# MENGYANG QIU

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# **EDUCATION**

II ' '	
University at Buffalo, Buffalo, NY	
Ph.D., Communicative Disorders and Sciences (CogSci Track)	2016 - 2023
Dissertation: The Information Accumulation Perspective of Cognitive Aging	
Advisors: Nichol Castro, Ph.D.; Brendan T. Johns, Ph.D.	
M.S., Computational Linguistics/Natural Language Processing	2018 – 2019
M.S. Project: Artificial Error Generation with Fluency Filtering	
Advisor: Jungyeul Park, Ph.D.	
M.A., General Linguistics	2013 – 2015
M.A. Project: Verb Aspect and the Activation of Location Information	
Advisor: Jean-Pierre Koenig, Ph.D.	
B.A., Psychology & Linguistics (Honors in Language and Cognition)	2010 – 2013
Honors Thesis: Personifications in Mandarin and English	
Advisor: Jean-Pierre Koenig, Ph.D.	
Summa Cum Laude; Minor in Sociology	
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# ACADEMIC POSITIONS

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Trent University, Peterborough, ON	0000 D
Assistant Professor (Limited Term)   Department of Psychology	2023–Present
McGill University, Montreal, QC	
Graduate Research Trainee   Department of Psychology	Fall 2021
McGill Cognitive Computing Lab	
Advisor: Brendan T. Johns, Ph.D.	

# HONORS & AWARDS

NIDCD Research Symposium in Clinical Aphasiology Student Fellowship, \$1600	2022
Mark Diamond Research Fund, University at Buffalo, \$2964	2020 – 2021
New York State Graduate Student Employees Union Award, \$2202.50	2015
Wolfgang Wölck Outstanding Graduating Senior Award, University at Buffalo, \$250	2013

# **PUBLICATIONS**

#### Cognitive and Language Science

- **Qiu**, M., Castro, N., & Johns, B. T. (submitted). Estimating type of print exposure across aging through author production. *Proceedings of the Annual Meeting of the Cognitive Science Society*.
- Li, Y., & **Qiu**, **M.** (2023). A network analysis of the semantic evolution of 'fruit' and 'stone' in Tibeto-Burman languages. *PsyArXiv*. https://doi.org/10.31234/osf.io/dn75w.
- **Qiu**, **M.**, & Johns, B. T. (2021). A distributional and sensorimotor analysis of noun and verb fluency. PsyArXiv. https://doi.org/10.31234/osf.io/e9n8w.

- Qiu, M., Castro, N., & Johns, B. T. (2021). Structural comparisons of noun and verb networks in the mental lexicon. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 43, 1649–1655. https://escholarship.org/uc/item/4b20s6wp.
- Qiu, M., & Johns, B. T. (2020). Semantic diversity in paired-associate learning: Further evidence for the information accumulation perspective of cognitive aging. *Psychonomic Bulletin & Review*, 27(1), 114–121. https://doi.org/10.3758/s13423-019-01691-w.

# **Natural Language Processing**

- Wang, I. X., Wu, X., Coates, E., Zeng, M., Kuang, J., Liu, S., Qiu, M., & Park, J. (submitted). Neural automated writing evaluation with corrective feedback. *Proceedings of the 2024 Annual Conference of the North American Chapter of the Association for Computational Linguistics System Demonstration Track (NAACL 2024)*.
- Zeng, M., Kuang, J., Qiu, M., Song, J., & Park, J. (accepted). Evaluating prompting strategies for grammatical error correction based on language proficiency. *Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024)*.
- Park, J., & Qiu, M. (accepted). Frustratingly simple prompting-based text denoising. Proceedings of the Second Tiny Papers Track at the Twelfth International Conference on Learning Representations (ICLR 2024).
- Qiu, M., & Park, J. (2019). Artificial error generation with fluency filtering. *Proceedings of the Fourteenth Workshop on Innovative Use of NLP for Building Educational Applications*, 87–91. https://doi.org/10.18653/v1/W19-4408.
- Qiu, M., Chen, X., Liu, M., Parvathala, K., Patil, A., & Park, J. (2019). Improving precision of grammatical error correction with a cheat sheet. *Proceedings of the Fourteenth Workshop on Innovative Use of NLP for Building Educational Applications*, 240–245. https://doi.org/10.18653/v1/W19-4425.

# CONFERENCE PRESENTATIONS & POSTERS

- Stipancic, K. L., van Brenk, F., **Qiu**, **M.**, & Tjaden, K. (2024, February). Clinically important change in speech intelligibility from different perspectives: A pilot study [Conference presentation]. 2024 Conference on Motor Speech, San Diego, CA. https://www.madonna.org/motor-speech-conference.
- Li, Y., & Qiu, M. (2023, May). The semantic evolution of 'fruit' and 'stone' in Sino-Tibetan languages [Conference presentation]. 32nd Annual Meeting of the Southeast Asian Linguistics Society, Chiang Mai, Thailand. https://seals32.human.cmu.ac.th.
- Stipancic, K. L., van Brenk, F., **Qiu**, **M.**, & Tjaden, K. (2022, August). Progress toward estimating the minimal clinically important difference of speech intelligibility: A crowdsourced perceptual experiment [Poster presentation]. 8th International Conference on Speech Motor Control, Groningen, the Netherlands. https://slp-nijmegen.nl/smc2022/.
- Qiu, M., & Castro, N. (2022, May). Developing a web-based stimulus selection hub for anomia treatment using R and Shiny [Poster presentation]. 51st Clinical Aphasiology Conference, Wrightsville Beach, NC, United States. https://clinicalaphasiologyconference.org.
- Qiu, M., & Castro, N. (2021, October). Comparing semantic networks of early vocabulary across languages [Conference presentation]. Complexity and Cognition: Satellite Symposium at the Conference on Complex Systems. https://sites.google.com/view/compcogccs2021.
- Qiu, M., & Johns, B. T. (2018, November). Memory searching pathway underlying verb fluency [Poster presentation]. Annual Convention of the American Speech-Language-Hearing Association, Boston, MA, United States. https://convention.asha.org.

# RESEARCH EXPERIENCE

University at Buffalo, Buffalo, NY	
Graduate Research Assistant   PI: Nichol Castro, Ph.D.	2020 – 2021
Adult Language Network Lab, CDS Department	
Online Experiment Developer   PI: Thea Knowles, Ph.D.	Spring 2020
Clinical Applications of Speech Acoustics Lab, CDS Department	
Project Leader   Supervisor: Jungyeul Park, Ph.D.	Spring 2019
Grammatical Error Correction Project, Department of Linguistics	
Graduate Research Assistant   PI: Brendan T. Johns, Ph.D.	2016 – 2019
Computational Language and Memory Lab, CDS Department	
Graduate Research Assistant   PI: Christopher McNorgan, Ph.D.	Summer 2017
Computational Cognitive Neuroscience Lab, Department of Psychology	
Undergraduate Research Assistant   PI: Gail Mauner, Ph.D.	2012 – 2013
Psycholinguistics Lab, Department of Psychology	
Undergraduate Research Assistant   PI: Paul Luce, Ph.D.	Summer 2012
Language Perception Lab, Department of Psychology	
Undergraduate Research Assistant   PI: Eon-Suk Ko, Ph.D.	Summer 2011
Child Language Development Project, Department of Linguistics	
TEACHING EXPERIENCE	
Instructor of Record	
Trent University, Peterborough, ON	
PSYC 2400: Introduction to Cognitive Psychology	2022–Present
DCVC 2000 N 1 1	
PSYC 3220: Neuropsychology	2023–Present
PSYC 3220: Neuropsychology PSYC 3451: Psychology of Language	2023–Present 2022–Present
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PSYC 3451: Psychology of Language	
PSYC 3451: Psychology of Language Toronto Metropolitan University International College, Toronto, ON	2022–Present
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON  CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON	2022–Present
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON  CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON  PSYC 1010: Making Sense of Data in Psychological Research	2022–Present 2022–Present
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON  CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON	2022–Present 2022–Present
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research University at Buffalo, Buffalo, NY	2022–Present 2022–Present Winter 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research University at Buffalo, Buffalo, NY	2022–Present 2022–Present Winter 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON  CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON  PSYC 1010: Making Sense of Data in Psychological Research  University at Buffalo, Buffalo, NY  CHI 101 & 102: First-Year Chinese	2022–Present 2022–Present Winter 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer	2022–Present 2022–Present Winter 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer University of Toronto Scarborough, Scarborough, ON	2022–Present 2022–Present Winter 2022 2013–2015
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research  University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer  University of Toronto Scarborough, Scarborough, ON LINA 01: Introduction to Linguistics	2022–Present 2022–Present Winter 2022 2013–2015
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research  University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer  University of Toronto Scarborough, Scarborough, ON LINA 01: Introduction to Linguistics LINB 60: Comparative Study of English and Chinese	2022–Present 2022–Present Winter 2022 2013–2015  2021–2022 Winter 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research  University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer  University of Toronto Scarborough, Scarborough, ON LINA 01: Introduction to Linguistics LINB 60: Comparative Study of English and Chinese PSYC 70: Advanced Research Methods Laboratory	2022–Present 2022–Present Winter 2022 2013–2015  2021–2022 Winter 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research  University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer  University of Toronto Scarborough, Scarborough, ON LINA 01: Introduction to Linguistics LINB 60: Comparative Study of English and Chinese PSYC 70: Advanced Research Methods Laboratory  Trent University, Peterborough, ON	2022–Present  2022–Present  Winter 2022  2013–2015  2021–2022  Winter 2022  Winter 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research  University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer  University of Toronto Scarborough, Scarborough, ON LINA 01: Introduction to Linguistics LINB 60: Comparative Study of English and Chinese PSYC 70: Advanced Research Methods Laboratory  Trent University, Peterborough, ON PSYC 2400: Introduction to Cognitive Psychology	2022–Present  2022–Present  Winter 2022  2013–2015  2021–2022  Winter 2022  Winter 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research  University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer  University of Toronto Scarborough, Scarborough, ON LINA 01: Introduction to Linguistics LINB 60: Comparative Study of English and Chinese PSYC 70: Advanced Research Methods Laboratory  Trent University, Peterborough, ON PSYC 2400: Introduction to Cognitive Psychology  University at Buffalo, Buffalo, NY	2022–Present  2022–Present  Winter 2022  2013–2015  2021–2022  Winter 2022  Winter 2022  Summer 2022
PSYC 3451: Psychology of Language  Toronto Metropolitan University International College, Toronto, ON CPSY 102: Introduction to Psychology I  University of Guelph, Guelph, ON PSYC 1010: Making Sense of Data in Psychological Research  University at Buffalo, Buffalo, NY CHI 101 & 102: First-Year Chinese  Teaching Assistant/Guest Lecturer  University of Toronto Scarborough, Scarborough, ON LINA 01: Introduction to Linguistics LINB 60: Comparative Study of English and Chinese PSYC 70: Advanced Research Methods Laboratory  Trent University, Peterborough, ON PSYC 2400: Introduction to Cognitive Psychology  University at Buffalo, Buffalo, NY CDS 151: Introduction to Speech-Language Pathology and Audiology	2022–Present  2022–Present  Winter 2022  2013–2015  2021–2022  Winter 2022  Winter 2022  Summer 2022  2016–2021

# PROFESSIONAL SERVICE & AFFILIATIONS

#### Journal Article Reviews

Behavior Research Methods

Journal of Speech, Language, and Hearing Research

#### Conference Reviews

The Conference on Empirical Methods in Natural Language Processing (EMNLP)

The Annual Meeting of the Cognitive Science Society

Workshop on Innovative Use of NLP for Building Educational Applications

2023—Present
2022—Present

Member

Cognitive Science Society

ACL Special Interest Group for Building Educational Applications

2021–Present
2019–Present

# TECHNICAL SKILLS

Programming: Python, Javascript, Java, R, Matlab

Experiment: jsPsych, PsychoPy/JS, JATOS, psiTurk, E-Prime

NLP: PyTorch, Transformers, Keras, SpaCy, NLTK

Others: LATEX, SQL, Prolog, Praat

# OTHER INFORMATION

Citizenship: China

Permanent Residency: Canada

Languages: Mandarin (native), English (fluent), Cantonese (receptive)

# REFERENCES

#### Nichol Castro, Ph.D.

Assistant Professor

Director of the Adult Language Network Laboratory

Department of Communicative Disorders and Sciences

University at Buffalo

E-mail: nicholca@buffalo.edu

https://sites.google.com/view/alnlab

#### Brendan T. Johns, Ph.D.

Assistant Professor

Director of the McGill Cognitive Computing Laboratory

Department of Psychology

McGill University

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http://btjohns.com

## Jean-Pierre Koenig, Ph.D.

Professor

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## Jungyeul Park, Ph.D.

Lecturer

MDS Computational Linguistics Program

Department of Linguistics

University of British Columbia

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https://linguistics.ubc.ca/profile/jungyeul-park/