

Manda Fischer

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Western Interdisciplinary Research Building
Perth Drive, London, ON
4th floor office 4114

Training and Education

- 2023 – **Postdoctoral Associate**
University of Western Ontario, Canada
Advisor: Dr. Ingrid Johnsrude
- 2023 **Doctor of Philosophy**, Psychology,
University of Toronto, Canada
Ready for action! When the brain learns, yet memory-guided behaviour does not follow
Advisors: Dr. Morris Moscovitch and Dr. Claude Alain
- 2022 **Visiting Researcher**
University of Oxford, UK
Cross-modal reorganization of the visually deprived cortex in relation to auditory memory and spatial processing
Collaborators: Dr. Kate Watkins and Dr. Holly Bridge
- 2020 **Research intern**
The Virtual Brain
Modelling dynamics of large-scale memory and attention brain networks
- 2019 **Master of Arts**, Psychology,
University of Toronto, Canada
Does Incidental Auditory Learning Facilitate Memory-guided Attention? A Behavioural and Electroencephalogram (EEG) Study
Advisors: Dr. Morris Moscovitch and Dr. Claude Alain
- 2018 **Honours Bachelor of Science**, Psychology
McGill University, Canada
Thesis 1: *The role of timbre in auditory stream segregation: Investigating the critical link between auditory perception and human expression*
Thesis 2: *Timbre saliency and stratification in orchestral musical excerpts*
Advisor: Dr. Stephen McAdams

Publications

Peer-reviewed Publications

- Fischer, M.**, Moscovitch, M., Keisuke, F., & Alain, C. (2023). Ready for Action: When the brain learns, yet memory-biased action does not follow. *Neuropsychologia*, 108660. Advance online publication. <https://doi.org/10.1016/j.neuropsychologia.2023.108660>.
- Fischer, M.**, Soden, K., Thoret, E., Montrey, M., & McAdams, S. (2021). Instrument timbre enhances perceptual segregation in orchestral music. *Music Perception*, 38(5), 473–498. <https://doi.org/10.1525/mp.2021.38.5.473>.
- Fischer, M.**, Moscovitch, M., & Alain, C. (2020). A systematic review and meta-analysis of memory-guided attention: Frontal and parietal activation suggests involvement of fronto-parietal networks. *WIREs Cognitive Science*, 12(1), e1546. <https://doi.org/10.1002/wcs.1546>.

Fischer, M., Moscovitch, M., & Alain, C. (2020). Incidental auditory learning and memory-guided attention: Examining the role of attention at the behavioural and neural level using EEG. *Neuropsychologia*, 147, 107586. <https://doi.org/10.1016/j.neuropsychologia.2020.107586>.

Manuscripts in Preparation

Fischer, M., Moscovitch, M., & Alain, C. (in prep). What you heard is where you listen: Alpha and theta differences localized to parietal and temporal lobes support memory retrieval for cued sound location.

Fischer, M. & McAdams, S. (in prep). Instrument timbre influences the relative prominence of perceptual layers in orchestral music.

Fischer, M., Moscovitch, M., & Alain, C. (in prep). Incidental learning enhances auditory sensitivity in real-world soundscapes.

Mo, S., **Fischer, M.,** Moscovitch, M., & Alain, C. (in prep). Individual differences in memory-guided attention.

Research Funding

2023	Western Postdoctoral Fellowship (2-year) Western Research <i>Institutional level (CAN): \$150,846.72</i>
2022	Women in Cognitive Science Small Research Grant for Jr Scientists Women in Cognitive Science – Canada <i>National level (CAN): \$1,500</i>
2020	Alexander Graham Bell– Doctoral Award (3-year), rank No. 1 Natural Sciences and Engineering Research Council (NSERC) <i>National level (CAN): \$105,000</i>
2020 (declined)	Complex Dynamics Training (CREATE) Grant NSERC <i>National level (CAN): \$26,000</i>
2020	Michael Smith Foreign Study Supplement NSERC <i>National level (CAN): \$6,000</i>
2020	Globalink Research Award Mitacs <i>National level (CAN): \$6,000</i>
2019	CREATE Grant NSERC <i>National level (CAN): \$26,000</i>
2019 (declined)	Canada Graduate Scholarship – Masters NSERC <i>National level (CAN): \$17,500</i>
2018	Supplements of the NSERC Undergraduate Student Research Awards Fonds de Recherche du Québec Nature et Technologies <i>Provincial level (CAN): \$2,000</i>
2018	Undergraduate Student Research Award NSERC

- National level (CAN): \$5,600*
- 2017 Supplements of the NSERC Undergraduate Student Research Awards
Fonds de Recherche du Québec Nature et Technologies
Provincial level (CAN): \$2,000
- 2017 Undergraduate Student Research Award
NSERC
National level (CAN): \$5,600

Honours and Awards

- 2023 Jack and Rita Catherall Fund
Rotman Research Institute at Baycrest
Institutional level (CAN): \$500
- 2022 Jack and Rita Catherall Fund
Rotman Research Institute at Baycrest
Institutional level (CAN): \$500
- 2021 – 22 Top Cited Article: WIRES Cognitive Science
International level (CAN): \$0
- 2020 – 21 Top Cited Article: WIRES Cognitive Science
International level (CAN): \$0
- 2019 Finkler Graduate Student Fellowship
Rotman Research Institute at Baycrest
Institutional level (CAN): \$3,000
- 2019 The Ebbinghaus Award for Best Talk
Toronto Area Memory Group
Regional level (CAN): \$75 and invited manuscript
- 2018 Faculty of Arts and Science Admissions Award
University of Toronto
Institutional level (CAN): \$5,000
- 2017 Celia Hendler Scholarship in Psychology
McGill University
Institutional level (CAN): \$3,545

Presentations and Posters

Invited Talks

Fischer, M. (2023). Ready for Action: When the brain learns, yet memory-biased action does not follow. Brain & Mind Coffee Talk, University of Western Ontario, London, Canada.

Fischer, M. (2023). Ready for Action: When the brain learns, yet memory-biased action does not follow. Stanford Memory Lab, Stanford University, online.

Fischer, M. (2022). Optimizing attention and performance: The role of experience and memory. Nobre Brain and Cognition Lab, University of Oxford, Oxford, UK.

Fischer, M. (2022). Memory-guided attention in hearing. Watkins Speech and Brain Group. University of Oxford, Oxford, UK.

Fischer, M., Moscovitch, M., & Alain, C. (2021). Mapping 'expectation for perception': Directed attention at encoding facilitates response preparation to high probability events. Society for Psychophysiological Research – The Faces of the Future Flash Talks (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2021). Memory-guided attention: A look at the neural correlates that underly 'expectation for perception'. Neuroscience Research Group at York University (online due to COVID-19).

Fischer, M., Soden, K., Thoret, E., Montrey, M., & McAdams, S. (2019). The role of timbre in perceptual segregation in orchestral music. Society of Music Perception and Cognition, New York, US.

Fischer, M., Moscovitch, M., & Alain, C. (2019). Does everyday auditory experience facilitate memory-guided attention? Graduate Speaker Series. University of Toronto, Toronto, Canada.

Fischer, M. (2017). The role of timbre in auditory stream segregation. Harnad Cognition & Communication Laboratory. University of Quebec at Montreal, Montreal, Canada.

Talks

Fischer, M., Moscovitch, M., & Alain, C. (2022). Acoustic change detection during associative auditory learning and explicit memory is related to enhanced signal detection at retrieval. Auditory Perception, Cognition, & Action (APCAM), Boston, US.

Fischer, M., Moscovitch, M., & Alain, C. (2022). What you heard is where you listen: Alpha and theta differences localized to parietal and temporal lobes support memory retrieval for cued sound location. Ebbinghaus Empire Data Blitz, University of Toronto (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2021). Mapping 'expectation for perception': Directed attention at encoding facilitates response preparation to high probability events. Canadian Society for Brain, Behaviour and Cognitive Science (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2021). Optimizing attention and performance: The role of experience and memory. The Ebbinghaus Empire Data Blitz, University of Toronto (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2020). Directed attention at exposure modulates implicit memory for real-world soundscapes at retrieval. APCAM (online due to COVID-19).

Fischer, M. (2019). Memory-guided attention in hearing. Rotman Research Trainee SpeakEasy, Rotman Research Institute at Baycrest Hospital, Toronto, Canada.

Fischer, M., Moscovitch, M., & Alain, C. (2019). Incidental auditory learning and memory-guided attention: A behavioural and electroencephalogram (EEG) study. APCAM, Montreal, Canada.

Fischer, M., Moscovitch, M., & Alain, C. (2019). Does everyday auditory experience facilitate memory-guided attention? Toronto Area Memory Group, York University, Canada.

Fischer, M., Moscovitch, M., & Alain, C. (2019). Incidental auditory learning and memory-guided attention: A behavioural and EEG study. Toronto Auditory Research Group, Toronto, Canada.

Conference Posters

Fischer, M., Moscovitch, M., & Alain, C. (2023). Long-term memory triggers covert response preparation at retrieval. Cognitive Neuroscience Society, San Francisco, US.

Fischer, M., Moscovitch, M., & Alain, C. (2022). Long-term memory triggers covert response preparation at retrieval. Psychonomic Society, Boston, US.

Fischer, M., Moscovitch, M., & Alain, C. (2022). Memory-guided auditory benefits relate to theta differences localized to anterior temporal lobe. Society for Neuroscience, San Diego, US.

Mo, S., **Fischer, M.**, Moscovitch, M., & Alain, C. (2022). Individual differences in memory-guided attention. Society for Psychophysiological Research, Vancouver, Canada (online).

Fischer, M., Moscovitch, M., & Alain, C. (2022). Implicit memory and parietal source-localized alpha-band power facilitate memory-guided attention in real-world sound-clips. New Perspectives on Declarative Memory Conference, Norwich, UK.

Fischer, M., Moscovitch, M., & Alain, C. (2022). Implicit memory for target location and parietal source-localized alpha-band power facilitate memory-guided attention in real-world sound-clips. Cognitive Neuroscience Society, San Francisco, US.

Fischer, M., Moscovitch, M., & Alain, C. (2021). Implicit memory for target location facilitates memory-guided attention in real-world sound-clips. Society for Neuroscience (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2021). Memory-guided attention: Lateralized event-related potentials (ERPs) index location of lateralized targets embedded in learned soundscapes. Psychonomic Society (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2021). Mapping 'expectation for perception': Directed attention at encoding facilitates response preparation to high probability events. Society for Psychophysiological Research (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2021). Directed attention at encoding facilitates response preparation to high probability events. Nonlinear Dynamics of Brain and Behaviour Symposium (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2020). Long-term memory-guided attention and theta-band oscillations. Nonlinear Dynamics of Brain and Behaviour Symposium (online due to COVID-19).

Fischer, M., Moscovitch, M., & Alain, C. (2020). Long-term memory-guided attention and alpha-band oscillations: Implicit access to spatial information. Cognitive Neuroscience Society (online due to COVID-19).

Fischer, M., Soden, K., & McAdams, S. (2017). Orchestral timbre in perceptual segregation. The Faculty of Science Undergraduate Research Conference (competitive). McGill University, Montreal, Canada.

Student and Research-assistant Supervision

Rotman Research Institute at Baycrest Hospital

2022	William Ji, High school student
2021 – 2022	Shimin Mo, Undergraduate thesis student
2021 – 2022	Juan Martin Soto, Co-op student
2019 – 2020	Shahier Paracha, Research assistant
2019	Karishma Ramdeo, Research assistant
2019	Parnian Tajbakhsh, Research assistant

Teaching Experience

University of Toronto

2022	Teaching Assistant – Introduction to Psychology
2021	Tutorial Instructor and Teaching Assistant – Advanced Statistics

2021 Teaching Assistant – Introduction to Social Psychology
2020 Tutorial Instructor and Teaching Assistant – Introduction to Psychology
2019 Teaching Assistant – Personality Psychology
2019 Teaching Assistant – Research Methods
2019 Invited Guest Lecturer – Cognitive Neuroscience
2018 – 2022 Teaching Assistant – Introduction Statistics (6 sessions)

Service and Outreach

2023 Submission Reviewer – Rotman Research Institute Conference
2022 – Ad-hoc Reviewer – Cortex, Nature Communications
2022 – 2023 Mentor – University of Toronto Equity Diversity & Inclusion Committee
2022 Guide – Science Day for blind children at the Banbury Museum
2022 The Amazing Brain exhibition at Banbury Museum
2020 EEG Demonstrator – Baycrest Hospital Open House
2019 – 2023 Panelist and Mentor – University of Toronto Cognitive Neuroscience Recruitment
2018 Conference Co-organizer – International Timbre Conference