Alexander H. Foss

alexanderhfoss@gmail.com

Education

University at Buffalo **Aug 2012 – May 2017 (anticipated)**
Ph.D Candidate, Biostatistics GPA 3.9/4.0
University of the South **Aug 2010 – May 2012**
Post-baccalaureate student, Mathematics GPA 4.0/4.0
Indiana University, Bloomington **Aug 2003 – Aug 2007**
Bachelor of Science in Music and an Outside Field GPA 3.9/4.0
Graduated with High Distinction
Major: Piano Performance
Outside Field: Psychology, with Departmental Honors

Experience

University at Buffalo, Dept of Biostatistics, Buffalo, NY
Research Assistant **June 2013 – Present**
Principal Investigator: Dr. Marianthi Markatou

- Worked with collaborators at University at Buffalo and IBM Watson Labs to develop algorithms for clustering mixed continuous and categorical data subject to measurement error

University at Buffalo, Dept of Biostatistics, Buffalo, NY
Teaching Assistant **Fall 2012, Spring 2013**

- TA for graduate and undergraduate statistics courses
- Received excellent student evaluations: 94% agreement with the statement "Presents material well," 80% respondents categorizing overall teaching effectiveness as "One of the best" or "Above Average", and comments such as "One of the best TAs I have had so far."

University at Buffalo, Dept of Biostatistics, Buffalo, NY
Population Health Observatory
Research Assistant **Summers 2010, 2011, 2012**
Principal Investigator: Dr. Randolph Carter

- Implemented and published a Monte Carlo simulation in R evaluating methods of calculating the lifetime risk at birth of inborn errors of metabolism

Yale University School of Medicine, New Haven, CT
Children's Hospital of Philadelphia, Philadelphia, PA
Developmental Neuroimaging Lab
Principal Investigator: Dr. Robert Schultz
Research Assistant (full time) **Jul 2007 – Jun 2009**

- Assisted in the design and analysis of fMRI studies of visual perception and social cognition

Indiana University, Dept of Psychological & Brain Sciences, Bloomington, IN
Cognition & Action Neuroimaging Lab
Principal Investigator: Dr. Karin James
Undergraduate Research Assistant **Sep 2005 – Aug 2007**

- Designed, analyzed, and published results of an fMRI experiment investigating the neural correlates of auditory perception of tone combinations; analysis conducted using BrainVoyager QX

Publications

AH Grossman, **AH Foss**, and AR D'Augelli (2014). "Puberty: Maturation, Timing and Adjustment, and Sexual Identity Developmental Milestones among Lesbian, Gay, and Bisexual Youth". In: *Journal of LGBT Youth* 11, pp. 107–124

AH Foss, PK Duffner, and RL Carter (2013). "Lifetime Risk Estimators in Epidemiological Studies of Krabbe Disease: Review and Monte Carlo Comparison". In: *Rare Diseases* 1.2, e25212

AL Barczykowski, **AH Foss**, PK Duffner, L Yan, and RL Carter (2012). "Death Rates in the U.S. due to Krabbe Disease and Related Leukodystrophy and Lysosomal Storage Diseases". In: *American Journal of Medical Genetics Part A* 158A, pp. 2835–2842

AH Foss, EL Altschuler, and KH James (2007). "Neural Correlates of Pythagorean Ratio Rules". In: *Neuroreport* 18, pp. 1521–1525

Invited Talks

AH Foss, A Heching, B Ray, and M Markatou (2014). "Clustering Mixed Data Subject to Measurement Error". In: *International Society for Business and Industrial Statistics*, ASA Section on Statistical Learning and Data Mining. Durham, NC, USA

Academic Honors

- Honorable Mention, NSF GRF Program — Spring 2013
- Presidential Fellowship, University at Buffalo ($23,000) — Fall 2012
- Excellence in Research Award, IU Psychology Dept — April 19, 2007
- Capstone Grant, Howard Hughes Medical Institute ($4,250) — Spring 2006
- Metz Scholarship, IU Honors College ($56,000) — Fall 2003
- Merit scholarship, IU School of Music ($40,000) — Fall 2003

Programming Skills

Fluent (*Used daily; I can write substantial programs without consulting references*):
R, LaTeX markup language, dynamic report generation with knitr (PDF, HTML, or MS word output)
Formerly Fluent (*I achieved fluency at some point within the last 10 years*):
Java, MATLAB, Python
Familiar (*I can use at a high level while consulting references*):
C, HTML/CSS, Mathematica, Processing, SAS, SQL, Visual Basic

Other Computing Skills

Software: SPSS, VIM, MS Office Suite
Operating systems: Linux (Red Hat, Ubuntu, CentOS) and Windows (98/XP/Vista/7/8)
Shell programming (BASH)
Batch scheduling systems: SLURM, SGE

Selected Coursework

University at Buffalo, Master's Level: Regression Analysis, Categorical Data Analysis, Multivariate Data Analysis, Statistics for Bioinformatics
University at Buffalo, PhD Level: Topics in Advanced Modeling, Advanced Categorical Data Analysis, Advanced Survival Analysis, Theory of Linear Models, Limit Theory
University of the South: Probability and Statistics I/II, Multidimensional Calculus, Linear Algebra, Discrete Mathematical Structures, Numerical Analysis, Genomics
Indiana University: Molecular Biology, Abnormal Psychology, Behavioral Neuroscience, Laboratory in Behavioral Neuroscience, Laboratory in Neuroimaging Methods

Other Proficiencies

- Fluent in Spanish
- Classically-trained pianist, freelance organist