Repair in a Porcine Model. *The Journal of Thoracic and Cardiovascular Surgery*, 136(6):1492-1495.
64. Cerda-Gonzalez, S., Olby, N.J., Broadstone, R., McCullough, S. and Osborne, J.A., 2009. Morphology of the Caudal Fossa in Cavalier King Charles Spaniels. *Veterinary Radiology & Ultrasound*, 50(1):37-46.
65. Adomas, A., Heller, G., Olson, A., Osborne, J., Karlsson, M., Nahalkova, J., van Zyl, L., Sederoff, R., Stenlid, J., Finlay, R. and Asiegbu, F.O. (2008), "Comparative analysis of transcript abundance in *Pinus sylvestris* after challenge with a saprotrophic, pathogenic or mutualistic fungus," *Tree Physiology*, 28: 885-897.
66. Heller G., Adomas A., Li, G. Osborne, J. van Zyl, L., Sederoff, R. Finlay, R.D., Stenlid, J., Asiegbu, F.O. (2008), "Transcriptional analysis of *Pinus sylvestris* roots challenged with the ectomycorrhizal fungus *Laccaria bicolor*," *BMC Plant Biology*, 8:19.
67. Sumanasinghe, R.D., Osborne, J.A., and Lobo, E.G., 2008. Mesenchymal stem cell seeded collagen matrices for bone repair: Effects of uniaxial cyclic tensile strain, cell density and media conditions on matrix contraction *in vitro*,. *Journal of Biomedical Materials Research: Part A* 88(3):778-786.
68. Adomas, A., Heller, G., Li, G., Olson, A., Chu, T., Osborne, J., Craig, D., Van Zyl, L., Wolfinger, R., Sederoff, R., Dean, R., Stenlid, J., Finlay, R. and Asiegbu, F. (2007), "Transcript profiling of conifer pathosystem: response of *Pinus sylvestris* root tissues to pathogen (*Heterobasidion annosum*) invasion", *Tree Physiology* 27, 1441-1458.
69. Parker, J., Oviedo, E., Clack, B.A., Clemente-Hernandez, S., Osborne, J., Remus, J.C., Ketunen, H., Makivuokko, J. and Pierson, E.M. (2007), "Enzymes as Feed Additive to Aid in Responses Against *Eimeria* spp in *Coccidia* Vaccinated Broilers Fed Corn-Soybean Meal Diets with Different Protein Levels" , *Poultry Science*, 86(4):643-653.
70. Fain, G.B., Grey, T.L., Gilliam, C.H., Tilt, K.M., Wehtje, G.R. and J.A. Osborne (2007) "Polymeric resins adsorb and release oryzalin in response to pH and irrigation," *Weed Science*, 55(2):157-163.
71. Silverstein, R.A., Chen, Y., Sharma-Shivappa, R.R., Boyette, M.D. and J. A. Osborne, (2007), "A Comparison of Chemical Pretreatment Methods for Converting Cotton Stalks to Ethanol" (2007), *Bioresource Technology*, 98:3000-3011.
72. Burchell, M.R., Skaggs, R.W., Lee, C.R., Broome, S., Chescheir, G.M. and Osborne, J.A. (2007), "The Role of Substrate Organic Matter in Improving Nitrate removal efficiency in Surface-Flow Constructed Wetlands," *Journal of Environmental Quality*, 36:194-207.

73. Payne, J.B., Osborne, J.A., Jenkins, P.K. and Sheldon, B.W. (2006), "Modeling the Growth and Death Kinetics of *Salmonella* in Poultry Litter as a Function of pH and Water Activity", *Poultry Science* 86(1): 191-201.
74. Myburg, H., Morse, A.M., Amerson, H.V., Kubisiak, T.L., Huber, D., Osborne, J.A., Garcia, S.A., Nelson, C.D., Davis, J.M., Covert, S.F., and L. van Zyl (2006), "Differential gene expression in loblolly pine (*Pinus taeda* L.) challenged with the fusiform rust fungus, *Cronartium quercuum* f.sp. *fusiforme*," *Physiological and Molecular Plant Pathology*, 68:79-91.
75. Cannon, J.L., Papafragkou, E., Park, G., Osborne, J., Jaykus, L. and J. Vinjè (2006) "Surrogates for the study of norovirus stability and inactivation in the environment: A comparison of murine norovirus and feline calicivirus," *Journal of Food Protection*, 69(11):2761-2765. (First place award from the International Association of Food Protection as Most Cited Research Publication.)
76. Li, G., Osborne, J. and F. Asiegbu (2006), "A macroarray expression analysis of novel cDNAs vital for growth initiation and primary metabolism during development of *Heterobasidion parviporum* conidiospores. *Environmental Microbiology* 8:1340-1350.
77. Keener, K.M., McAvoy, K.C., Foegeding, J.B., Curtis, P.A., Anderson, K.E and J.A. Osborne (2006), "Effect of Testing Temperature on Internal Egg Quality Measurements," *Poultry Science*, 85:550-555.
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79. Shimps, E.L., Rice, J.A. and J.A. Osborne (2005) "Hypoxia tolerance in two juvenile estuary-dependent fisheries," *Journal of Experimental Marine Biology and Ecology*, 325:146-162.
80. Breidt, F., Hayes, J.S., Osborne, J.A., and R.F. McFeeters (2005) "Determination of 5-log pathogen reduction times for heat-processed, acidified vegetable brines," *Journal of Food Protection*, 68(2):305-310.
81. Young, N.D., Sanders, T.H., Drake, M.A., Osborne, J.A. and G.V, Civille (2005) "Descriptive analysis and US consumer acceptability of peanuts from different origins," *Food Quality and Preference*, 16(1):37-43
82. Bashor, M.P., Curtis, P.A., Keener, K.M., Sheldon, B.W., Kathariou, S. and J.A. Osborne (2004) "Effects of carcass washers on *Campylobacter* contamination in large broiler processing plants," *Poultry Science*, 83(7):1232-1239.
83. Henry, T.B., Grizzle, J.M. Johnston, C.E. and Osborne, J.A. (2004) "Susceptibility of ten fish species to electroshock-induced mortality," *Transactions of the American Fisheries Society*, 133(3):649-654.
84. Osborne, J. (2003) "Markov chains for the RISK board game revisited," *Mathematics Magazine*, 76(2):129-135.



85. Rohrbach, R.P., Mainland, C.M. and Osborne, J.A. (2003) "Effects of Sunlight or Shade on Maturity and Optical Density in Blueberries," *Small Fruits Review*, 3(1/2).
86. Feng, Y., Motta, A.C., Reeves, D.W., Burmester, C.H., van Santen, E., Osborne, J.A. (2003) "Soil microbial communities under conventional-till and no-till continuous cotton systems," *Soil Biology & Biochemistry*, 35(12):1693-1703.
87. Kellison, G.T., Eggleston, D.B., Taylor, J.C. Burke, J.S. and Osborne, J.A. (2003) "Pilot evaluation of summer flounder stock enhancement potential using experimental ecology," *Marine Ecology Progress Series*, 250: 263-278.
88. Fain G.B., Gilliam, C.H., Wehtje, G.R., Grey, T.L., Osborne, J.A. and K.M. Tilt. (2003). "Evaluation of experimental extended delivery granular pre-emergence herbicide formulations for direct application to nursery containers. *Journal of Environmental Horticulture* 21:1-5.
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91. Sartin, J., Dyer, C., Matteri, R., Buxton, D., Buonomo, F., Shores, M., Osborne, J.A., Braden, T. and Steele, B. (2001), "Effect of intracerebroventricular orexin-B on food intake in sheep," *Journal of Animal Science*, 79:1573-1577.
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## CONFERENCE PUBLICATIONS - REFEREED

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5. Osborne, J.A. (2006), "Estimating the False Discovery Rate using SAS," *Proceedings of 31<sup>st</sup> Annual SAS Users Group International Conference*.
6. Srikanth, H., Williams, L. and Osborne, J. (2005) "System Test Case Prioritization of New and Regression Test Cases," *International Symposium on Empirical Software Engineering*: 64.73.
7. Nagappan, N., Williams, L., Osborne, J., Vouk, M. and Abrahamsson, P., (2005) "Providing Test Quality Feedback Using Static Source Code and Automatic Test Suite Metrics," *Proceedings of the 16<sup>th</sup> IEEE International Symposium on Software Reliability Engineering*, pp. 85-94.
8. Layman, L., Williams, L., Osborne, J., L. Berenson, S. Slaten, K and Vouk, M. (2005), "How and Why Collaborative Software Development Impacts the Software Engineering Course," *Proceedings of Frontiers in Education*, pp. T4C-9 - T4C-14.
9. Katira, N. Williams, L. and Osborne, J.A. (2005), "Towards increasing the compatibility of student pair programmers," *27<sup>th</sup> International Conference on Software Engineering, Education and Training Tract, St. Louis, Missouri*, pp. 625-626.
10. Nagappan, N. Williams, L., Vouk, M. and Osborne, J.A. (2005), "Early estimation of software quality using in-process testing metrics: a case study" *27<sup>th</sup> International Conference on Software Engineering, St. Louis, Missouri*, 30(4):1-7.
11. Nagappan, N., William, L, Vouk, M. and Osborne, J. (2004), "Using In-Process Testing Metrics to Estimate Software Reliability: A Feasibility Study," *FastAbstract in supplementary proceedings, International Symposium on Software Reliability Engineering (ISSRE 2004)*, pp. 21-22.

#### OTHER - UNREFEREED PUBLICATIONS

1. Osborne, J.A. and Barker, C.A., (2007) "Estimating the False Discovery Rate using SAS and JMP," *Annual Conference Proceedings of the Southeast SAS User's Group*, Paper SA09.
2. Sumanasinghe, R.D., Osborne, J.A. and Lobo, E.G., (2006) "Collagen Matrix Contraction by Mesenchymal Stem Cells under Chemical and Mechanical Stimulation," (Abstract submitted to BMES Annual Fall Meeting).
3. Solomon, L., Fekybelu, S., Smith, C., Osborne, J.A. and Myburg, A.A. (2005), "Microarray Analysis of Within and Between-Tree Variation in Wood-forming Tissues of *Eucalyptus*," *International Union of Forest Research Organizations Tree Biotechnology Meeting* (Abstract).
4. Torbati, D., Totapally, B.R., Raszynski, A., Gil, S. Bertrand, S, Osborne, J.A., Kalomiris, S. and Wolfsdorf, J. (2005), "Brain gene expression following prenatal global hypoxia-ischemia in neonatal rats," *European Society of Pediatric Research* (Abstract).
5. Osborne, J.A., and Grift, T.E. (2003), "A simple linear Boolean model for mass flow," *Proceedings of the Joint Statistical Meetings of the ASA*.
6. Feng, Y. Motta, A.C., Burmester, C.H. Reeves, D.W., van Santen, E. and Osborne, J.A. (2002) "Effects of tillage systems on soil microbial community structure under a continuous cotton cropping system," *Proceedings of the 25<sup>th</sup> Annual Southern Conservation Tillage conference for Sustainable Agriculture*, pp. 222-226.
7. Harris, C.E., Simonne, E., Meritt, L., Codreanu, P. and Osborne, J. (2000), "Current products provide inadequate protection from White-tailed deer feeding damage to 'Beauregard' sweetpotato," *Proceedings of the Florida State Horticultural Society* 113:216-218.
8. Jungblut, P.R., Osborne, J.A., MacNeil, M.A., Clausen, J.W., McPherson, D.D., Quigg, R.J., and Muster, A.J., (1996) "Does exercise improve left ventricular diastolic filling in elite older male endurance athletes?" *Circulation* 94:I-681.

#### MANUSCRIPTS IN PREPARATION OR UNDER REVIEW

1. Concha, C, Palavesam, A, Guerrero, FD, Osborne, JA, Hernandez, Y., et al, 2016, "A transgenic male-only strain of the New World screwworm for an improved control program using the sterile insect technique," submitted to *BMC Biology*.
2. Osborne, JA and Levine, RA, 2015, Shrinkage Estimation of NFL field goal success probabilities, submitted to *Journal of Quantitative Analysis in Sports*.
3. "Storage of Pasteurized Human Milk in Clinical and Outpatient Settings," 2016, submitted to *Archives of Disease in Childhood*.
4. Ting Meng, April Danielle Fogleman, Jonathan Allen, Frances Jones, Jason Osborne, "Bacteriological and Immunological Qualities of Pasteurized and Pasteurized Leftover Human Milk," submitted to *Journal of Pediatrics*, 2014.

5. Garzon, J.G., Boyette, M.D and Osborne, J.A., “Prediction Model for Sweetpotato (*ipomoea batatas* (*L*) *Lam*)) Weight Loss During Long-term Storage,” submitted to HorTechnology, 2014.
6. Barker, C. Stefanski, L. A. and Osborne, J.A., “The Orthogonal Interactions Model for Unreplicated Factorial Experiments,” in preparation.

## PRESENTATIONS

1. “The hidden F-test for interaction (software included),” San Diego State University, Dept. of Mathematics Seminar, April, 2015.
2. “Testing for Hidden Additivity in Factorial Experiments using the Hiddenf Package in R”, Joint Statistical Meetings, Seattle, WA, August, 2015 (delivered by Christopher Franck, Virginia Tech).
3. “Efficiency of Scoring Baserunners in MLB,” William Knapp and Jason A. Osborne, Joint Statistical Meetings, Boston, MA, 2014.
4. “Modelling umpire misclassification of balls and strikes using pitchFX data,” Justin Post and Jason A. Osborne, 2013 New England Symposium on Statistics in Sports (poster presentation), Cambridge, MA.
5. “Looking for (and Finding!) hidden additivity in complete-block designs,” The R User Conference 2013, University of Castilla-La Mancha, Albacete, Spain. July, 2013.
6. “An All Configurations Approach to testing for Latent Group-Based Interaction Effects in Two-Way Unreplicated Experiments,” Contributed Session at Joint Statistical Meetings 2011, Miami, FL. Franck, CT, Osborne, JA,
7. “Field goal accuracy in the NLF: A comparison of kickers,” 2011 New England Symposium on Statistics in Sports (poster presentation), Cambridge, MA.
8. “Strength of Schedule Adjustments in American Football,” 2009 New England Symposium on Statistics in Sports (poster presentation) with Channelle Simmons, Cary High School, NC, Cambridge, MA.
9. “Statistical modelling of field goal accuracy in American Football,” invited talk at Stat Club, NCSU Dept. of Statistics, April, 2010.
10. “Estimation of the False Discovery Rate using SAS and JMP,” Southeastern SAS User’s Group, Hilton Head, SC, November, 2007.
11. “Conjugate Hierarchical Modeling of the Error Variance in Tests for Differential Gene Expression”
  - Joint Statistical Meetings, Salt Lake City, UT, August, 2007,
  - NCSU, Dept. of Statistics Seminar, September, 2006.

12. "Estimation of the False Discovery Rate"
  - USSES Conference, Lexington, KY, June, 2006.
  - Coffee Talk, Bioinformatics Research Center, September, 2005
13. "Tools and Topics for Analysis of Microarray Data"
  - USSES Conference, Blowing Rock, NC, June, 2005.
  - U.S. Census Bureau, July, 2005.
14. "A simple linear boolean model for assessing mass flow,"
  - Joint Statistical Meetings of the American Statistical Association, New York, NY.
  - U.S. Army Conference on Applied Statistics, Raleigh, NC.
15. "Statistical issues in variety trials," Invited, Annual Intl. Conference of the American Society for Horticultural Science, Sacramento, CA.
16. "Exponential Order Statistic Models," Invited Talk,
  - Department of Statistics, University of Georgia, Athens, GA.
  - Department of Mathematical and Computer Science, Loyola University Chicago, IL.
17. "The Sample Lorenz Curve for Goodness-of-fit in the Exponential Order Statistic Model," Invited Talk,
  - Department of Biostatistics, University of Minnesota, Summer, 1998.
  - Spring Meeting of the Alabama Chapter of the ASA, 1999.
18. "Survival Analysis with SAS", Seminar, Auburn University, Auburn, AL.
19. "Nonparametrics with SAS", Seminars, Auburn University, Auburn, AL.

## FUNDING

- NSA/NCSU Science of Security Lablet: Analytics Supporting Security Science, 2 months summer salary support, principal investigators are Dr. Laurie Williams and Dr. Michael Rappa. Duration is 2008-2013.
- "Collaboration through Agile Software Development Practices: Improving the Preparation for and Success of Minorities, the Disabled and Woman in IT Careers" awarded by NSF, 2003, total amount is \$680,000, over two years, serving as senior personnel.
  - Additional support (\$4800) for summer research experience for undergraduate in statistics, summer, 2005.
  - Supplement support in the amount of \$118,728 extending the grant until June 30, 2008.
- "A hypothesis for the chemical basis for sourness perception in acid solution and foods," awarded by NRI, May, 2003, serving as paid statistical consultant, PIs are R. McFeeters, M. Drake, Dept. of Food Science, NCSU, total amount is \$104,000. Some research support for graduate student in statistics, summer, 2004.

- “*In-Vitro* Model for Injury Induced Cartilage Degeneration,” awarded 2002, by Whitaker Foundation for Biomedical Engineering Grant Program; serving as statistical consultant, Principal Investigator is P. Mente, Dept. of Bio. and Ag. Engineering, NCSU, total amount is \$201,561 over three years.
- “Reliable Evaluation and Design of Combinatorial Algorithms,” submitted in February, 2004, to NSF, Information Technology Research solicitation, co-PI with F. Brglez, M. Stallman, Dept. of Computer Science, NCSU, total amount is \$2,062,000.
- “Micro and Macrofluidics for Differentiating hMSCs,” a bioengineering research grant proposal submitted to NIH with E. Lobo, total amount is \$1,773,654.

#### ADVISING

- Doctoral students

Student	Year	Current employer
Bongseog Choi (joint w/ Dennis Boos)	2016	SAS
Chris Franck	2012	Virginia Tech
Yuhua Su	2012	Dr. Su’s Statistics
Clay Barker (joint w/ Len Stefanski)	2011	SAS
Kelci Miclus (joint w/ Russ Wolfinger)	2010	SAS
Jiajun Liu (joint w/ Jackie Hughes-Oliver)	2009	Cleveland Clinic

- Undergraduates
  - Undergraduate Sports Statistics Club Advisor, joint with Justin Post
  - William Knapp, Summer, Fall, 2014.

#### STATISTICAL CONSULTING

- Internal consulting within NCSU (more than 100 appointments every year):
  - Statistical Liason for departments within the NCSU College of Agriculture and Life Sciences:
    - \* Poultry Science, Biological and Agricultural Engineering, Food Science
- Funded internal statistical consulting within the university:
  - Forest Biotechnology, Computer Science, Food Science, Horticulture
- Unfunded consulting within the University
  - Biomedical Engineering, Forestry, Toxicology, Genetics, Veterinary Medicine, Computer Engineering
- Serving as science team member for ArrayXpress, a microarray service company. Duties include designing and analyzing gene expression experiments and use of modern statistical software developed for high throughput genomic experiments (including R, SAS and JMP Genomics).

## EDITORIAL ACTIVITIES

- Referee
  - Statistics Journals: *Journal of the American Statistical Association*, *The American Statistician*, *Journal of Applied Statistics*, *The Annals of Applied Statistics*, *Biometrics*, *Journal of Statistical Theory and Practice*, *WIRE's Computational Statistics*
  - Other Journals: *Bioinformatics*, *Genome Biology*, *Pharmacogenomics*, *IEEE Transactions on Reliability*, *Journal of Quantitative Analysis in Sports*, *Mathematics Magazine*, *Journal of Economic Inequality*, *Journal of Sequential Analysis*, *Mathematics Magazine*
- Book reviewer:
  - Duxbury
  - SAS Institute

## MEMBERSHIP OF PROFESSIONAL SOCIETIES

- American Statistical Association, Institute of Mathematical Statistics.

## ACTUARIAL EXAMS PASSED

- Society of Actuaries Exams 100,110,120

## OTHER ACTIVITIES

- Squash
  - Competed in national tournament, 1998 (Champion), 2002 (Semifinalist), 2003, 2010 (Semifinalist)
  - Helped organize squash community at NCSU; salvaged two wide (20') courts in old Carmichael Gym from being retooled as storage closets.
  - Coached the Duke Team to their first National Tournament, 2010 and their first Championship at Nationals (H Division, 2016).
- Running (Chicago Marathon, 1993. City of Oaks Marathon, 2012.)
- Badminton (Advisor, team member, NCSU club team.)
- Juggling (can juggle six balls!)