Manda Fischer, Ph.D.

Curriculum Vitae

Department of Psychology
University of Toronto
Mississauga, ON, Canada

Email: manda.fischer@utoronto.ca
Citizenship: Canadian
Languages: English (Native); French (Fluent)

TRAINING

Academic Appointments

2025 - Postdoctoral Fellow, University of Toronto - Mississauga
Advisor: Dr. Keisuke Fukuda

2023 - 2025 Postdoctoral Associate, Western University
Advisor: Dr. Ingrid Johnsrude

Education

2023 Ph.D. in Psychology (Cognitive Neuroscience), University of Toronto - Baycrest Hospital
Advisors: Dr. Claude Alain and Dr. Morris Moscovitch

2019 M.A. in Psychology (Cognitive Neuroscience), University of Toronto - Baycrest Hospital
Advisors: Dr. Claude Alain and Dr. Morris Moscovitch

2018 B.Sc. in Honours Psychology with First Class Honours [3.96 GPA], McGill University
Advisor: Dr. Stephen McAdams

Visiting Scholar – Fully Funded

2022 fMRI and DTI analysis to assess cross-modal reorganization of the visually deprived cortex
Oxford University | Advisor: Dr. Kate Watkins

2020 Developing a pipeline for EEG source analysis in Brainstorm
The Virtual Brain | Internship

2018 Machine learning (MVPA) of fMRI data during music training
Montreal Neurological Institute | Advisor: Dr. Robert Zatorre

RESEARCH INTERESTS

My research explores how context shapes perception in complex, real-world environments and focusses on auditory and audiovisual processing. I leverage music and speech as rich, ecologically meaningful testbeds to uncover the ways in which prior experience guides real-time perception, revealing the dynamic interplay between low-level sensory cues and high-level cognitive factors. Using behavioural paradigms, neuroimaging (EEG), advanced statistical modeling, and an individual-differences approach, I probe how the brain flexibly integrates multiple sources of information to resolve perceptual uncertainty. This work illuminates fundamental cognitive mechanisms and addresses applied challenges, including improvement in speech comprehension and reduction of listening effort in both aging and clinical populations.

FUNDING, HONOURS & AWARDS

Funding [N = 14 Total; N = 10 National] (Total Awarded: $518,046.72)

2025	NSERC (Natural Science & Engineering Research Council) Postdoctoral Grant ($140,000 over 2 years)	National
2025	University of Toronto Mississauga Tri-Council Postdoctoral Fellowship Top-Up ($24,000 over 2 years)	Institutional
2023	Western University Postdoctoral Fellowship ($150,846.72 over 2 years)	Institutional
2022	Women in Cognitive Science Small Research Grant for Jr Scientists ($1,500)	National
2020	NSERC Canada Graduate Scholarship, Doctoral, **rank No.1 in Psychology** ($105,000 over 3 years)	National
2020 (declined)	NSERC Complex Dynamics Training Grant ($26,000)	National
2020	NSERC Michael Smith Foreign Study Supplement ($6,000)	National
2020	Mitacs Globalink Research Award ($6,000)	National
2019	NSERC Complex Dynamics Training Grant ($26,000)	National
2019 (declined)	NSERC Canada Graduate Scholarship, Masters ($17,500)	National
2018	FRQNT Undergraduate Student Research Award ($2,000)	Provincial
2018	NSERC Undergraduate Student Research Award ($5,600)	National
2017	FRQNT Undergraduate Student Research Award ($2,000)	Provincial
2017	NSERC Undergraduate Student Research Award ($5,600)	National

Selected Honours & Awards [N = 14 Total; N = 7 International] (Total Awarded: $13,370.00)

2025	Travel Award, Association for Research in Otolaryngology ($750)	International
2024	Accessible Presentation Award, Association for Research in Otolaryngology	International
2024	Top Three Best Postdoc Talk, Association for Research in Otolaryngology	International
2023	Jack and Rita Catherall Fund, Rotman Research Institute at Baycrest ($500)	Institutional
2022	Jack and Rita Catherall Fund, Rotman Research Institute at Baycrest ($500)	Institutional
2021	Top Cited Article, WIRES Cognitive Science	International
2020	Top Cited Article, WIRES Cognitive Science	International
2019	Finkler Graduate Fellowship, Rotman Research Institute at Baycrest ($3,000)	Institutional
2019	Ebbinghaus Award - Best Talk, Toronto Area Memory Group Meeting ($75)	Regional
2018	Faculty Arts & Science Admissions Award, University of Toronto ($5,000)	Institutional
2017	Celia Hendler Scholarship in Psychology, McGill University ($3,545)	Institutional
2016-2018	Dean's Honour List (top 10%), McGill University	Institutional
2014-2015	Dean's Honour Roll (90% average or above), Vanier College	Institutional
2013	Governor General's Academic Medal (Bronze), F.A.C.E. School	Institutional

PUBLICATIONS

Peer Reviewed Publications [N = 6 All First Author]

Fischer, M., Moscovitch, M., & Alain, C. (2025). Memory-guided perception is shaped by dynamic two-stage theta- and alpha-mediated retrieval. *Annals of the New York Academy of* Sciences, 10.1111/nyas.15287. Advance online publication. https://doi.org/10.1111/nyas.15287

Fischer, M. & McAdams, S. (2025). Instrument timbre combinations influence the relative prominence of perceptual layers in orchestral music. *Music Perception,* 1-18. https://doi.org/10.1525/mp.2025.2325705

Fischer, M., Moscovitch, M., Fukuda, K., & Alain, C. (2023). Ready for Action: When the brain learns, yet memory-biased action does not follow. *Neuropsychologia*, *189*, 108660. 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. (2021). 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 and Under Review [N = 4]

Fischer, M. & Johnsrude, I. (2024). The Morgan Freeman effect: Long-term memory for voices frees up cognitive capacity to enhance speech perception in noise. *PsyArXiv.* https://doi.org/10.31234/osf.io/4wuby

Fischer, M. & Johnsrude, I. (in prep). Individual differences in cognitive ability predict familiar-voice benefits across a delay.

Fischer, M. & Johnsrude, I. (in prep). Using voice familiarity to enhance speech perception in individuals with hearing loss.

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

PRESENTATIONS

Invited Talks [N = 10 All First Author]

Fischer, M. (2025). How long-term memory and attention shape what we hear. Special Seminar, Université du Québec à Montréal (UQAM), Montreal, Canada.

Fischer, M. (2025). The sound of memory: Investigating the relationship between memory and auditory perception. Perception Cognition & Language Group, University of Toronto Mississauga, Mississauga, Canada.

Fischer, M. (2024). How does memory prepare us to act? Using EEG to track dynamic retrieval processing. Köhler Memory Lab, Western University, London, Canada.

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

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

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

Fischer, M. (2022). Memory-guided attention in hearing. Watkins Speech and Brain Lab, Oxford University, 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., 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, USA.

Fischer, M. (2017). The role of timbre in auditory stream segregation. Harnad Cognition & Communication Lab, Université du Québec à Montréal (UQAM), Montreal, Canada.

Talks [N = 12 All First Author]

Fischer, M. (2025). Characterizing the role of memory in guiding auditory perception. Brain & Mind Coffee Talk, Western University, London, ON, Canada.

Fischer, M. & Johnsrude, I. (2024). The Morgan Freeman effect: Advantages and disadvantages of listening to speech under distraction. Auditory Perception, Cognition, & Action Meeting (APCAM), New York, NY, USA.

Fischer, M., Moscovitch, M., & Alain, C. (2024). Incidental learning enhances auditory sensitivity in real-world soundscapes. Association for Research in Otolaryngology MidWinter Meeting, Anaheim, CA, USA. *Awarded Top Three Best Postdoc Talk.

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. APCAM Meeting, Boston, MA, USA.

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, The 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 Annual Meeting (online due to COVID-19).

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

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

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

Fischer, M., Moscovitch, M., & Alain, C. (2019). Does everyday auditory experience facilitate memory-guided attention? Toronto Area Memory Group Meeting, Toronto, ON, Canada. *Awarded Best Talk.

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

Selected Poster Presentations [N = 18; N = 16 First Author]

*Indicates student trainee under my supervision

Fischer, M. & Fukuda, K. (2026). Dissociating Predictive and Postdictive Audiovisual Inference. Cognitive Neuroscience Society Annual Meeting, Vancouver, BC, Canada.

Fischer, M. & Johnsrude, I. (2025). Speech Perception Benefits Emerge Weeks After Voice Training: Predicting Gains from Individual Differences in Cognitive Ability. Psychonomic Society Annual Meeting. Denver, Colorado, USA.

Montpetit, M.*, **Fischer, M.**, Johnsrude, I., & Kousaie, S. (2025). Lost in translation? How multitasking affects native and non-native speech processing. Joint Scientific Meeting of the Experimental Psychology Society (EPS) and the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), University of Dundee, Dundee, UK.

Fischer, M. & Johnsrude, I. (2025). The Morgan Freeman effect: Advantages and disadvantages of listening to speech under distraction. Association for Research in Otolaryngology MidWinter Meeting, Orlando, FL, USA.

Fischer, M. & Johnsrude, I. (2024). The Morgan Freeman effect: Advantages and disadvantages of listening to speech under distraction. Psychonomic Society Annual Meeting. New York, NY, USA.

Fischer, M., Moscovitch, M., & Alain, C. (2024). Incidental learning enhances auditory signal detection. Cognitive Neuroscience Society Annual Meeting, Toronto, ON, Canada.

Fischer, M., Moscovitch, M., & Alain, C. (2024). Incidental learning enhances sensitivity in real-world soundscapes. Association for Research in Otolaryngology MidWinter Meeting, Anaheim, CA, USA.

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

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

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, CA, USA.

Mo, S.*, **Fischer, M.**, Moscovitch, M., & Alain, C. (2022). Individual differences in memory-guided attention. Society for Psychophysiological Research, Vancouver, BC, 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 facilitates memory-guided attention in real-world sound-clips. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA, USA.

Fischer, M., Moscovitch, M., & Alain, C. (2021). Implicit memory for target location facilitates memory-guided attention in real-world sound-clips. Society for Neuroscience Meeting (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 Annual Meeting (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 Annual Meeting (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 (presented 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).

SUPERVISORY EXPERIENCE

University of Toronto - Mississauga

2025 - Kayla Vasquez, BA Research Opportunity Student

Western University - Brain & Mind Institute

Research Supervision

2024 - 2025 Maxine Montpetit, MA/PhD student
2024 - 2025 Grace Malheiro, BA thesis student
2024 - 2025 Vibha Sarathy, BA thesis student
2023 - 2024 Harsh Patel, BA student
2023 Lauren McBay, MA/PhD student

Baycrest Hospital Rotman Research Institute

2022 William Ji, Highschool student
2021 - 2022 Shimin Mo, BA thesis student
2021 - 2022 Juan Martin Soto, BA co-op student
2019 - 2020 Shahier Paracha, BA student
2019 Karishma Ramdeo, BA student
2019 Parnian Tajbakhsh, BA student

TEACHING EXPERIENCE

Western University

Summer 2025	Foundation Research Skills – 11-Week Series **(Overall Teaching Eval. 95%; N = 86)**	Workshop Organizer & Instructor
2025	Research Methods II (PSY2856)	Guest Lecturer
2025	Psychology of Eating (PSY2054)	Guest Lecturer
2025	Neuropsychology and Cognitive Neuroscience (PSY3224) **(Overall Teaching Eval. 95%; N = 30)**	Guest Lecturer

University of Toronto

Quantitative Methods

2022	Introduction to Statistics (PSY201)	Teaching Assistant
2021	Advanced Statistics (PSY202) **(Overall Teaching Eval. 97%; N =35)**	Tutorial Instructor
2021	Introduction to Statistics (PSY201)	Teaching Assistant
2020	Introduction to Statistics (PSY201)	Teaching Assistant
2020	Introduction to Statistics (PSY201)	Teaching Assistant
2019	Psychological Research (PSY203)	Teaching Assistant
2019	Introduction to Statistics (PSY201)	Teaching Assistant
2018	Introduction to Statistics (PSY201)	Teaching Assistant

Other

2023	Introduction to Psychology (PSY100)	Teaching Assistant
2021	The Psychology of Prejudice (PSY12)	Teaching Assistant
2020	Introduction to Psychology (PSY100)	Teaching Assistant
2020	Introduction to Social Psychology (PSY220)	Teaching Assistant
2020	Personality and Its Transformations (PSY230)	Teaching Assistant
2019	Cognitive Neuroscience (PSY493) **(Overall Teaching Eval. 95%; N = 12)**	Guest Lecturer

Lectures [N = 8]

Fischer, M. (February 2025). "Research Methods in Memory Research" for *Research Methods II (PSY2856)* at Western University. London, ON, Canada. [30 students]

Fischer, M. (February 2025). "How to Read a Journal Article" for *Psychology of Eating (PSY2054)* at Western University. London, ON, Canada. [30 students]

Fischer, M. (January 2025). "From Synapses to Stories: The Neuroscience of Memory and Learning" for *Neuropsychology and Cognitive Neuroscience (PSY3224)* at Western University. London, ON, Canada. [30 students]

Fischer, M. (April 2021). "Memory-Guided Attention: A Look at The Neural Correlates That Underlie Expectation for Perception" for *Neuroscience Research Group* at York University. Toronto, ON, Canada. [30 attendees]

Fischer, M. (May 2019). "Statistical Variability" for *Introduction to Statistics (PSY201)* at University of Toronto, Toronto, ON, Canada. [150 students]

Fischer, M. (May 2019). "Introduction to Hypothesis Testing" for *Introduction to Statistics (PSY201)* at University of Toronto, Toronto, ON, Canada. [150 students]

Fischer, M. (April 2019). "The Psychology of Music: Our Brain is a Super Decoder for Incoming Sound" for *Cognitive Neuroscience (PSY493)* at University of Toronto, Toronto, ON, Canada. [50 students]

Fischer, M. (February 2019). "Does Everyday Auditory Experience Facilitate Memory-Driven Attention?" for *Graduate Speaker Series* at University of Toronto, Toronto, ON, Canada. [25 attendees]

Workshops [N = 6]

Fischer, M. (July 2025). *How to Give a Compelling Talk*, Foundation Research Skills Course (Organizer; presenter), Western University.

Fischer, M. & Sansom, L. (July 2025). *Making Connections: Synthesizing Research for Coherent Writing*, Foundation Research Skills Course (Organizer; presenter), Western University.

Fischer, M. (June 2025). *Strategies for Reading and Organizing Research Effectively*, Foundation Research Skills Course (Organizer; presenter), Western University.

Fischer, M. (May 2024). "Introduction to EEG" for *Discovery Day,* Brain & Mind Institute, London, ON, Canada.

Fischer, M. (May 2022). "Your Amazing Brain" for *Science Day*, Banbury Museum in partnership with Oxford University, Oxford, UK.

Fischer, M. (November 2020). "Introduction to EEG" for *Open House*, Rotman Research Institute at Baycrest Hospital, Toronto, ON, Canada.

PROFESSIONAL DEVELOPMENT

Certificates

2025 Certificate in University Teaching and Learning, Western University [65 hours]
2021 Graduate Teaching Workshop and Certificate, University of Toronto [12 hours]

Courses in Teaching & Pedagogy

2025 **Advanced Teaching & Pedagogy,** Western University [30 hours]
2025 **Teaching & Mentorship Program,** Western University [15 hours]

Select Workshops [N=9] [20 hours]

2025 Research on Teaching and Learning Symposium, Western University
2025 Culturally Relevant Pedagogy & Universal Design for Learning, Western University
2025 Communication in The Canadian Classroom, Western University
2025 Connecting, Understanding, & Empowering, Western University
2025 AI in Teaching & Learning, Western University
2024 Supporting International Students in the Classroom, Western University
2024 Collaborating with Western Libraries, Western University

2024	How to Be a Good Mentor and Mentee, Western University
2021	Teaching, Supporting, & Evaluating Student Writing, University of Toronto

SERVICE & OUTREACH

2022 -	**Ad-hoc Reviewer:** *Attention Perception & Psychophysics, Cerebral Cortex, Hearing Research, Human Brain Mapping, Music Perception, Nature Communications, Proceedings of the National Academy of Sciences of the United States of America (PNAS), Psychological Science*
2024 - 2025	**Postdoc Representative**, University Research Board of the Senate, Western University
2024 - 2025	**Founding Member**, Food Support Program, Western University
2024	**Science Volunteer**, Science Rendezvous to excite kids about STEM
2024	**EEG Demonstrator & Mentor**, Discovery Day for high school students
2024	**Judge**, Inspiring Diversity in STEM 2024 Conference
2024	**Postdoc Representative & Mentor**, Inspiring Diversity in STEM 2024 Conference
2023	**Submission Reviewer**, Rotman Research Institute Conference
2022	**Science Volunteer & Guide**, Science Day for blind children at the Banbury Museum
2020	**EEG Demonstrator**, Baycrest Hospital Open House
2019 - 2023	**Panelist & Mentor**, University of Toronto Cognitive Neuroscience Recruitment
2018	**Conference Organizing Committee Member**, International Timbre Conference 2018