

# MENGYANG QIU

1600 West Bank Dr., LHS C112  
Peterborough, ON K9L 0G2, Canada  
mengyangqiu@trentu.ca  
<https://mengyang.dev>

## EDUCATION

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### 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

## ACADEMIC POSITIONS

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### Trent University, Peterborough, ON

**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

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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

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### Cognitive and Language Science

**Qiu, M.**, Castro, N., & Johns, B. T. (accepted). 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. (2024). Neural automated writing evaluation with corrective feedback. *arXiv*. <https://doi.org/10.48550/arXiv.2402.17613>.

Zeng, M., Kuang, J., **Qiu, M.**, Song, J., & Park, J. (2024). 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.** (2024). 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

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**Qiu, M.**, Castro, N., & Johns, B. T. (2024, July). *Estimating type of print exposure across aging through author production* [Oral presentation]. 46th Annual Meeting of the Cognitive Science Society, Rotterdam, the Netherlands. <https://cognitivesciencesociety.org/cogsci-2024/>.

Zeng, M., Kuang, J., **Qiu, M.**, Song, J., & Park, J. (2024, May). *Evaluating prompting strategies for grammatical error correction based on language proficiency* [Oral presentation]. 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING), Torino, Italy. <https://lrec-coling-2024.org>.

Park, J., & **Qiu, M.** (2024, May). *Frustratingly simple prompting-based text denoising* [Poster presentation]. 12th International Conference on Learning Representations (ICLR), Vienna, Austria. <https://iclr.cc/Conferences/2024>.

Stipancic, K. L., van Brenk, F., **Qiu, M.**, & Tjaden, K. (2024, February). *Clinically important change in speech intelligibility from different perspectives: A pilot study* [Oral 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* [Oral 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* [Oral presentation]. Complexity and Cognition: Satellite Symposium at the Conference on Complex Systems. <https://sites.google.com/view/compcogccs2021>.
- Qiu, M., Castro, N., & Johns, B. T.** (2021, July). *Structural comparisons of noun and verb networks in the mental lexicon* [Poster presentation]. 43rd Annual Meeting of the Cognitive Science Society (Virtual). <https://cognitivesciencesociety.org/cogsci-2021/>.
- Qiu, M.** (2020, November). *Using natural language processing for language sample analysis* [Poster presentation]. Annual Convention of the American Speech-Language-Hearing Association, San Diego, CA, United States (Convention canceled due to COVID-19).
- Qiu, M., & Park, J.** (2019, August). *Artificial error generation with fluency filtering* [Poster presentation]. 14th Workshop on Innovative Use of NLP for Building Educational Applications, Florence, Italy. <https://sig-edu.org/bea/2019>.
- Qiu, M., Chen, X., Liu, M., Parvathala, K., Patil, A., & Park, J.** (2019, August). *Improving precision of grammatical error correction with a cheat sheet* [Poster presentation]. 14th Workshop on Innovative Use of NLP for Building Educational Applications, Florence, Italy. <https://sig-edu.org/bea/2019>.
- 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>.
- Min, H., Guo, L., Higginbotham, D. J., & **Qiu, M.** (2018, November). *How does writing medium influence the operation of writing processes and writing quality?* [Poster presentation]. Annual Convention of the American Speech-Language-Hearing Association, Boston, MA, United States. <https://convention.asha.org>.

## RESEARCH EXPERIENCE

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### University at Buffalo, Buffalo, NY

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| <b>Graduate Research Assistant</b>   PI: Nichol Castro, Ph.D.<br>Adult Language Network Lab, CDS Department                                | 2020–2021   |
| <b>Online Experiment Developer</b>   PI: Thea Knowles, Ph.D.<br>Clinical Applications of Speech Acoustics Lab, CDS Department              | Spring 2020 |
| <b>Project Leader</b>   Supervisor: Jungyeul Park, Ph.D.<br>Grammatical Error Correction Project, Department of Linguistics                | Spring 2019 |
| <b>Graduate Research Assistant</b>   PI: Brendan T. Johns, Ph.D.<br>Computational Language and Memory Lab, CDS Department                  | 2016–2019   |
| <b>Graduate Research Assistant</b>   PI: Christopher McNorgan, Ph.D.<br>Computational Cognitive Neuroscience Lab, Department of Psychology | Summer 2017 |
| <b>Undergraduate Research Assistant</b>   PI: Gail Mauner, Ph.D.<br>Psycholinguistics Lab, Department of Psychology                        | 2012–2013   |
| <b>Undergraduate Research Assistant</b>   PI: Paul Luce, Ph.D.<br>Language Perception Lab, Department of Psychology                        | Summer 2012 |
| <b>Undergraduate Research Assistant</b>   PI: Eon-Suk Ko, Ph.D.<br>Child Language Development Project, Department of Linguistics           | Summer 2011 |

## TEACHING EXPERIENCE

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### Instructor of Record

#### Trent University, Peterborough, ON

PSYC 2400: Introduction to Cognitive Psychology 2022–Present

PSYC 3220: Neuropsychology 2023–Present

PSYC 3451: Psychology of Language 2022–Present

#### Toronto Metropolitan University International College, Toronto, ON

CPSY 102: Introduction to Psychology I 2022–Present

#### University of Guelph, Guelph, ON

PSYC 1010: Making Sense of Data in Psychological Research Winter 2022

#### University at Buffalo, Buffalo, NY

CHI 101 & 102: First-Year Chinese 2013–2015

### Teaching Assistant/Guest Lecturer

#### University of Toronto Scarborough, Scarborough, ON

LINA 01: Introduction to Linguistics 2021–2022

LINB 60: Comparative Study of English and Chinese Winter 2022

PSYC 70: Advanced Research Methods Laboratory Winter 2022

#### Trent University, Peterborough, ON

PSYC 2400: Introduction to Cognitive Psychology Summer 2022

#### University at Buffalo, Buffalo, NY

CDS 151: Introduction to Speech-Language Pathology and Audiology 2016–2021

CDS 564: Language Disorders in Adults 2017–2019

CDS 480/687: Disorders of Memory 2017–2019

## PROFESSIONAL SERVICE & AFFILIATIONS

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### 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) 2023

The Annual Meeting of the Cognitive Science Society 2022–Present

Workshop on Innovative Use of NLP for Building Educational Applications 2020–Present

### Member

Cognitive Science Society 2021–Present

ACL Special Interest Group for Building Educational Applications 2019–Present

## TECHNICAL SKILLS

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**Programming:** Python, Javascript, Java, R, Matlab

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

**NLP:** PyTorch, Transformers, Keras, SpaCy, NLTK

**Others:** L<sup>A</sup>T<sub>E</sub>X, SQL, Prolog, Praat

## OTHER INFORMATION

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**Citizenship:** China

**Permanent Residency:** Canada

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

## REFERENCES

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**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](mailto: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  
E-mail: [brendan.johns@mcgill.ca](mailto:brendan.johns@mcgill.ca)  
<http://btjohns.com>

**Jean-Pierre Koenig, Ph.D.**

Professor  
Department of Linguistics  
University at Buffalo  
E-mail: [jpkoenig@buffalo.edu](mailto:jpkoenig@buffalo.edu)  
<https://www.jeanpierrekoenig.com>

**Jungyeul Park, Ph.D.**

Lecturer  
MDS Computational Linguistics Program  
Department of Linguistics  
University of British Columbia  
E-mail: [jungyeul.park@ubc.ca](mailto:jungyeul.park@ubc.ca)  
<https://linguistics.ubc.ca/profile/jungyeul-park/>