Lingbo Tong

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EDUCATION

University of Notre Dame, Notre Dame, IN, USA
Joint Ph.D. in Quantitative Psychology and Computer Science and Engineering — Expected 2025
M.S. in Computer Science and Engineering — 2024

Sichuan University, Chengdu, China
B.Eng. in Computer Science and Technology — 2020

RESEARCH EXPERIENCE

Lab for Big Data Methodology, University of Notre Dame
Graduate Research Assistant, Advisor: Prof. Zhiyong Johnny Zhang — Aug 2020 – present
Research topic: Integrating deep learning with structural equation modeling

DM2 Lab, University of Notre Dame
Graduate Research Assistant, Advisor: Prof. Meng Jiang — Aug 2020 – present
Research topic: Large Language Models for mental health support

Natural Language Processing Lab (THUNLP), Tsinghua University
Research Assistant, Advisors: Prof. Zhiyuan Liu & Prof. Huimin Chen — Sep 2020 – Jan 2021
Research Topic: Social media sentiment analysis and bias detection

PUBLICATIONS

Journal & Conference Articles

Tong, L., & Zhang, Z. (in prep). TextSEM: Structural Equation Modeling for Text Data. *Structural Equation Modeling: A Multidisciplinary Journal*.

Tong, L., & Zhang, Z. (under review). Neural Network Analysis of Psychological Data: A Step-by-Step Guide. *Multivariate Behavioral Research*.

Lu, Y., **Tong, L.**, & Cheng, Y. (in press). Advanced Knowledge Tracing for Intelligent Tutoring Systems: Incorporating Process Data and Curricula Information via an Attention-Based Framework. *Journal of Educational Data Mining.* [Preprint]

Tong, L., Qu, W., & Zhang, Z. (2024). Comparison of the K1 Rule, Parallel Analysis, and the Bass-Ackward Method on Identifying the Number of Factors in Factor Analysis. *Fudan Journal of the Humanities and Social Sciences,* 1-28. [DOI]

Zhang, J., Chen, H., & **Tong, L.** (2022). Structured Gender Bias: How is Gender Cognition Changed and Affected by Digital Communities in China? *In 2022 Annual Conference of International Association for Media and Communication Research Conference (IAMCR).*

Kuebler, J., **Tong, L.**, & Jiang, M. (2021). Multi-round parsing-based multiword rules for scientific knowledge extraction. *In 2021 IEEE International Conference on Big Knowledge (ICBK) (pp. 331-338). IEEE.* [DOI]

Chen, H., Jin S., Lin W., Zhu Z., **Tong L.**, Liu Y., ... & Sun M. (2021). Quantitative analysis on the communication of COVID-19 related social media rumors. *Journal of Computer Research and Development,* 58(7), 1366-1384. [DOI]

Workshop Papers

Tong, L., Liu, Q., Yu, W., Yu, M., Zhang, Z., & Jiang, M (2023). Improving mental health support response generation with event-based knowledge graph. *Workshop on Knowledge-Augmented Methods for NLP (KnowledgeNLP) at AAAI Conference on Artificial Intelligence (AAAI).* [PDF]

Wan, R., & **Tong, L.** (2023). Digital and Historical Exclusivity in Feminine Linguistics: From Nüshu to Xiaohongshu. *WiNLP workshop at Conference on Empirical Methods in Natural Language Processing (EMNLP).* [PDF]

Jiang M., Dang H., **Tong L.** (2023). A Quantitative Review on Language Model Efficiency Research. Large Language Model. *Symposium at International Joint Conference on Artificial Intelligence (IJCAI).* [PDF]

Yu, M., Yu, W., **Tong, L.**, & Jiang, M. (2022). Scientific Comparative Argument Generation. *Document Intelligence Workshop (DI) at ACM SIGKDD International Conference on Knowledge Discovery and Data Mining(KDD).* [PDF]

WORKSHOP ORGANIZED	The Second Workshop on Knowledge Augmented Methods for NLP at ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 6-10 August 2023, Long Beach, CA, USA. [Website]

HONORS AND AWARDS

ISLA Graduate Student Research Award ($4,000)   2024
University of Notre Dame

First place, 2023 EDM Cup   2023
International Educational Data Mining Society (IEDMS)
with EK Lu & Alison Cheng

TEACHING EXPERIENCE

Associate Instructor, Grad Seminar: Quantitative Study (PSY 63199)   Fall 2024
Department of Psychology, University of Notre Dame

Teaching Assistant, Methods for Behavioral Sciences (PSY 30160)   Fall 2023, Spring 2022
Department of Psychology, University of Notre Dame

STUDENT MENTORING

- Noah Crockett, ND undergraduate in psychology   2024
- Yue Wan, ND exchange undergraduate student   2023 – 2024
- Anna Krush, ND undergraduate student in psychology   2023 – 2024
- Qi Liu, ND visiting undergraduate student in computer science   2022

SERVICE

Manuscript Reviewer:
- Journal of Behavioral Data Science (JBDS)
- Journal of Chinese Political Science (JCPS)
- Annual Meeting of the Association for Computational Linguistics (ACL)
- Conference on Empirical Methods in Natural Language Processing (EMNLP)
- China National Conference on Computational Linguistics (CCL)

University Service:
- Departmental Diversity, Equity, and Inclusion Committee Representative   2023 – 2024
- Departmental Faculty Meeting Representative   2022 – 2023

TECHNICAL SKILLS

- Programming Languages: Python, R, JavaScript, SQL, HTML and others
- Quantitative Methods: Structural Equation Modeling, Multivariate Analysis, Bayesian Statistics, Item Response Theory
- Machine Learning Methods: Natural Language Processing, Deep Learning, Human-AI Collaborations