



## Experience

APRIL 2014 - PRESENT, SEATTLE, WA

**RESEARCH SCIENTIST/ENGINEER** UNIVERSITY OF WASHINGTON

- ▶ Characterize brain development during early childhood using hierarchical regression modeling to analyze neural activity during speech processing and survey data.
- ▶ Describe deficits in autism spectrum disorders employing two-sample hypothesis testing of neuroimaging data for language cognition.
- ▶ Contribute to open-source Python software for dense array digital signal processing and analysis tools for neuroscience research.

NOVEMBER 2011 - APRIL 2014, SEATTLE, WA

**POSTDOCTORAL FELLOW** UNIVERSITY OF WASHINGTON

- ▶ Awarded \$500K to lead research projects in early childhood language learning and cognition in autism spectrum disorders.
- ▶ Implemented 4 projects yielding nearly 3TB of data analyzed using the Python scientific computing stack, resulting in multiple conference presentations, and manuscripts.

NOVEMBER 2008 - OCTOBER 2011, PHILADELPHIA, PA

**POSTDOCTORAL FELLOW** CHILDREN'S HOSPITAL OF PHILADELPHIA

- ▶ Awarded \$35K National Institute of health loan repayment grant for developing an experimental paradigm to study speech perception in young children.
- ▶ Developed an experimental protocol that enhanced the reliability of pre-operative diagnostic mapping of language brain function in patients.

SEPTEMBER 2007 - AUGUST 2008, CAMBRIDGE, UK

**VISITING SCIENTIST** MRC COGNITION AND BRAIN SCIENCES UNIT

- ▶ Created speech stimuli in PRAAT and processed data on high performance compute cluster.

## Education

**PHD, COGNITIVE NEUROSCIENCE** JUNE 2007

UNIVERSITY OF MÜNSTER, MÜNSTER, GERMANY

**MS, COGNITIVE PSYCHOLOGY** JUNE 2004

UNIVERSITY OF OREGON, EUGENE, OR

**BS, PHYSIOLOGICAL SCIENCES** JUNE 2001

UNIVERSITY OF CALIFORNIA LOS ANGELES, LOS ANGELES, CA

## Skills

- |          |          |                                |
|----------|----------|--------------------------------|
| • Python | • Pandas | • A/B testing                  |
| • Numpy  | • R      | • Analysis of Variance (ANOVA) |
| • Scipy  | • Bash   | • Regression modeling          |



## Publications

- Roberts, Cannon, **Tavabi**, et al. Auditory Magnetic Mismatch Field Latency: A Biomarker for Language Impairment in Autism. *Biological Psychiatry* 2011.
- **Tavabi**, Embick, Roberts. 2011. Spectral-Temporal Analysis of Cortical Oscillations during Lexical Processing. *Neuroreport*, 2011.
- **Tavabi**, Embick, Roberts. Word Repetition Priming-Induced Oscillations in Auditory Cortex. *NeuroReport*, 2011.
- **Tavabi**, Elling, Dobel, Pantev, Zwitterlood. Effects of place of articulation changes on auditory neural activity: a magnetoencephalography study. *PLoS One*, 2009.
- **Tavabi**, Obleser, Dobel, Pantev. Auditory evoked fields differentially encode speech features: an MEG investigation of the P50m and N100m time courses during syllable processing. *Eur J Neurosci*, 2007.