Samantha Faber

Curriculum Vitae

IUB Dept. of Psychological and Brain Sciences
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Education

2015 – Present	**Ph.D.**, *Indiana University Bloomington*, Psychology. *Expected Date of Graduation: May 2020*
2015 – Present	**Ph.D.**, *Indiana University Bloomington*, Neuroscience. *Expected Date of Graduation: May 2020*
2012 – 2015	**B.S.**, *North Carolina State University*, Mathematics, Minors in Biology and French. *summa cum laude*

Honors & Awards

2016	**Travel Award**, *Indiana University Bloomington College of Arts and Sciences & Program in Neuroscience*, $1,500. Awarded to support graduate student travel to conferences.
2016	**NSF-GRFP Honorable Mention**, *Indiana University Bloomington*, PI: Dr. Franco Pestilli.
2015 – 2016	**Pre-doctoral Research Fellowship**, *Indiana University Bloomington*, Training Program in Integrative Developmental Process, PI: Dr. Franco Pestilli, $22,920.
2014	**NSF Research Grant 557131**, *North Carolina State University*, PI: Dr. Mette Olufsen, $4,000.
2014	**NIH/NIGMS Research Grant P50-GM094503**, *North Carolina State University*, PI: Dr. Mette Olufsen, $2,500.
2012 – 2015	**Dean's List**, *North Carolina State University*.
2012	Member of National Society of Collegiate Scholars
2010 – 2011	**Chancellor's Achievement Award & Dean's List**, *University of North Carolina at Wilmington*.

Poster Presentations

2014	**13th Annual Summer Undergraduate Research Symposium**, *North Carolina State University*, Sensitivity Analysis of Inverse Problems: Cardiovascular Modeling. Authors: Paul Brockington, Samantha Faber, Steven Gilmore, Andrew Marquis & Dr. Mette Olufsen

Research

2016 – Present	**Graduate Research Assistant in Computational Neuroscience**, *Indiana University Bloomington*, Dr. John Beggs & Dr. Ehren Newman. Using graph and information theoretic approaches to characterize information flow and processing in neural networks derived from effective connectivity of *in vitro* organotypic cultures.
2015 – 2016	**Graduate Research Assistant in Computational Neuroscience**, *Indiana University Bloomington*, Dr. Franco Pestilli. Worked on methods of DWI data preprocessing, tractography, and visualization of human *in vivo* white matter. Also developed stimuli and MRI scanning protocol for a functional neurimaging study investigating potential structural connections between ventral and dorsal visual streams.

2014	**Undergraduate Research Assistant in Applied Mathematics**, *North Carolina State University*, Dr. Mette Olufsen.
	Collaborated with The Virtual Physiological Rat Project to build computational models of cardiovascular dynamics in rats for the prediction of cardiovascular disease. Also investigated methods of sensitivity analysis (how changes in model parameters affect model outputs) using cardiovascular models described by systems of coupled ordinary differential equations.

Skills

Computer	MATLAB, Microsoft Office, Unix, RStudio, Maple, COMSOL Multiphysics$^{\circledR}$ Modeling Software, LaTeX
Language	Conversationally fluent in French
Neuroimaging	Diffusion-Weighted Imaging, data preprocessing, tractography, MRtrix, FSL, Linear Fascicle Evaluation (LiFE), Vistasoft, Automated Fiber Quantification (AFQ)

Education Outreach

2016	**Foundations in Science and Mathematics**.
	Volunteered as an administrative helper for this summer program in which graduate students instruct middle and high school-level students in high school and early college science and mathematics subjects.
2015	**Indiana University Oustanding Junior Scientist Competition**.
	Volunteered to judge high school student research presentations.
2013	**The GREEN Program**, *Renewable Energy and Sustainability in Costa Rica*.
	12-day summer program included lessons and projects on renewable energy and sustainable practices, community service projects, cultural immersion opportunities, and local excursions.

Teaching Experience

Lecturer's Assistant, *North Carolina State University*, Environmental Science.
- Summer 2013: Dr. Robert Bruck

Tutoring.
- Mathematics: 2 years
- Chemistry: 1 year
- Biology: 1 year
- Biochemistry: 0.5 year