Sybil Prince Nelson

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Education

August 2010 to *August 2016*
Medical University of South Carolina
Charleston, SC
PhD in Biostatistics

January 2006 to *May 2010*
College of Charleston
Charleston, SC
Master of Science in Mathematics
- Master's Thesis: Dynamics of Nearly Circular Vortex Filaments

September 1997 to *June 2001*
Washington and Lee University
Lexington, VA
Bachelor of Arts in Mathematics and Music
- Dean's List

Research Interests

- Random Forests
- Methodological issues in Logic Regression and Classification and Regression Tree analysis
- Statistical Genetics

Work History

July 2020 to *Present*
Assistant Professor
Washington and Lee University
Lexington, VA
- Courses Taught
  - ❖ Mathematical Statistics – Fall 2020

August 2016 to *June 2020*
Visiting Faculty
The Citadel
Charleston, SC
- Courses Taught
  - ❖ Precalculus – Fall 2016, Spring 2017, Summer 2017, Fall 2018, Summer 2018, Fall 2019, Fall 2020
  - ❖ Calculus 1 – Fall 2016, Spring 2017, Summer 2017, Fall 2017, Spring 2018, Summer 2019, Fall 2019
  - ❖ Calculus 2 – Summer 2019

- ❖ Statistical Methods – Spring 2018, Spring 2019, Summer 2020, Spring 2020
- ❖ Intro to Probability and Statistics – Spring 2019, Spring 2020
- ❖ Probability and Statistics – Spring 2017, Spring 2018

August 2004 to *July 2010* — Mathematics Teacher, Ashley Hall School, Charleston, SC

- Taught Algebra 1, 2, 3, Trigonometry, Precalculus, AP Statistics
- Taught dance: ballet, tap, jazz, hip hop
- Directed the math team

August 2001 to *July 2004* — Mathematics Teacher, Georgetown Day School, Washington, DC

- Taught Algebra 2, Precalculus, AP Calculus
- Directed the dance club
- Directed the math team

Presentations/Posters

- Prince Nelson, S *Dynamics of Nearly Circular Vortex Filaments*. Poster presented at Cha-Cha Days Statistical Meeting and College of Charleston Graduate Student Research Day. First place prize at CofC. 2008
- Prince Nelson, S. *Health Disparities in the development of Lymphedema in Breast Cancer Survivors*. Poster presented at MUSC Student Research Day. (First Place Winner). 2011
- Prince Nelson, S. *Preliminary Steps for Developing a Secondary Breast Cancer Lymphedema Assessment Tool*. Poster presented at Hollings Cancer Retreat. 2012
- Prince Nelson, S. *Reduced Actin Polymerization in Lung of IQGAP-1 in Knockout Mice Implication for Scleroderma Pulmonary Fibrosis*. Poster presented at College of Medicine Research Day. 2013
- Prince Nelson, S. *Preliminary Steps for Developing A New Statistical Algorithm for Classifying and Predicting Disease Outcome from Binary and Continuous Predictors and their Interactions*. Poster presented at MUSC Student Research Day. 2014
- Prince Nelson, S. *A New Statistical Algorithm for Classifying and Predicting Disease Outcome from Binary and Continuous Predictors and their Interactions*. Presentation given at the SC-ASA meeting. 2014
- Prince Nelson, S. *A New Statistical Algorithm for Classifying and Predicting Disease Outcome from Binary and Continuous Predictors and their Interactions*. Invited speaker at University of North Carolina. 2014
- Prince Nelson, S. *C.Logic: An Extension of Logic Regression*. Invited speaker at Proctor and Gamble, Cincinnati, OH 2015
- Prince Nelson, S. *C.Logic: A Method for Predicting Disease Outcome*. Oral presentation at MUSC Student Research Day 2014 (Second Place Winner).

- Prince Nelson, S. Genetic and Environmental factors leading to Lupus in the SC Gullah Population. Invited speaker at MUSC's EE Just Symposium 2015
- Prince Nelson, S. A Novel Statistical Method for Identifying Genetic and Environmental Interactions that Lead to Disease. Poster presentation Eastern North Atlantic Region of the International Biometric Society conference, Baltimore, MD 2014
- Prince Nelson, S. A Novel Statistical Method for Identifying Genetic and Environmental Factors Leading to Health Disparities. Invited poster James E. Clyburn lecture. Columbia, SC 2014
- Prince Nelson, S. A Novel Statistical Method for Identifying Genetic and Environmental Factors Leading to Health Disparities. Invited speaker Proctor and Gamble, Cincinnati, Ohio 2015
- Prince Nelson, S. C.Logic: An Algorithm to Classify Dichotomous Disease Outcomes Using Interactions Between Dichotomous and Continuous Predictors. JSM 2016 Chicago, IL
- Frequent motivational presentations at local k-12 institutions.
- Prince Nelson, S "The Influence of Mathematical Preparedness on Student Performance in an Engineering Statics Course" Embry Riddle 2017 Daytona Beach, FL
- From Poverty to PhD, Mainland High School Daytona Beach, FL 2017
- Making Sense of the Madness: Using Statistics to Predict the NCAA Basketball Tournament, The Citadel 2019

Other Experience

- Panelist in mentoring presentations to encourage undergraduate minorities to pursue graduate degrees (at least twice per year each year at MUSC)
- MUSC College of Graduate Studies Admissions Committee
- Selected to give presentation to MUSC board of trusties
- Homework Helper at Carolina Youth Development Center (CYDC)
- Invited to present research at the Proctor and Gamble company in Cincinnati, Ohio.

Skills

- Microsoft Word and Excel
- R computer language for statistics
- SAS
- PLINK
- BEAGLE
- Adobe Photoshop

- LaTex and MikTex
- Proficient in Spanish and Portuguese
- Fiction Author (as Sybil Nelson and Leslie DuBois)

Publications

- Yuen, H., Prince Nelson, S. *Test-Retest Reliability of Oral Health Impact Profile (OHIP-49) in Adults with Systemic Sclerosis*. Paper published in Special Care in Dentistry. June 2013 p. 27-33
- White-Gilbertson, S., Prince Nelson, S. *et.al Analysis of the National Cancer Data Base to Describe Treatment Trends in Stage IV Oral Cavity and Pharyngeal Cancers in the United States, 1998-2012.* Journal of Registry Management (JRM), Winter 2015 Issue p. 146-151
- S. L. Prince Nelson, V. Ramakrishnan, P. J. Nietert, D. L. Kamen, P. S. Ramos & B. J. Wolf (2017) An evaluation of common methods for dichotomization of continuous variables to discriminate disease status, Communications in Statistics - Theory and Methods, 46:21, 10823-10834, DOI: 10.1080/03610926.2016.1248783
- Prince Nelson S, Ramakrishnan, R., Nietert, P., Kamen, D., Ramos, P., Wolf, B. *A Comparison of Joint and Marginal Dichotomization of Interacting Variables to Discriminate Disease Status*. Communication in Statistics Theory and Methods, submitted to Statistics and Medicine

References

- References available upon request