Jason Locklin, Ph.D.

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Profile Summary

Research scientist with extensive experience in the study of human health and behaviour, with specialized knowledge of research in psychiatric and neurological disorders. A high degree of technical training and expertise regarding data collection, management and advanced statistical analysis. Experience in every phase of the research process, and able to collaborate effectively with colleagues, trainees, and stake holders.

Education

University of Waterloo:

Ph.D., Cognitive Neuroscience, August 2015
- *Perceptual and Memory Deficits in Unilateral Neglect*
- Adviser: James Danckert
- Area of Study: Stroke, Perception, and Memory.

M.A., Behavioural and Cognitive Neuroscience, August 2009
- *Development of a Measure of Visuomotor Control for Assessing the Long-term Effects of Concussion*
- Adviser: James Danckert
- Area of Study: Fine Motor Control, Concussion Research.

B.Sc. (Honours), Psychology, Biology (minor), June 2007
- Course load including strong mix of Psychology and Natural Science: Biology, Physics, Chemistry, Biochemistry, Organic Chemistry, and Calculus (including all associated laboratory courses).

Publications

Locklin, J. (2015). *Perceptual and Memory Deficits in Unilateral Neglect.* (Dissertation, University of Waterloo, Waterloo, Canada).
Retrieve from hdl.handle.net/10012/9590

Locklin, J., Bunn, L., Roy, E. & Danckert, J. (2010). Measuring Deficits in Visually Guided Action Post-Concussion. *Sports Medicine*, *40*, 183-187.
doi:10.2165/11319440-000000000-00000

Locklin, J. (2009). *Development of a measure of visuomotor control for assessing the long-term effects of concussion.* (Master's thesis, University of Waterloo, Waterloo, Canada).
Retrieve from hdl.handle.net/10012/4740

Striemer, C., **Locklin, J.**, Blangero, A., Rossetti, Y., Pisella, L. & Danckert, J. (2008). Attention for action? Examining the link between attention and visuomotor control deficits in a patient with optic ataxia. *Neuropsychologia*, *47*, 1491-1499.
doi:10.1016/j.neuropsychologia.2008.12.021

Non-Refereed Publications:

Newman, G., Duffy, C., Powell, A., Gray, R., & **Locklin, J.** (2012). Position Paper on Electromagnetic Hypersensitivity (Idiopathic Environmental Intolerance Attributed to Electromagnetic Fields). Canada: *Bad Science Watch*.
Retrieve from www.badsciencewatch.ca/projects/investigation-of-anti-wifi-activism-in-canada

Locklin, J., & Danckert, J. (2010). Do we have Independent Visual Streams for Perception and Action? a Response. Preprint.
Retrieve from cogprints.org/6854/

Locklin, J., Danckert, J. (2009). Changes in Visuomotor Performance of Concussed Individuals. Poster. Abstract published in *Journal of Vision*, *9:8*, 1103-1103.
doi:10.1167/9.8.1103

Law, A., McCabe, S., **Locklin, J.**, Tan, C., & Morris, S. (2006). Perceptions of social rank as a predictor of anger and depression symptoms. Poster presented at the Graduate Student Research Conference, University of Waterloo, Waterloo, Canada.

Leadership Roles

Science Advisor, Advisory Committee: Bad Science Watch. Sep. 2012 to Cur
- Non-profit public interest advocacy group.

President: U.W. Undergraduate Psychology Society. Sep. 2005 to Apr. 2007
- Student organization, administration of 8, over 600 members.

Laboratory Coordinator: Clinical Psychology. Sep. 2005 to Aug. 2006
- Researcher: Dr. Scott McCabe, University of Waterloo.

Research

Department of Psychology, University of Waterloo:

Perception, action and brain injury: Research Assistant. May. 2007 to Aug. 2015
Supervisor: Dr. James Danckert
- Develop a motor-accuracy task for the measurement of concussion symptoms.
- Test neurological patients using a variety of neuropsychological tests and procedures, including Prism Adaptation.
- Develop and test a gaze-contingent task using real-time eye-tracking equipment.

Decision making: Research Assistant. Jan. 2007 to Apr. 2007
- Supervisor: Dr. Jon Fugelsang
- Develop web-based decision making experiments and collect data.

Psychophysics. Research Assistant. Jun. 2005 to Dec. 2006
- Supervisor: Dr. James Danckert
- Develop a computer-based task for a graduate student's project.

Attention and clincal depression. Research Assistant. Sep. 2004 to Aug. 2006
- Supervisor: Dr. Scott McCabe
- Train research assistants, oversee several covert-orienting experiments.

Teaching

Department of Psychology, University of Waterloo:

Physiological Psychology: T.A. Winter 2011 & 2014
- Provide weekly office hour extra instruction to students.

Human Neuropsychology: T.A. Fall 2012
- Provide weekly office hour extra instruction to students.

Res. in Human Cognitive Neuroscience: T.A. Winter 2010
- Provide assistance and feedback to students developing a research paper.

Physiological Psychology: T.A. Winter & Fall 2009
- Provide weekly office hour extra instruction to students.

Cognitive Processes: T.A. Fall 2008
- Provide extra instruction during office hours, grade term papers, give feedback to students.

Basic Data Analysis: T.A. & Lab Instructor Winter 2008
- Instruct a weekly tutorial for 30 students, consisting of a 30 minute review lecture of the week's topic, and 30 minutes of practical instruction on solving data analytic problems.
- Develop weekly tutorial lesson plans in cooperation with other teaching assistants.

Advanced Data Analysis: T.A. & Lab Instructor Fall 2007
- Develop and lead regular 1 hour tutorials instructing 30 students to utilize the statistical software package SPSS in analyzing real world experimental and observational data.

Graduate Level Training

University of Waterloo, selected examples follow:

Technical
- Multiple Regression (Psychology 632), Jonathan Oakman.
- Analysis of Variance (Psychology 630), Stephen Spencer.
- Experimental Design (Statistics 830), Jeanette O'Hara-Hines.
- Computer Vision (Systems Design Engineering 677), Hamid Tizhoosh.
- Data Analysis in Neuroscience (Biology 681), Mattheijs van der Meer.

Non-technical
- Visual Perception (Psychology 287), Daniel Smilek.
- Neurobehavioral Analysis of Perceptual and Motor Deficits (Kinesiology 656), Eric Roy.
- Nature & Computational Correlations of Intelligence (Psychology 670), Britt Anderson.
- Cognitive Neuropsychology I (Psychology 779A), Michael Dixon.
- Human Neuroanatomy and Neuropathology (Psychology 784), Britt Anderson.

Mathematical Expertise

Basic Statistics and Data Analysis
- Hypothesis testing via means comparisons and correlations, including techniques for the prevention of elevated experiment-wise error.
- Data reduction and simplification using measures of central tendency, variance, and periodicity.
- Data visualization, including experience with the problem of communicating high-dimensional data on paper/screen.
- Experiment power and effect size calculations.
- Experimental design optimization.

Advanced Statistics
- Analysis of Variance and Covariance, as well as Logistic Regression (Generalized Linear Models).
- Multiple Regression, including model comparisons and variable coding for non-typical data sets.
- Bayesian hypothesis testing.

Technical Skills

Statistical / Data Analytical Software

- R, statistics programming, data visualization.
- SPSS, statistical analysis for social sciences.
- SAS, data management and advanced statistical analysis.
- Scipy/Pylab, Python library for scientific computation, data visualization.
- Matlab, high-level technical computing language.

Laboratory Equipment and Software

- EyeLink II host control (For controlling eye-tracking equipment).
- Psychopy, Python library for building psychopysics and cognitive psychology experiments.
- Trained in lesion overlay analysis (Analysis of MRI brain imaging data)
- AcqKnowlege software in combination with BIOPAC laboratory equipment for physiological measurement (Electromyography (EMG) and Galvanic Skin Response (GSR))
- E-Prime for data collection in Psychology Research.

Programming and Scripting Languages

- Day-to-day familiarity with several scripting languages including Python, UNIX shell scripting (BASH).
- Experience using a variety of programming languages (C, Pascal, and Java).
- Experience using PHP with HTML and CSS in the development of web-based research experiments.

Typesetting Software

- Comfortable writing with TeX, LaTeX, and BibTeX for technical and scientific documents, as well as common office suites such as Microsoft Office and LibreOffice.

Awards

Government of Ontario

Ontario Graduate Scholarship	2010–2011
Aiming for the Top Tuition Scholarship	2002–2003

University of Waterloo

University of Waterloo Graduate Scholarship	2012
President's Graduate Scholarship	2010–2011
UW/Faculty of Arts Graduate Scholarship	2010
Psychology Memorial Fund Scholarship	2010
Arts Graduate Enhancement Scholarship	2009
University of Waterloo Merit Scholarship	2009
MERIT/Faculty of Arts Graduate Scholarship	2008–2009
Arts Grad Enhancement Scholarship	2007–2008
Dean of Science Honours List (non-monetary)	2004
Dean of Science Honours List (non-monetary)	2005

Affiliations

Danckert Attention and Action Group (thedaag.uwaterloo.ca)
Bad Science Watch (Advisory Council) (badsciencewatch.ca)
Vision Sciences Society (VisionSciences.org)
Society of Ontario Freethinkers (sofree.ca)
KW Amateur Radio Club (Callsign: VE3MAL, kwarc.org)