Patrick Beukema

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Education

PhD Neuroscience • University of Pittsburgh • 2017 (expected)

MS Logic • Carnegie Mellon • 2011

BA McGill University • Montréal, QC • 2009

Peer Reviewed Publications

- **P. Beukema**, F.C. Yeh, T. Verstynen. In vivo characterization of the connectivity and subcomponents of the human globus pallidus. NeuroImage 120(15), 382393 (2015).
- G. M. Mikkelson, B. J. McGill, S. Beaulieu, **P. Beukema**. Multiple links between species diversity and temporal stability in bird communities across North America. Program No. 368.13. *Evolutionary Ecology Research*, 2011, 13: 361372

Conference Presentations

- **P. Beukema**, T. Verstynen. Long-term sequence training alters movement representations in primary motor cortex. San Diego, CA: Society for Neuroscience, 2013.
- **P. Beukema**, T. Verstynen. Reorganization of cortical motor representations after long term sequential skill learning. OHBM. Geneva, Switzerland 2016.
- **P. Beukema**, T. Verstynen. Long-term skill learning is associated with a reorganization of cortical motor representations. Pittsburgh MR Community Imaging Retreat, Pittsburgh, PA, 2015.
- **P. Beukema**, T. Verstynen. Parcellating the internal and external globus pallidus using diffusion based clustering. Program No. 633. Neuroscience 2014 Abstracts. Washington D.C: Society for Neuroscience, 2014.

Awards & Grants

- 2015, MNTP Predoctoral Fellow, full tuition and stipend
- 2013, NIH Predoctoral Fellow, T32 full tuition and stipend
- 2010, Carnegie Fellow, Carnegie Mellon University, half tuition
- 2004, Trustee Scholar, Lewis and Clark, half tuition

Experience

CoAx Lab August 2014-present ***Predoctoral Fellow***

- Characterizing the changes in movement representations during long-term skill learning, using representational similarity analysis of fMRI data and by building computational models that bridge imaging results and behavior.

Carnegie Mellon University 2012-2013 ***Research Assistant***

- Designed experiments and analyzed data to identify the neocortical locus of thermal sensation in mice.
- Wrote custom imaging signal detection software to increase throughput by 10x

McGill University 2008 ***Research Programmer***

- Designed and implemented statistical analyses in Matlab
- Identified and published novel relationship between ecosystem stability and biodiversity.

Teaching Experience

Center for the Neural Basis of Cognition

- 2016, Multimodal Neuroimaging Training Program, Teaching Assistant (DWI)

University of Pittsburgh

- 2015, Psychiatric Disorders and Brain Function, Teaching Assistant

Carnegie Mellon University

- 2011, Logic and Argumentation, Instructor of Record
- 2010, Epistemology, Logic and Metaphysics, Teaching Assistant
- 2010, Introduction to Philosophy, Teaching Assistant

Programming Languages

- Proficiency in Python (4 years) & R (3 years)

Ad Hoc Review Experience

- Human Brain Mapping
- PLOS ONE

Professional Affiliations

- Human Brain Mapping
- Society for Neuroscience
- Association for Symbolic Logic

Service & Outreach

- 2016 - Education Committee Representative for CNBC
- 2015 - Moderator of speciality seminar on basal ganglia in motor control and disease
- 2012 - globaleyeproject.org
- 2008 - theflat.wordpress.com
- 2009 - Bachelor of Arts and Science Mentor, McGill University
- 2008 - Calculus Tutor

Interests

- Competitive cycling
- Data visualization