

# AMANDA EASSON

Github: <https://github.com/amandakeasson>

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## SKILLS

- **Programming languages:** Python, Matlab, Bash (advanced); R, SQL, JavaScript, HTML, CSS (basic)
- **Techniques:** Statistics, machine learning, modeling, data visualization, signal processing, data cleaning, version control using Git and Github
- **Soft skills:** problem solving, teamwork, written and oral communication, leadership, time management, project management and organization, interpersonal skills, critical thinking, creative thinking

## EDUCATION

2015-2019 (expected)	<b>PhD in Psychology (Cognitive Neuroscience)</b> <u>Thesis:</u> <i>Characterizing brain network dynamics in autism spectrum disorder</i> <u>Supervisor:</u> Dr. Randy McIntosh <u>Courses:</u> General Linear Models, Advanced Statistics, Introduction to Machine Learning, Higher Cognition, Exploring Brain Networks	University of Toronto
2014-2015	<b>MA in Psychology (Cognitive Neuroscience)</b> <u>Thesis:</u> <i>Atypical neural synchronization during a socially relevant inhibitory control task in children with autism spectrum disorder</i> <u>Supervisors:</u> Dr. Sam Doesburg and Dr. Margot Taylor <u>Certificate:</u> Collaborative Program in Neuroscience	University of Toronto
2010-2014	<b>Bachelor of Health Sciences (Honours)</b> <b><i>Minor in Psychology, Neuroscience and Behaviour</i></b> <u>Thesis:</u> <i>The Effects of Stress, Depression and Alcohol Bingeing on Neurogenesis-Dependent Memory Tasks</i> <u>Supervisor:</u> Dr. Suzanna Becker	McMaster University

## HONOURS AND AWARDS

2014, 2016, 2017, 2018	Ontario Graduate Scholarship	\$15,000
2018	Finkler Graduate Student Fellowship	\$4,820
2017, 2018	Jack & Rita Catherall Travel Award	\$500
2017	Max & Ruth Wiseman Graduate Student Fellowship	\$3,829
2017	University of Toronto Faculty of Arts & Science Travel Award	\$400
2016	Finkler Graduate Student Fellowship	\$3,247
2016	Mynne & Harold Soupcoff Fellowship	\$2,400
2016	Michael Smith Foreign Study Supplement	\$6,000
2015	Canadian Graduate Scholarship (CIHR)	\$17,500
2015	School of Graduate Studies Conference Grant	\$700
2011-2014	McMaster University Dean's Honour List	-----
2011	McMaster University Senate Scholarship	\$800
2010	McMaster University President's Award	\$3,000

## RESEARCH EXPERIENCE

- 05/2016 – 07/2016      **Visiting PhD Student**      Aix-Marseille University  
Project: *Modeling brain network dynamics in autism spectrum disorder using The Virtual Brain*  
Supervisor: Dr. Viktor Jirsa
- 05/2014 – 07/2014      **Summer Research Student**      Holland Bloorview Kids Rehabilitation Hospital  
*Ward Family Summer Student Research Program*  
Supervisor: Dr. Evdokia Anagnostou
- Analyzed magnetoencephalography data for patterns of neural connectivity in children with and without autism spectrum disorder
- 09/2010 – 04/2014      **Research Assistant**      McMaster Children's Hospital  
Supervisor: Dr. Gabriel Ronen
- Assisted with clinical studies on the quality of life of children with epilepsy, and the effects of exercise on well-being in children with epilepsy
  - Recruited participants, administered questionnaires, and exhibited strong communication skills by interacting with young children and parents
- 07/2013 – 08/2013      **Research Assistant**      Hospital for Sick Children  
Supervisor: Dr. Alice Charach
- Assisted with a systematic review of the effectiveness of screening for disruptive behaviour disorders in preschool-aged children
- 05/2013 – 06/2013      **Research Assistant**      McMaster Children's Hospital  
05/2012 – 09/2012      Supervisor: Dr. Kathryn Bennett
- Assisted with systematic reviews of children's mental health topics, including suicide, anxiety and depression prevention strategies

## TEACHING EXPERIENCE

- 07/2019-08/2019      **Course Instructor: PSY202: Statistics II**      University of Toronto
- Preparing lectures and assignments for an undergraduate statistics course
- 09/2014 – 04/2019      **Teaching Assistant**      University of Toronto
- **Courses:** PSY201 (Statistics I), PSY202 (Statistics II), PSY342 (Cognition and Psychopathology), PSYC50 (Higher-Order Cognition), PSYC23 (Developmental Psychobiology), PSY427 (Media Psychology)
  - **Duties:** holding weekly tutorials (PSY202); holding weekly office hours; monitoring and responding to online discussion posts; grading assignments, midterms, and exams; developed practice questions for review sessions
- Fall 2016      **Guest Lecturer**      University of Toronto
- Presented a guest lecture on the topic of probability for PSY201 (Statistics I)
- 2014 – 2016      **Guest Lecturer**      George Brown College
- Co-taught 5 guest lectures to introductory psychology classes on the topics of neuroimaging and theory of mind

## PUBLICATIONS

### Peer-reviewed journal articles

Easson, A.K., McIntosh A.R. BOLD signal variability and entropy in children and adolescents with and without autism spectrum disorder. *Developmental Cognitive Neuroscience*, 100630.

Easson, A.K., Fatima, Z., & McIntosh, A.R. Functional connectivity-based subtypes of individuals with and without autism spectrum disorder. *Network Neuroscience*, 3(2), 344-362.

Easson, A. & Woodbury-Smith, M. (2014). The role of prenatal immune activation in the pathogenesis of autism and schizophrenia. *Research in Autism Spectrum Disorders*, 8(3), 312-316.

Easson, A., Agarwal, A., Duda, S., & Bennett, K. (2014). Portrayal of youth suicide in Canadian news. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 23(3), 167-173.

### Manuscripts in preparation

Easson, A.K., Strother, S., & McIntosh, A.R. Effects of preprocessing strategies on resting-state functional connectivity in children and adolescents with and without autism spectrum disorder.

Easson, A.K., Schirner, M., Ritter, P., Jirsa, V. & McIntosh, A.R. Examining mesoscale brain network dynamics in children and adolescents with autism spectrum disorder using The Virtual Brain.

Charach, A., Mohammadzadeh, F., Belanger, S., Easson, A.K., Johnston, B., Lipman, E., McLennan, J., & Parkin, P. Screening preschool children for behavioural and emotional disorders in primary care settings: a systematic review.

## PRESENTATIONS

### Workshops

Shen, K. & Easson, A.K. Modelling brain network dynamics using The Virtual Brain. Canadian Association for Neuroscience Satellite Meeting: Signal Processing. May 2019. Toronto, ON: Canada.

Easson, A.K. Introduction to Machine Learning in Python. Research Training Centre Workshop Series, Rotman Research Institute, Baycrest Hospital. May 2019. Toronto, ON: Canada.

Easson, A.K. Introduction to Python. University of Toronto Coders. October 2019. Toronto, ON: Canada.

### Conference posters (selected)

Easson, A.K., Strother, S.C., & McIntosh, A.R. Effects of fMRI preprocessing strategies on functional connectivity in children and adolescents with and without autism spectrum disorder. Society for Neuroscience Annual Meeting. November 2018. San Diego, California: United States of America.

Easson, A.K., Schirner, M., Ritter, P., Jirsa, V., & McIntosh, A.R. Examining brain network dynamics in children and adolescents with and without autism spectrum disorder using The Virtual Brain. Machine Learning for Brain Health Symposium, McMaster University. September 2018. Hamilton, ON: Canada.

Easson, A.K., Schirner, M., Ritter, P., Jirsa, V., & McIntosh, A.R. Examining brain network dynamics in children and adolescents with and without autism spectrum disorder using The Virtual Brain. Society for Neuroscience Annual Meeting. November 2017. Washington, DC: United States of America.

Easson, A.K., Fatima, Z., & McIntosh, A.R. Characterizing subtypes of autism spectrum disorder using static and dynamic functional connectivity. Organization for Human Brain Mapping Annual Meeting. June 25-29, 2017. Vancouver, British Columbia: Canada.

Easson, A.K., Shen, K., & McIntosh, A.R. Static and Dynamic Resting State Functional Connectivity in Children with Autism. Organization for Human Brain Mapping Annual Meeting. June 26-30, 2016. Geneva, Switzerland.

Easson, A., Pang, E., Taylor, M., Doesburg, S., & Anagnostou, E. Reduced Neural Synchronization during a Social Inhibition Task in Children with Autism. Organization for Human Brain Mapping Annual Meeting. June 14-18, 2015. Honolulu, Hawaii: United States of America.

Easson, A., Robertson, A., Wong, S., Cassel, D., Pang, E., Taylor, M., Doesburg, S., & Anagnostou, E. Patterns of Neural Connectivity during a Socially Relevant Inhibition Task in Children with Autism Spectrum Disorder. Ward Summer Student Research Day, Holland Bloorview Kids Rehabilitation Hospital. July 22, 2014. Toronto, Ontario: Canada.

### **Seminar talks**

Easson, A.K. & McIntosh, A.R. BOLD signal variability and complexity in children and adolescents with and without autism spectrum disorder. Neurosciences and Mental Health: The next 30 years: Symposium at the Hospital for Sick Children. March 21, 2019. Toronto, Ontario, Canada.

Easson, A.K. & McIntosh, A.R. BOLD signal variability and complexity in children and adolescents with and without autism spectrum disorder. Rotman Research Institute Rounds. January 22, 2019. Toronto, Ontario, Canada.

Easson, A.K., Fatima, Z., & McIntosh, A.R. Characterizing subtypes of autism spectrum disorder using static and dynamic functional connectivity. University of Toronto Ebbinghaus Empire Data Blitz. September 20, 2017. Toronto, Ontario, Canada.

Easson, A.K., Beaton, D., Raamana, P., Strother, S., & McIntosh, A.R. Using Optimization of Preprocessing Pipelines for NeuroImaging to examine the effects of preprocessing choices on functional connectivity in children with and without autism spectrum disorder. Rotman Research Institute Data Blitz. September 12, 2017. Toronto, Ontario, Canada.

Easson, A., Robertson, A., Wong, S., Cassel, D., Pang, E., Taylor, M., Doesburg, S., & Anagnostou, E. Patterns of Neural Connectivity during a Socially Relevant Inhibition Task in Children with Autism Spectrum Disorder. Ebbinghaus Empire Data Blitz, University of Toronto. October 8, 2014. Toronto, Ontario: Canada.

**ACTIVITIES**

2018 – 2019	neuroBRITE Mentor neuroBRITE is a program that gives high school students the opportunity to learn about neuroscience and neurotechnology	Rotman Research Institute
2017 – 2019	Research Training Centre Steering Committee	Rotman Research Institute
2017 – 2019	Alumni survey project co-lead	University of Toronto
2014 – 2018	Psychology Graduate Students Association <u>Roles:</u> MA and Graduate Student Union representative (2014-2015); co-president (2015-2016); orientation coordinator (2016-2017); Rotman Research Institute Representative (2017-2018)	University of Toronto
2014 – 2016	Science Rendezvous Executive Team Member	University of Toronto
2015 – 2016	Silhouettes Dance Company Member	University of Toronto
2014 – 2015	Let's Talk Science Outreach Volunteer	University of Toronto

**CONFERENCES**

06/2019	Organization for Human Brain Mapping Annual Meeting, Rome, Italy
11/2018	Society for Neuroscience Annual Meeting, San Diego, USA
11/2017	Society for Neuroscience Annual Meeting, Washington DC, USA
06/2017	Organization for Human Brain Mapping Annual Meeting, Vancouver, Canada
06/2017	Organization for Human Brain Mapping Hackathon, Vancouver, Canada
06/2017	Innovative Perspectives in Neuroscience Conference, Toronto, Canada
03/2017	Rotman Research Institute Annual Conference, Toronto, Canada
06/2016	Organization for Human Brain Mapping Annual Meeting, Geneva, Switzerland
06/2015	Organization for Human Brain Mapping Annual Meeting, Honolulu, USA
06/2015	Jean Piaget Society Annual Meeting, Toronto, Canada
02/2015	Ontario Psychological Association Annual Conference, Toronto, Canada

**TRAINING**

12/2018	Montreal Artificial Intelligence and Neuroscience Conference
12/2018	Coursera Course Certificate: Optimization (Deep Learning specialization)
11/2018	Coursera Course Certificate: Machine Learning
08/2018	Neurohackademy, Seattle, USA
03/2018	Coursera Course Certificate: Neural Networks and Deep Learning
09/2017	MUSE EEG & BCI Workshop, Toronto, Canada
08/2017	Nipype Workshop, Toronto, Canada
03/2017	The Virtual Brain Node #4 Workshop, Toronto, Canada
06/2016	Brain Connectivity Workshop, Marseille, France
05/2015	Brainstorm MEG Workshop, Toronto, Canada
03/2015	MEG Training Workshop, Montreal, Canada

**PROFESSIONAL SERVICE**

2018	Reviewer for <i>Autism Research</i>
2018	Reviewer for <i>Brain Structure and Function</i>

**MEMBERSHIPS**

2015 – 2019	Organization for Human Brain Mapping
2017 – 2018	Society for Neuroscience