

## Alexander H. Foss

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alexanderhfoss@gmail.com

Education	<b>University at Buffalo</b> Ph.D Candidate, Biostatistics GPA 3.9/4.0	<b>Aug 2012 – May 2017 (anticipated)</b>
	<b>University of the South</b> Post-baccalaureate student GPA 4.0/4.0	<b>Aug 2010 – May 2012</b>
	<b>University of California, Berkeley</b> Ph.D Candidate, Psychology GPA 4.0/4.0 Area of Focus: Cognition, Brain, and Behavior	<b>Aug 2009 – Mar 2010</b>
	<b>Indiana University, Bloomington</b> Bachelor of Science in Music and an Outside Field Graduated with High Distinction, GPA 3.9/4.0 Major: Piano Performance Outside Field: Psychology, with Departmental Honors	<b>Aug 2003 – Aug 2007</b>
GRE Scores	<b>General GRE scores:</b> 790 Quantitative, 730 Verbal, 5.5 Analytical Writing <b>Psychology Subject GRE score:</b> 830	
Experience	<b>University at Buffalo, Dept of Biostatistics, Buffalo, NY</b> <i>Research Assistant</i> Principal Investigator: Dr. Marianthi Markatou	
	<ul style="list-style-type: none"><li>• Implemented Monte Carlo simulation studies in R investigating the impact of measurement error on clustering methods with mixed categorical and continuous data</li><li>• Worked with collaborators at University at Buffalo and IBM Watson Labs</li><li>• Conducted a literature review on clustering methodologies focusing on mixed data types and measurement error</li></ul>	
	<b>University at Buffalo, Dept of Biostatistics, Buffalo, NY</b> <i>Teaching Assistant</i>	
	<ul style="list-style-type: none"><li>• Teaching assistant for STA527, Introduction to Medical Statistics, a graduate level introductory statistics course; and STA302, Introduction to Statistical Inference, an undergraduate level mathematical statistics course</li><li>• Led weekly recitation sections, held weekly office hours, graded homework, assisted in grading exams</li><li>• 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.” (Spring 2013 evaluations)</li></ul>	
	<b>University at Buffalo, Dept of Biostatistics, Buffalo, NY</b> <b>Population Health Observatory</b> <i>Research Assistant</i>	
	<ul style="list-style-type: none"><li>• Implemented a Monte Carlo simulation in R evaluating published methods of calculating the lifetime risk at birth of Krabbe disease (paper accepted)</li><li>• Conducted a literature review for a paper describing a novel method of calculating mortality rates of Krabbe disease and related diseases</li></ul>	

- Assisted in the writing of grant proposals to the NIDDK and HRSA, as well as an ARRA grant proposal.

**New York University, Dept of Applied Psychology, New York, NY**

Principal Investigator: Dr. Arnold Grossman

*Data Analyst (part-time)*

**Mar 2011 – June 2012**

- Analyzed associations between domestic abuse, neglect and other variables in elderly LGBT adults, as well as associations between homelessness and traumatic life events in LGBT youth
- Co-author on a paper investigating the relationship between pubertal timing and sexual identity development (accepted)

**University of California, Dept of Psychology, Berkeley, CA**

**Affective Cognitive Neuroscience Lab**

Principal Investigator: Dr. Sonia Bishop

*Graduate Student Researcher*

**Aug 2009 – Apr 2010**

- Assisted in the design and analysis of a functional MRI study investigating neural processing of ambiguous and pure emotions
- Assisted in the writing of an NIMH BRAINS research grant concerning anxiety reduction biofeedback training using real-time fMRI

**Children's Hospital of Philadelphia, Philadelphia, PA**

**Developmental Neuroimaging Lab**

Principal Investigator: Dr. Robert Schultz

*Research Assistant (full time)*

**Oct 2007 – Jun 2009**

- Designed a study investigating the interaction of executive functioning and neural adaptation in ventral visual areas
- Analyzed functional MRI and eye-tracking data using BrainVoyager QX and MatLab; wrote C subroutines called from within MatLab functions (MEX files)

**Yale University School of Medicine, New Haven, CT**

**Developmental Neuroimaging Lab**

Principal Investigator: Dr. Robert Schultz

*Research Assistant (full time)*

**Jul 2007 – Oct 2007**

- Assisted in the design and implementation of fMRI studies of visual perception and social cognition
- Administered neuropsychological test to patients with autism spectrum disorders

**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**

- Foss AH**, Duffner PK, & Carter RL (2013). Lifetime Risk Estimators in Epidemiological Studies of Krabbe Disease: Review and Monte Carlo Comparison. *Rare Diseases* 1(2), e25212.
- Foss AH**, Altschuler EL, & James KH (2007). Neural correlates of pythagorean ratio rules. *Neuroreport* 18, 1521-1525.
- Barczykowski AL, **Foss AH**, Duffner PK, Yan L, & Carter RL (2012). Death rates in the U.S. due to Krabbe disease and related leukodystrophy and lysosomal

storage diseases. *American Journal of Medical Genetics Part A* 158A, 2835-2842.  
 Grossman AH, **Foss AH**, D'Augelli AR. Puberty: Maturation, Timing and Adjustment, and Sexual Identity Developmental Milestones among Lesbian, Gay, and Bisexual Youth. (accepted, *Journal of LGBT Youth*)  
 Tan W, Jalal K, **Foss AH**, Duffner PK, & Carter RL. Race effects on age specific metachromatic leukodystrophy incidence among 0-5 year olds. (In preparation)

## Posters

**Foss AH**, Duffner PK, & Carter RL (2013). Lifetime Risk Estimators in Epidemiological Studies of Krabbe Disease: Review and Monte Carlo Comparison. *Joint Statistical Meetings*, Montreal, Canada.  
 Nuñez-Elizalde A, **Foss AH**, Aguirre G, & Bishop SJ (2010). Does he look scared to you? Effects of trait anxiety upon neural dissimilarity measures for ambiguous and pure emotional expressions. *Vision Sciences Society*, Naples, FL, USA.  
 Herrington JK, Grupe DW, Hunyadi ET, Shin CS, **Foss AH**, Taylor JM, & Schultz RT (2010). Fusiform gyrus and face processing: Intrasubject stability, hemispheric asymmetry, and effective connectivity. *International Meeting for Autism Research*, Philadelphia, PA, USA.  
**Foss AH** & James KH (2006). Music and language processing: Investigating the neural correlates of expertise. *Human Brain Mapping Conference*, Chicago, IL, USA.

## Academic Honors

• Perry Poster Award, University at Buffalo (\$100)	April 19, 2013
• Honorable Mention, NSF GRF Program	Spring 2013
• Presidential Fellowship, University at Buffalo (\$23,000)	Fall 2012
• Diebold Fellowship, UC Berkeley Psychology Dept (\$14,600)	Fall 2009
• Excellence in Research Award, IU Psychology Dept	April 19, 2007
• Honors Thesis Award, IU Honors College	Spring 2007
• Capstone Grant, Howard Hughes Medical Institute (\$4,250)	Spring 2006
• Membership, <i>Psi Chi</i> , IU chapter	Spring 2006
• Metz Scholarship, IU Honors College (\$56,000)	Fall 2003
• Merit scholarship, IU School of Music (\$40,000)	Fall 2003

## Computer Skills

<u>Languages:</u>	R, Bash, C, Java, Mathematica, MATLAB, Processing, Python, Visual Basic, HTML/XHTML, CSS
<u>Software:</u>	SPSS/PASW, SAS, BrainVoyager QX 1.10, pdfTEX, Sweave, Adobe Photoshop 7.0, VIM, OpenOffice/LibreOffice, MS Office Suite
<u>Operating Systems:</u>	Windows (98/XP/Vista/7), Macintosh (OS9, OSX), Linux (Red Hat, Ubuntu, CentOS)

## Other Proficiencies

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

## Community Service

**New York State Center of Excellence in Bioinformatics and Life Sciences**  
*Volunteer Speaker* **July 24, 2012**  
 • Gave a presentation on face recognition, brain imaging, and autism to a group of exchange students

**The Franklin Institute Museum of Science, Philadelphia, PA**

*Volunteer*

**Nov 2007 – Oct 2008**

- Conducted science demonstrations including paper-making, the “brain bar” neuroscience exhibit, and the Baldwin 60,000 steam engine simulation
- Interacted individually with children ages 4–16 and their parents

**Wonderlab Museum of Science, Bloomington, IN**

*Volunteer*

**May 2006 – Jul 2007**

- Conducted “science-on-the-spot” demonstrations
- Interacted individually with children ages 4–12 and their parents

**International Service Learning, Kansas City, MO/San Jose, Costa Rica**

*Volunteer*

**Mar 10 – 18, 2007**

- Helped set up clinics in Costa Rica in the towns of Tibás and Puntarenas
- Conducted community triage, took patient histories, gave eye examinations, and prescribed reading glasses