

Ezekiel Williams

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CURRENT POSITION

PhD student/researcher at University of Montreal and Mila, Quebec Artificial Intelligence (AI) Institute

EDUCATION

- MSc, Mathematics & Statistics, University of Ottawa, 2020. Thesis: *An Information Theoretic Analysis of Neural Multiplexing*. Supervisors: Richard Naud, Maia Fraser
- BSc, Neuroscience, Carleton, 2017. Thesis: *The Role of Network Connectivity in the Speed of Neural Synchronization*. Supervisor: John Lewis

PUBLICATIONS

To come!

TALKS

- 2020 - *Burst Coding Despite a Unimodal Interspike Interval Distribution*, Neuromatch 2.0, international (online)
- 2020 - *Robustness of a Multiplexed Neural Code*, Gatsby Computational Unit, UCL, Jan 2020, London, UK
- 2019 - Panalist: *Future of Neuro-AI training*, Montreal Artificial Intelligence and Neuroscience (MAIN) Conference, Quebec

TEACHING AND MENTORING EXPERIENCE

- 2020 - TA at Neuromatch Academy, International Summer school in Computational Neuroscience: lead python tutorials in applied math and machine learning methods, and provided guidance during research projects for 8 students.
- 2018 - TA at University of Ottawa: lead tutorials for first year Linear Algebra.
- 2018 - DEGREE program mentor, University of Ottawa: shadowed by undergrad student interested in pursuing graduate studies.
- 2016 - Peer Assisted Study Session Facilitator, Carleton: lead and developed supplementary workshops for Intro to Stats for Psych.
- 2015 - Peer Assisted Study Session Facilitator, Carleton: lead and developed supplementary workshops for Biology I.

AWARDS

- 2019 - Ontario Graduate Scholarship (OGS) Masters Award, UOttawa - \$15,000 (2019)
- 2019 - Graduate Excellence Scholarship, UOttawa - approx. \$10,000 (tuition)
- 2018 - National Science & Engineering Research Council (NSERC) CGS Masters Award, UOttawa - \$17,500
- 2018 - Ontario Graduate Scholarship (OGS) Masters Award, UOttawa - \$15,000
- 2017 - NSERC Undergraduate Student Research Award (declined), UOttawa - \$4500
- 2016 - J. Lorne Gray Scholarship, Carleton - \$1000
- 2016 - NSERC Undergraduate Student Research Award, UOttawa - \$4500
- 2015 - A. Davidson Dunton Scholarship, Carleton - \$1000
- 2013 - Part-time Scholarship, Carleton - \$375
- 2013/.../17 - Deans honour list student, Carleton

CONFERENCE POSTERS

- *Information Theoretic Analysis of a Multiplexed Neural Code*. E. Williams*, M. Fraser & R. Naud; Montreal Artificial Intelligence and Neuroscience Conference (MAIN), 2019, Montreal, Quebec.
- *Proposed strategies for simultaneous cognitive and motor state estimation for an intracortical brain-computer interface with sensors in prefrontal and motor cortices*. C. Boulay*, A. Rouzitalab, E. Williams, R. Naud & A. J. Sachs; BCI Society 17th International Meeting, 2018, Pacific Grove, California.
- *The Role of Network Connectivity in the Speed of Neural Synchronization*. E. Williams* & J. Lewis; Canadian Association for Neuroscience Conference, 2017, Montreal, Quebec.

LEADERSHIP

- 2018/19/20 - Organized inter-departmental journal club in mathematical neuroscience and machine learning, University of Ottawa.
- 2018/19 - Most Valuable Player, UOttawa Nordiq (Varsity Nordic Ski Club), University of Ottawa

OTHER

Nordic Skiing 3x Canadian Junior Champion; represented Canada at 2013 World Junior Championships; multiple Provincial titles

Music Grade 8 Royal Conservatory Piano; multiple Kiwanis music festival awards

Languages English: Native. French: learning.

Coding Languages Python, R, Matlab, \LaTeX