

Dr. Chunhua Liu

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 [Chunhua Liu](#)
 [Google Scholar](#)

I am a postdoctoral researcher in Natural Language Processing (NLP) at the University of Melbourne, with a human-centred focus on how language technologies represent human meanings, values, and cultural differences. My research examines where human-human and human-model representations diverge, how these gaps can be reduced, and how NLP can be translated into trustworthy, socially aligned real-world systems. I collaborate widely across NLP, cognitive science, software engineering, and healthcare equity research.

- **Publications:** 24 publications, including 9 first-authored papers in top venues (CORE A*/A/B or 26-29% acceptance rate)
- **Publication Impact:** Received 237 citations and an h-index of 8 (Google Scholar)
- **Research Grant:** Secured AU\$110K in research funding
- **Professional Service:** Served as a referee and area chair for 6 CORE rank A*/A/B journals and conferences; Local Chair for *SEM 2025 in EMNLP.
- **Research Collaboration:** Co-authored with 20+ researchers from 6 academic institutions in Singapore, Canada, Australia, China, UK and Germany
- **Teaching Experience:** Co-lectured large postgraduate subjects in Machine Learning (270+ students) and Software Modelling & Design (300+ students)
- **Student Supervision:** Co-supervisor of 1 PhD, 1 Intern, 1 Honours student, and 6 Master's students (4 graduated)

EMPLOYMENT

Postdoc Research Fellow and Associate Lecturer at The University of Melbourne (Level B) *Jan 2025 – Present*

Research focus: Cultural and Value Alignment in NLP; research and teaching
Advisors: Prof. Eduard Hovy (2011 ACL Fellow) and Prof. Lea Frermann

Postdoc in The University of Melbourne (Level A) *Jan 2024 - Dec 2024*

Research focus: Trustworthy NLP for automated code review; research and teaching
Advisor: Assoc. Prof Patanamon Thongtanunam

EDUCATION

Ph.D., The University of Melbourne *Sep 2019 - Mar 2024*

Topic: Commonsense Reasoning in Natural Language Processing
Supervisors: Prof. Trevor Cohn and Dr. Lea Frermann

M.Sc. in Beijing Language and Culture University, China *Sep 2016 - Jul 2019*

Major: Computer Application Technology
Topic: Natural Language Understanding, Supervisor: A/Prof. Dong Yu

B.Sc. in Beijing Language and Culture University, China *Sep 2012 - Jul 2016*

Major: Computer Science and Technology

TEACHING

Co-lecturer “Introduction to Machine Learning” (50% teaching load) 2026

M.Sc course (270+ students), Sch. of Computing and Information System, UoM

Teaching delivery: Delivered 12 lectures independently; developed lecture materials, in-class activities, quizzes, assignments, and exam questions; monitored student discussion board.

Admin: Collaborated with the subject coordinator and 6 tutors on overall course design, delivery, and student engagement.

Co-lecturer “Software Modelling and Design” (25% teaching load) 2024

M.Sc course (300+ students), Sch. of Computing and Information System, UoM

Teaching delivery: Delivered 3 out of 12 lectures independently; revised lecture materials; designed in-class activities; reviewed assignments; designed exam questions.

Admin: monitored student extension applications and collaborated with four co-lecturers on course delivery.

Guest Lecturer “Natural Language Processing” 2024

2nd year M.Sc course (300+ students), Sch. of Computing and Information System, UoM

Teaching delivery: Independently developed lecture materials and delivered a session on commonsense reasoning, integrating my own research with state-of-the-art advances in the field. The lecture aimed to bridge the gap between classroom knowledge and frontier research, sparking students’ interest in exploring NLP.

Tutor “Text Analytics for Business” 2021,2022

M.B.A course (60 students), Melbourne Business School, UoM

Tutor “Introduction to Machine Learning” 2021,2022

1st year M.Sc course (30 students), Sch. of Computing and Information System, UoM

Tutor “Natural Language Processing” 2021,2022

2nd year M.Sc course (30 students), Sch. of Computing and Information System, UoM

Project Supervisor of Data Science Project 2021

2nd year of M.Ds course, Sch. of Computing and Information System, UoM

Tutor “Dynamic Programming (Perl)” 2017

3rd year of B.Sc course, Sch. of Information and Science, BLCU

RESEARCH SUPERVISION

Natural Language Processing 2024 – Present

Co-supervising three Master’s students (MIT/MDS) on LLM persuasion (in collaboration with researcher from Amazon Australia)

Co-supervised a Master’s student (Chaoyi Xiang) on the topic of moral value biases evaluation in LLMs — *Thesis: 89/100; published in ACL; continued to PhD at UoM*

Cognitive Psychology (with Dr. Simon De Deyne) 2026 – Present

Co-supervising one Honours student on cross-cultural variation in concept meaning.

Co-supervised one research Intern supported by Complex Human Data Hub

Software Engineering (with Dr. Patanamon Thongtanunam) 2024 – Present

Co-supervising Hong Yi Lin (PhD) on Automated Code Review

Confirmation completed; TOSEM/ACL publications; TSE

Co-supervised two Master’s students (both theses completed; one SCAM publication)

INVITED TALKS AND PRESENTATIONS

Oral Presentation at the ACL 2026 (online)	Jul 2026
Spotlight Talk at the Australian Summer School in Software Engineering (OzSE)	Feb 2026
Invited panelist for the International AI Cooperation and Governance Forum (IAICFG) on “Cultural Alignment & Low-Resource Languages”, Australia	Nov 2025
Invited Talk at NextGen AI Hackathon, Melbourne, Australia	Aug 2025
Poster Presentation at ACL main, Vienna, Austria	Jul 2025
Invited talk on Multi-Agent Disinfo-Avatar at Information and Influence Lab, UoM	Jul 2025
Paper Oral Presentation at MSR 2025, Ottawa, Canada	Apr 2025
Invited Talk in the Vision and Language Group, Monash University	Sep 2023
Paper Poster Presentation in the 44th Cognitive Science Society, Sydney	Jul 2023
Invited Talk at the Computational Linguistics Group, University of Toronto	Jul 2023
Invited Talk at Computational Cognitive Science Lab, UoM	Nov 2022
Paper Poster Presentation at AACL 2022, Online	Aug 2022
Paper Oral Presentation at CoNLL 2021, Online	Aug 2021
Paper Oral Presentation (Outstanding Paper) at the NLPCC 2018, Hohhot, China	Aug 2018

PROFESSIONAL SERVICE

OpenReview Chair for NLPCC	Mar 2026
Area Chair for ACL ARR October	Oct 2025
Local Chair for *SEM, China	Nov 2025
Peer Reviewing: ACL ARR, *SEM, EMNLP, NLPCC, CCL, ACL Trustworthy ML Workshop, TOSEM, IEEE TSE	2018-
NLP Reading Group Organizer, Beijing Language and Culture University	2016-2018
Co-organizer of the NLP reading group at The University of Melbourne	2022-2023
Volunteer of the CIPS Summer School, Beijing, China	2016, 2018

AWARDS AND FUNDING

Inclusion and Diversity Funding, UoM, AU\$8K	2026
Google Australia Funding, AU\$80K	2026
MDAP Faculty Supported Collaboration, UoM, AU\$30K	2025
School Travel Funding, UoM, AU\$4.1K	2023, 2025
Outstanding Paper Award, NLPCC	2018
National Scholarship, BLCU, Top 5% at school	2018
1st Prize Scholarship, BLCU	2018
National Encouragement Scholarship, BLCU, Top 5% at school,	2014, 2015

ONGOING COLLABORATIONS

ALIVE National Centre — “Whose Care is Left Behind?”	2025 – present
Leading the database and service-matching tool development within the AU\$4M MRFF-funded national consortium to improve service availability and reduce inequities in Australian mental healthcare(9 universities, 7 mental health organizations, 40+ researchers).	
Quantifying cross-cultural differences in word meaning differences via word associations with data scientists and psycholinguist at UoM	Ongoing
Aligning large language models with cognitively grounded Chinese cultural knowledge with researcher at University of Monash	ACL 2026
Evaluating LLMs capability in generating persuasive arguments	Ongoing
Calibrating LLM confidence scores in automated code revision with researchers in software engineering	Major Revision
Automated creativity and likability assessment on Reddit stories with researchers from University of Cambridge and University of Sheffield	Manuscript in Preparation

TECHNICAL SKILLS

Programming Skills: Tensorflow, PyTorch, Python, Perl, C++, C, Shell, L^AT_EX, R
Large Language Model Tools: Hugging Face, LORA fine-tuning, Weights and Bias, LangChain, LangGraph, vLLM
Web Languages: HTML5, CSS3, JavaScript
Computing Infrastructure: HPC (SLURM, Spartan), GPU clusters
Version Control: Github, Gitlab

LANGUAGE SKILLS & HOBBIES

Languages: Mandarin (native), English (TOEFL 100, CET6, TEM4; 6+ years in immersive English-speaking environments, with roles in communication, learning and teaching)

Hobbies: Tennis (intermediate level), running (finished a half-marathon under 2 hours), table tennis, hiking, road cycling (longest ride: 100km)

PUBLIC ENGAGEMENT AND LEADERSHIP

Women in Tech Leadership: Lead organiser of [She Leads Tech](#) (UoM), an academia-industry initiative building career pathways for women and underrepresented students in tech through panels and mentorship featuring speakers from Australia (UoM, Uni Monash, Antler) and the US (Google, Amazon, USC) (2025 - 2026). Attracted (AU\$8K) funding support from both FEIT (AU\$5K) and FBE(AU\$3K) Diversity and Inclusion grants, reflecting strong cross-faculty interest in its outcomes.

Public Engagement: AI Advisor for [NextGen AI Hackathon](#), mentoring AI enthusiasts and startups on addressing health challenges (200 participants; Melbourne; Aug 2025).

Public Showcase: Live Demo of a disinformation avatar at The Future of Disinformation Event at UoM (500+ participants; Apr 2025)

Social Media: A short film for Melbourne Connect on [cultural biases](#) in large language models.

Research Outreach: Paper Analyst and Blogger for [PaperWeekly](#) (2016 - 2019) and [XiXiaoYao](#) (2020-2021)

SELECTED PUBLICATIONS

- [1] **Chunhua Liu**, Kabir Manandhar Shrestha, and Sukai Huang. “ALIGN: Word Association Learning for Cultural Alignment in Large Language Models”. In: *Proceedings of the 64th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*. July 2026. URL: <https://aclanthology.org/2026.acl-long.130/>.
- [2] Simon De Deyne, Sukai Huang, Lea Frermann, and **Chunhua Liu**. “Fine-tuned Large Language Models predict human word associations and improve performance across lexical and semantic processing tasks.” In: *Proceedings of 48th Annual Meeting of the Cognitive Science Society*. (To Appear). 2026.
- [3] Chaoyi Xiang, **Chunhua, Liu**, Simon De Deyne, and Lea Frermann. “Comparing Moral Values in Western English-speaking societies and LLMs with Word Associations”. In: *Proceedings of the 63rd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*. July 2025. URL: <https://aclanthology.org/2025.acl-long.177/>.
- [4] **Chunhua Liu**, Hong Yi Lin, and Patanamon Thongtanunam. “Hallucinations in Code Change to Natural Language Generation: Prevalence and Evaluation of Detection Metrics”. In: *International Joint Conference on Natural Language Processing & Asia-Pacific Chapter of the Association for Computational Linguistics (AAACL)*. 2025. URL: <https://aclanthology.org/2025.ijcnlp-long.137/>.

- [5] **Chunhua Liu**, Hong Yi Lin, and Patanamon Thongtanunam. “Too Noisy To Learn: Enhancing Data Quality for Code Review Comment Generation”. In: *Proceedings of the 22nd International Conference on Mining Software Repositories (MSR)*. 2025. URL: <https://www.computer.org/csdl/proceedings-article/msr/2025/018300a236/27vTsGKcCvC>.
- [6] Lin Hong Yi, **Chunhua Liu**, Haoyu Gao, Patanamon Thongtanunam, and Christoph Treude. “CodeReviewQA: The Code Review Comprehension Assessment for Large Language Models”. In: *Findings of the Association for Computational Linguistics: ACL 2025*. July 2025, pp. 9138–9166. URL: <https://aclanthology.org/2025.findings-acl.476.pdf>.
- [7] Hong Yi Lin and Patanamon Thongtanunam and Christoph Treude and Michael Godfrey and **Chunhua Liu** and Wachiraphan Charoenwet. “Leveraging Reviewer Experience in Code Review Comment Generation”. In: *ACM Transactions on Software Engineering and Methodology (TOSEM)* (2025). URL: <https://dl.acm.org/doi/10.1145/3762183>.
- [8] Simon De Deyne, **Chunhua Liu**, and Lea Frermann. “Can GPT-4 Recover Latent Semantic Relational Information from Word Associations? A Detailed Analysis of Agreement with Human-annotated Semantic Ontologies.” In: *The Workshop on Cognitive Aspects of the Lexicon (CogALex@ LREC-COLING 2024)*. 2024, p. 68. URL: <https://aclanthology.org/2024.cogalex-1.8.pdf>.
- [9] **Chunhua Liu**, Trevor Cohn, and Lea Frermann. “Seeking Clozure Robust Hypernym Extraction from BERT with Anchored Prompts”. In: *The 12th Joint Conference on Lexical and Computational Semantics (*SEM)*. 2023. URL: <https://aclanthology.org/2023.starsem-1.18.pdf>.
- [10] **Chunhua Liu**, Trevor Cohn, Simon De Deyne, and Lea Frermann. “WAX: A New Dataset for Word Association eXplanations”. In: *Proceedings of the 2nd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing*. 2022. URL: <https://aclanthology.org/2022.aacl-main.9>.
- [11] **Chunhua Liu**, Trevor Cohn, and Lea Frermann. “Commonsense Knowledge in Word Associations and ConceptNet”. In: *Proceedings of the 25th Conference on Computational Natural Language Learning*. 2021. URL: <https://aclanthology.org/2021.conll-1.38>.
- [12] **Chunhua Liu**, Shan Jiang, Hainan Yu, and Dong Yu. “Multi-turn Inference Matching Network for Natural Language Inference **Outstanding Paper Award**”. In: *Natural Language Processing and Chinese Computing (NLPCC)*. 2018. URL: https://link.springer.com/chapter/10.1007/978-3-319-99501-4_11.
- [13] **Chunhua Liu**, Yan Zhao, Qingyi Si, and Dong Yu. “Multi-Perspective Fusion Network for Commonsense Reading Comprehension”. In: *Chinese Computational Linguistics and Natural Language Processing Based on Naturally Annotated Big Data*. 2018, pp. 262–274. URL: https://link.springer.com/chapter/10.1007/978-3-030-01716-3_22.
- [14] **Chunhua Liu**, Haiou Zhang, Shan Jiang, and Dong Yu. “DEMN: Distilled-Exposition Enhanced Matching Network for Story Comprehension”. In: *Pacific Asia Conference on Language, Information and Computation (PACLIC)*. 2018. URL: <https://aclanthology.org/Y18-1045.pdf>.
- [15] Yan Zhao, Lu Liu, **Chunhua Liu**, Ruoyao Yang, and Dong Yu. “From Plots to Endings: A Reinforced Pointer Generator for Story Ending Generation”. In: *Natural Language Processing and Chinese Computing (NLPCC)*. 2018, pp. 51–63. URL: https://link.springer.com/chapter/10.1007/978-3-319-99495-6_5.