

E. Shannon Neeley Tass

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Education

Ph.D., 2008; Biostatistics, Rice University

Dissertation Topic: Preprocessing of Reverse Phase Protein Arrays

Advisor: Keith Baggerly

M.A., 2007; Statistics, Rice University

M.S., 2003; Statistics, Brigham Young University

Project Topic: Temporal Lobe Classification of Autism

Advisor: Sterling Hilton

B.S., 2001; Statistics, Brigham Young University

Research Interests

Statistical applications in health, medicine, and wildlife; Environmental and spatial statistics; Statistical climatology and climate models; Risk Analysis; Brain imaging; Cancer genetics and proteomics;

Publications

Peer Reviewed

1. Prigge MB, Lange N, Bigler ED, Merkley TL, **Neeley ES**, Abildskov TJ, Froehlich AL, Nielsen JA, Cooperrider JR, Cariello AN, Ravichandran C, Alexander AL, Lainhart JE. (2013) Corpus Callosum area in children and adults with autism. *Res Autism Spectr Disord.* 7(2):221-234.
2. West J, Hall P, Hanson C, Prier, K, Giraud-Carrier C, **Neeley ES**, Barnes M. (2012) Temporal variability of problem drinking on Twitter. *textitOpen Journal of Preventive Medicine*, 2, 43-48. doi: 10.4236/ojpm.2012.210
3. **Neeley ES**, Kornbalu SM, Baggery KA. (2011). Surface adjustment of reverse phase protein arrays using positive control spots. *Cancer Informatics.* 11:77-86.
4. Heltemes-Harris LM, Willette MJ, Ramsey LB, Qiu YH, **Neeley ES**, Zhang N, Thomas DA, Koeuth T, Baechler EC, Kornblau SM, Farrar MA. (2011). Ebf1 or Pax5 haploinsufficiency synergizes with STAT5 activation to initiate acute lymphoblastic leukemia. *Journal of Experimental Medicine.* 208(6):1135-1149.
5. Tate DF, Khedraki R, **Neeley ES**, Ryser D, Bigler ED. (2011). Cerebral volume loss, cognitive deficit and neuropsychological performance: Comparative measures of brain atrophy II: Traumatic brain injury. *Journal of the International Neuropsychological Society.* 17(2):308-316.

6. Tate DF, **Neeley ES**, Norton MC, Tschanz JT, Miller MJ, Wolfson L, Hulette C, Leslie C, Welsh-Bohmer KA, Plassman B, Bigler ED. (2011). Intracranial volume and dementia: Some evidence in support of the cerebral reserve hypothesis. *Brain Research*. 1385:151-162.
7. Ghia AJ, **Neeley ES**, Gaffney DK. (2010). Postoperative radiotherapy use and patterns of care analysis for node positive or parametria positive cervical cancer. *Gynecologic Oncology*. 119(3):411-416.
8. Brown AP, **Neeley ES**, Werner T, Soisson AP, Burt RW, Gaffney DK. (2010). A population-based study of subsequent primary malignancies after endometrial cancer: Genetic, environmental, and treatment-related associations. *International Journal of Radiation Oncology*Biophysics*. 78(1):127-135.
9. Trusov A, Bumgarner R, Valijev R, Chestnova R, Talevski S, Vragoterova C, **Neeley ES**. (2009). Comparison of Lumin LED fluorescent attachment, fluorescent microscopy and Ziehl-Neelsen for AFB diagnosis. *The International Journal of Tuberculosis and Lung Disease*, 13(7):836-841.
10. Poland KS, Shardy DL, Azim M, Naeem R, Krance RA, Dreyer ZE, **Neeley ES**, Zhang N, Qiu YH, Kornblau SM, Plon SE. (2009). Overexpression of ZNF342 by juxtaposition with MPO promoter/enhancer in the novel translocation t(17;19)(q23;q13.32) in pediatric acute myeloid leukemia and analysis of ZNF342 expression in leukemia. *Genes, Chromosomes, and Cancer*, 48(6):480-489.
11. **Neeley ES**, Kornblau SM, Coombes KR, Baggery KA. (2009). Variable slope normalization of reverse phase protein arrays. *Bioinformatics*, 25(11):1384-1389.
12. Baggerly KA, Coombes KR, **Neeley ES**. (2008). Run batch effects potentially compromise the usefulness of genomic signatures for ovarian cancer. *Journal of Clinical Oncology*, 26(7):1187-1188.
13. Bigler ED, Mortensen S, **Neeley ES**, Ozonoff S, Krasny L, Johnson M, Lu J, Provencal SL, McMahon W, Lainhart JE. (2007). Superior temporal gyrus, language function, and autism. *Developmental Neuropsychology*, 31(2):217-238.
14. **Neeley ES**, Bigler ED, Krasny L, Ozonoff S, McMahon W, Lainhart JE. (2007). Quantitative temporal lobe difference: autism distinguished from controls using classification and regression tree analysis. *Brain Development*, 29(7):389-399.
15. Bigler ED, **Neeley ES**, Miller MJ, Tate DF, Rice SA, Cleavinger H, Wolfson L, Tschanz J, Welsh-Bohmer K. (2004). Cerebral volume loss, cognitive deficit and neuropsychological performance: comparative measures of brain atrophy: I. Dementia. *Journal of the International Neuropsychological Society*, 10(3):442-452.
16. Bigler ED, Tate DF, **Neeley ES**, Wolfson LJ, Miller MJ, Rice SA, Cleavinger H, Anderson C, Coon H, Ozonoff S, Johnson M, Dinh E, Lu J, Mc Mahon W, Lainhart JE. (2003). Temporal lobe, autism, and macrocephaly. *American Journal of Neuroradiology*, 24(10):2066-2076.

In Progress

1. **Neeley ES**, Neeley AD. Simulation of Risk of Coddling Moth Establishment from Imported Apples. (2012). *Biological Invasions*. (Submitted)
2. **Neeley ES**, Christensen WF, Sain SR (2013). A Bayesian spatial factor analysis approach for combining multi-model ensembles. (In progress).

Non-peer Reviewed

1. **Neeley.** (2012). Review of Essentials of Probability and Statistics for Engineers and Scientists by Walpole, Myers, Myers, Ye. *The American Statistician*. (To Appear).

Presentations

1. Ten Lectures on Statistical Climatology, Seattle, WA, August 2012 (Contributed Poster) Title: A Gaussian Markov Random Fields Approach to Integrating Multiple Climate Model Output
2. Joint Statistical Meetings, San Diego, CA, August 2012 (Contributed paper)
Title: A Gaussian Markov Random Fields Approach to Integrating Multiple Climate Model Output
3. Brigham Young University, Provo, UT, September 2011 (Contributed paper)
Title: A Gaussian Markov Random Fields Approach to Integrating Multiple Climate Model Output
4. Joint Statistical Meetings, Miami, FL, August 2011 (Contributed paper)
Title: A Gaussian Markov Random Fields Approach to Integrating Multiple Climate Model Output
5. Joint Statistical Meetings, Vancouver, BC, Canada, August 2010 (Contributed paper)
Title: Simulation of Risk of Coddling Moth Establishment from Imported Apples
6. Joint Statistical Meetings, Washington DC, August 2009 (Contributed paper)
Title: A Bayesian approach to the quantification of protein lysate arrays
7. Annual Meeting for the Western North American Region (WNAR) of the International Biometrics Society, Portland, OR, July 2009 (Contributed paper)
Title: Normalization of reverse phase protein arrays
8. MD Anderson Cancer Center, Department of Bioinformatics, Houston, TX, June 2008 (Invited talk)
Title: Normalization methods for reverse phase protein arrays
9. Keystone Symposium on Molecular and Cellular Biology, Lake Tahoe, CA, February 2008 (Invited talk)
Title: Preprocessing of reverse phase protein arrays to aid in the detection of molecular biomarkers in leukemia
10. Conference on Interface of Statistics and Computing Science, Philadelphia, PA, May 2007 (Invited talk)
Title: Statistical analysis of reverse phase protein arrays
11. Annual Meeting for the Society of Medical Decision Making, Atlanta, GA Oct 2004 (Contributed poster)
Title: A decision analysis of prostate cancer with variable levels of disease aggressiveness.

Professional Experience

Assistant Professor, Brigham Young University, Department of Statistics Provo, UT
July 2008-Present

Research Assistant, MD Anderson Cancer Center, Department of Bioinformatics and Computational Biology, Houtson, TX
2006-2008

Teaching Assistant, Rice University, Department of Statistics, Houtson, TX
2003-2006

Research Assistant, Brigham Young University, Department of Psychology, Provo, UT
2001-2003

Teaching Experience

Statistics for Engineers and Scientists, Brigham Young University, Department of Statistics
Winter Semester 2012
Winter Semester 2013

Probability Theory and Mathematical Statistics II, Brigham Young University, Department of Statistics
Winter Semester 2012

Probability Theory and Mathematical Statistics I, Brigham Young University, Department of Statistics
Fall Semester 2011
Fall Semester 2012

Statistical Methods II (ANOVA), Brigham Young University, Department of Statistics
Fall Semester 2010
Winter Semester 2010
Winter Semester 2009

Basic Practices of Statistics, Brigham Young University, Department of Statistics
Fall Semester 2009
Fall Semester 2008

Introduction to Statistics, Brigham Young University, Department of Statistics
Winter Semester 2003

Service

Department Seminar Coordinator, 2012
American Statistical Association, Utah Chapter, Treasurer, 2011-Present
Student Research Conference Department Coordinator, 2011-Present
Methods Subcommittee of Teaching and Learning Committee, Chair, 2009-2010
Undergraduate Service Oversight Committee, Chair, 2008-2009