Xintong Wang

EDUCATION

University of Hamburg — Hamburg, Germany
Ph.D. in Computer Science, Advisor: Prof. Dr. Chris Biemann — Apr. 2021 - Sept. 2025
- Thesis: "Multimodal Representation Learning: Understanding and Leveraging"

South China University of Technology — Guangzhou, China
M.S. in Computer Science, GPA: 3.70/4.00 — Sept. 2016 - July 2019
- Thesis: "Research on Abstractive Summarization"

South China University of Technology — Guangzhou, China
B.S. in Computer Science, GPA: 3.40/4.00 — Sept. 2012 - June 2016
- Thesis: "Spatio-temporal Data Storage and Mining Systems"

EXPERIENCE

Hub of Computing & Data Science, University of Hamburg — Hamburg, Germany
Researcher and Consultant, Leader: Prof. Dr. Chris Biemann — Jan. 2025 - Current
- Large Vision-Language Models
- Specializing in Vision and Multimodal Learning, Fostering Interdisciplinary Research across Modalities

AI Business, Alibaba International Digital Commerce Group — Hangzhou, China
Intern, Mentor: Dr. Longyue Wang, Senior Staff Engineer — Dec. 2024 - Sept. 2025
- Large Vision-Language Models
- Benchmarking Multilingual Vision-Language Translation and Evaluation Protocols

The Chinese Academy of Sciences — Beijing, China
Visiting Researcher, Advisor: Prof. Dr. Xingshan Li — Dec. 2022 - Mar. 2023
- Language Models
- Understand Language Models from Cognition Perspective: Regression and Prediction

University of Hamburg — Hamburg, Germany
Research Associate, Advisor: Prof. Dr. Chris Biemann — May 2020 - Dec. 2024
- Cross-modal Learning
- Cross-modal Learning for Improving Human Learning to Read

The Hong Kong Polytechnic University — Hong Kong, China
Research Assistant, Advisor: Prof. Dr. Wenjie Li — Oct. 2018 - Aug. 2019
- Summarization
- Fusing External Language Models in the Abstractive Summarization

The Chinese Academy of Sciences — Shenzhen, China
Visiting Student Researcher, Advisor: Prof. Dr. Min Yang — Mar. 2018 - Oct. 2018
- Summarization
- Generative Adversarial Network for Abstractive Text Summarization with Multi-task Constraint

PUBLICATIONS

1. **Xintong Wang**, Jingheng Pan, Yixiao Liu, Xiaohu Zhao, Chenyang Lyu, Minghao Wu, Chris Biemann, Longyue Wang, Linlong Xu, Weihua Luo, and Kaifu Zhang, "Rethinking Multilingual Vision-Language Translation: Dataset, Evaluation, and Adaptation", *Under Review.* April 2025 [LVLM Multimodal&Multilingual]

2. **Xintong Wang**, Jingheng Pan, Yixiao Liu, Longyue Wang, and Chris Biemann, "Bridging Visual Concepts: Conceptual Alignment for Ambiguity Resolution in Multimodal Translation", *Under Review.* March 2025 [LVLM Multimodal&Multilingual]

3. **Xintong Wang**, Longqin Jiang, Jingheng Pan, Longyue Wang, and Chris Biemann, "Reasoning over Images: Improving In-Image Text Understanding in Large Vision-Language Models", *Under Review.* March 2025 [LVLM Multimodal&Multilingual]

4. Minghao Wu, Weixuan Wang, Sinuo Liu, Huifeng Yin, **Xintong Wang**, Yu Zhao, Chenyang Lyu, Longyue Wang, Weihua Luo, and Kaifu Zhang, "The Bitter Lesson Learned from 2,000+ Multilingual Benchmarks", *Under Review.* March 2025 [LLM Multilingual]

5. **Xintong Wang**, Yixiao Liu, Jingheng Pan, Longyue Wang, and Chris Biemann, "*ToxiRewriteCN*: Chinese Toxic Language Mitigation via Sentiment Polarity Consistent Rewrites: Benchmark and Evaluation", *Under Review.* February 2025 [LLM Benchmark&Safety]

6. **Xintong Wang**, Jingheng Pan, Longyue Wang, and Chris Biemann, "Uncertainty-Aware Contrastive Decoding for Mitigating Ambiguity and Off-Target in Multimodal Machine Translation", *Under Review.* February 2025 [LVLM Multimodal&Multilingual]

7. **Xintong Wang**, Jingheng Pan, Liang Ding, Longyue Wang, Longqin Jiang, Xingshan Li, and Chris Biemann, "*CogSteer*: Cognition-Inspired Selective Layer Intervention for Efficiently Steering Large Language Models", *Under Review.* February 2025 [LLM Interpretability&Efficiency&Safety]

8. Yanfang Zhou, Yuntao Liu, Xiaodong Li, Yongqiang Zhao, **Xintong Wang**, Qingyu Wu, Jinlong Tian, Zhenyu Li, Xinhai Xu, "Metagent-P: A Neuro-Symbolic Planning Agent with Metacognition for Open Worlds", *Under Review.* February 2025 [LLM Agent]

9. Yanfang Zhou, Xiaodong Li, Yuntao Liu, Yongqiang Zhao, **Xintong Wang**, Zhenyu Li, Jinlong Tian, Xinhai Xu, "M2PA: A Multi-Memory Planning Agent for Open Worlds Inspired by Cognitive Theory", *Under Review.* February 2025 [LLM Agent]

10. Daryna Dementieva, Daniil Moskovskiy, Nikolai Babakov, Abinew Ali Ayele, Naquee Rizwa, Florian Schneider, **Xintong Wang**, Seid Muhie Yimam, Dmitry Ustalov, Elisei Stakovskii, Alisa Smirnova, Ashraf Elnagar, Animesh Mukherjee and Alexander Panchenko, "Multilingual and Explainable Text Detoxification with Parallel Data", *Proceedings of the 31st International Conference on Computational Linguistics (COLING).* January 2025 ***(Core Rank A and CCF-B)*** [LLM Multilingual&Safety]

11. **Xintong Wang**, Jingheng Pan, Liang Ding, and Chris Biemann, "Mitigating Hallucinations in Large Vision-Language Models with Instruction Contrastive Decoding", *Findings of the Association for Computational Linguistics (ACL). August 2024* ***(Core Rank A* and CCF-A)*** [LVLM Hallucination]

12. Abinew Ali Ayele, Nikolay Babakov, Janek Bevendorff, Xavier Bonet Casals, Berta Chulvi, Daryna Dementieva, Ashaf Elnagar, Dayne Freitag, Maik Fröbe, Damir Korenčić, Maximilian Mayerl, Daniil Moskovskiy, Animesh Mukherjee, Alexander Panchenko, Martin Potthast, Francisco Manuel Rangel, Naquee Rizwan, Paolo Rosso, Florian Schneider, Alisa Smirnova, Efstathios Stamatatos, Elise Stakovskii, Benno Stein, Mariona Taulé, Dmitry Ustalov, **Xintong Wang**, Matti Wiegmann, Seid Muhie Yimam and Eva Zangerle (*authors are listed in alphabetical order*), "Overview of PAN 2024: Multi-Author Writing Style Analysis, Multilingual Text Detoxification, Oppositional Thinking Analysis, and Generative AI Authorship Verification", *Proceedings of the 15th International Conference of the Cross-Language Evaluation Forum for European Languages (CLEF 2024). September 2024* [LLM Benchmark&Multilingual&Safety]

13. Daryna Dementieva, Daniil Moskovskiy, Nikolai Babakov, Abinew Ali Ayele, Naquee Rizwa, Florian Schneider, **Xintong Wang**, Seid Muhie Yimam, Dmitry Ustalov, Elisei Stakovskii, Alisa Smirnova, Ashraf Elnagar, Animesh Mukherjee and Alexander Panchenko, "Overview of the Multilingual Text Detoxification Task at Pan 2024", *Proceedings of*

the 2024 Working Notes of the Conference and Labs of the Evaluation Forum (CLEF 2024). September 2024 [**LLM Benchmark&Multilingual&Safety**]

14. **Xintong Wang**, Xiaoyu Li, Xingshan Li, and Chris Biemann, "Probing Large Language Models from A Human Behavioral Prospective", *Proceedings of the Bridging Neurons and Symbols for Natural Language Processing and Knowledge Graphs Reasoning at 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (NeusymBridge at LREC-COLING). May 2024* [**LLM Interpretability**]

15. **Xintong Wang**, Xiaoyu Li, Liang Ding, Sanyuan Zhao, and Chris Biemann, "Using Self-Supervised Dual Constraint Contrastive Learning for Cross-modal Retrieval", *Proceedings of the 26th European Conference on Artificial Intelligence (ECAI). September 2023* **(Core Rank A and CCF-B)** [**LVLM Efficiency**]

16. Anton Orell Wiehe, Florian Schneider, Sebastian Blank, **Xintong Wang**, Hans-Peter Zorn, and Chris Biemann, "Language over Labels: Contrastive Language Supervision Exceeds Purely Label-Supervised Classification Performance on Chest X-Rays", *Proceedings of the 2022 Asia-Pacific Chapter of the Association for Computational Linguistics: Student Research Workshop (SRW at AACL-IJCNLP). November 2022* [**LVLM Efficiency**]

17. **Xintong Wang***, Florian Schneider*, Özge Alacam, Prateek Chaudhury, Chris Biemann, "MOTIF: Contextualized Images for Complex Words to Improve Human Reading", *Proceedings of the 13th Edition of its Language Resources and Evaluation Conference (LREC). June 2022* **(Core Rank B)** [**LVLM Benchmark&Interpretability**]

18. Florian Schneider, Özge Alacam, **Xintong Wang**, and Chris Biemann, "Towards Multi-Modal Text-Image Retrieval to Improve Human Reading", *Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Student Research Workshop (SRW at NAACL). June 2021* [**LVLM Interpretability**]

19. Min Yang, **Xintong Wang**, Yao Lu, Jianming Lv, Ying Shen, and Chengming Li, "Plausibility-promoting Generative Adversarial Network for Abstractive Text Summarization with Multi-task Constraint", *Information Sciences,521 (2020): 46-61* **(Core Rank A and JCR-Q1)** [**NLP Summarization**]

20. Jianming Lv, and **Xintong Wang**, "Cross-dataset Person Re-identification using Similarity Preserved Generative Adversarial Networks", *Proceedings of the 11th International Conference on Knowledge Science, Engineering and Management (KSEM), August 2018* **(Core Rank B)** [**CV GAN**]

21. Jianming Lv, Qing Li, Qinghui Sun, and **Xintong Wang**, "T-CONV: A Convolutional Neural Network for Multiscale Taxi Trajectory Prediction", *Proceedings of the 2018 IEEE International Conference on Big Data and Smart Computing (BigComp), January 2018* [**CV Spatial-temporal**]

22. Haitao Yang, Jianming Lv, Fei Xu, **Xintong Wang**, Yilin Huang, Lanting Xia, and Xuewu Zhu, "Regression Approach for Optimal Purchase of Hosts Cluster in Fixed Fund for Hadoop Big Data Platform", *Proceedings of the 19th International Conference on Smart City, Transportation and Buildings, June 2017* [**Distributed System**]

23. Jianming Lv, **Xintong Wang**, Fengtao Huang, Junjie Yang, Tianfeng Wu, and Qifa Yan, "TREST: A Hadoop Based Distributed Mobile Trajectory Retrieval System", *Proceedings of the 2016 IEEE First International Conference on Data Science in Cyberspace (DSC), June 2016* [**Distributed Computing**]

24. Haibiao Lin, Jianming Lv, Can Yang, Miaoyi Deng, Kaitao Wang, and **Xintong Wang**, "GPS Trajectory Mining: A Survey", *Journal of Computational Information Systems,16 (2014): 6947–6956* [**Spatial-temporal**]

INVITED TALKS

- Multimodal Representation Learning: Understanding and Leveraging   03.2025
  Hosts: Prof. Dr. Jianming Lv, South China University of Technology
- Mitigating Hallucinations in Large Vision-Language Models (LVLMs)   07.2024
  Online Talk
- Probing Large Language Models (LLMs) for Predicting Human Behavioral Data   05.2023
  Hosts: Prof. Dr. Markus Hofmann and Prof. Dr. Ralph Radach, Universität Wuppertal

Teaching

- **Lecturer** at University of Hamburg   Winter 2025
  Master Course: Exercises Natural Language Processing and the Web
- **Lecturer** at University of Hamburg   Summer 2025
  Master Course: Exercises Statistical Methods of Language Technology
- **Teaching Assistant** at Max Planck Institute   Winter 2024
  Bachelor, Masters and PhD Course: Introduction to Python for Research
- **Co-Instructor** at University of Hamburg   Winter 2024
  Bachelor Course: Deep Learning for Natural Language Processing
- **Project Mentor** at University of Hamburg   Summer 2022&2023
  Master Project: Web Interfaces for Language Processing Systems
- **Co-Lecturer** at University of Hamburg   Winter 2020
  Master Course: Natural Language Processing and the Web

Supervision

Master Theses

- **Longqin Jiang** MSc, at Universität Hamburg   30.09.2025
  Thesis: Reasoning over Images: Improving In-Image Text Understanding in Large Vision-Language Models
- **Jingheng Pan** MSc, at Universität Hamburg   30.06.2025
  Thesis: Mitigating Ambiguity and Off-Target in Multimodal Machine Translation
- **Xiaoyu Li** MSc, at Technische Universität Berlin & Beijing Institute of Technology   06.03.2024
  Thesis: Methods towards Understanding and Application of Foundation Models
- **Fabian Meyer** MSc, at Universität Hamburg   16.04.2023
  Thesis: On the Potential and Limits of Zero-Shot Out-of-Distribution of Detection
- **Anton Orell Wiehe** MSc, at Universität Hamburg   10.07.2022
  Thesis: Domain Adaptation for Multi-Modal Foundation Models
- **Matthew Ng Cher-Wai** MSc, at Universität Hamburg   06.06.2022
  Thesis: Multi-Modal Fictional Backstory Generation using Transformer-Aspect-Backstory Generator
- **Ankit Srivastava** MSc, at Universität Hamburg   13.03.2022
  Thesis: Complex Word Identification for Language Learners
- **Florian Schneider** MSc, at Universität Hamburg   27.07.2021
  Thesis: Self-Supervised Multi-Modal Text-Image Retrieval Methods to Improve Human Reading
  GSCL Best Master's Thesis Award 2023

Research Assistants & Interns

- **Longqin Jiang** MSc, at Universität Hamburg, Hamburg, Germany   01.05.2024 - Current
  Topic: Trustful and Explainable Large Language Models
- **Yixiao Liu** MSc, at Nanyang Technological University, Singapore City, Singapore   01.10.2023 - Current
  Topic: Mitigating Biases in Chinese Toxic Language
- **Jingheng Pan** MSc, at Universität Hamburg, Hamburg, Germany   15.09.2023 - Current
  Topic: Mitigating Hallucinations in Large Vision-Language Models
- **Xiaoyu Li** MSc, at Technische Universität Berlin, Berlin, Germany   01.10.2022 - 30.09.2023
  Topic: Dual Constraint Contrastive in Cross-modal Retrieval
- **Prateek Chaudhury** BSc, at Indian Institute of Technology Delhi, New Delhi, India   01.06.2021 - 31.08.2021
  Topic: Reading Material Analysis for Second Language Learners

Projects

- (Pending) SPP: Advancing Human-Centric Interpretability on Foundation Models
  Submitted to German Research Foundation (DFG), 01.2026 – 12.2029, *Co-PI (Upon Approval)*

- (Pending) RTG: Human-AI Synergy
  Methods, Models, and Mechanisms for Synergetic Collaboration between Human and Artificial Intelligence
  Submitted to German Research Foundation (DFG), 01.2026 – 12.2029, *Lecturer (Upon Approval)*

- SFB TRR 169 Project C7: Crossmodal Learning for Improving Human Reading
  Funded by German Research Foundation (DFG): 05.2020 - 12.2024, *Doctoral Researcher (Core Participant)*

Scholarships and Awards

- 26th European Conference on Artificial Intelligence (ECAI 2023), Travel Grant — 2023
- The 58th Annual Meeting of the Association for Computational Linguistics (ACL 2020), D&I Grant — 2020
- South China University of Technology, Graduate Research Scholarships — 2016–2019
- South China University of Technology, Bachelor Scholarships — 2013–2016
- Tencent Research Scholarship — 2016
- Outstanding Winner of Pearl River Delta+ National College Students Innovation Contest, Team Leader — 2015
- Honorable Mention of International Mathematical Contest In Modeling Certificate of Achievement — 2015

Professional Activities

- Organizer and Task Committee: CLEF-2025 SemEval Task — 2024
  Multilingual Text Detoxification
- Organizer and Task Committee: CLEF-2024 SemEval Task — 2023
  Multilingual Text Detoxification
- Funding Reviewer: Vienna Science and Technology Fund — 2025
  Vienna Research Groups for Young Investigators
- Area Chair: NAACL — 2025
  Multimodal Learning
- Session Chair: ECAI 2023 Technical Sessions — 2023
  Speech and Natural Language Processing
- Conference Reviewer: ACL, EMNLP, NAACL, COLING, AISTATS, ACM MM — 2025
  Multimodal Learning, Interpretability and Analysis of Models for NLP, Cognitive Modeling
- Conference Reviewer: ACL, EMNLP, NAACL, LREC-COLING, ECCV, ACM MM, NeurIPS — 2024
  Multimodal Learning, Interpretability and Analysis of Models for NLP, Integrated Systems and Applications
- Conference Reviewer: ACL, EMNLP, NAACL, EACL, IJCNLP-AACL, CVPR, ACM MM, ECAI — 2023
  Multimodal Learning, Sentiment Analysis, Stylistic Analysis, and Argument Mining
- Conference Reviewer: ACL, EMNLP, EACL, IJCNLP-AACL — 2022
  Cognitive Modeling and Psycholinguistics, Summariaztion, Multimodal
- Conference Reviewer: ACL, NAACL, IJCAI/Senior Program Committee, KONVENS/Program Committee — 2021
  Summarization, Generation, Crossmodal Learning, Multilingual Hate Speech
- Conference Reviewer: ACL, EMNLP, IJCNLP-AACL — 2020
  Summarization, Generation, Multidisciplinary

- Conference Reviewer: EMNLP, NLPCC 2019
  Summarization, Conversational Bot/QA/IR/Dialogue
- Area Chair for ACL Rolling Review (ARR) 2024–2025
  Multimodal Learning
- Reviewer for ACL Rolling Review (ARR) 2021–2025
  Multimodal Learning, Interpretability and Analysis of Large Language Models
- Reviewer for Journal TALLIP 2020–2021
  Natural Language Processing
- Reviewer for Journal IEEE Access 2020–2021
  Computer Vision, Natural Language Processing

Skills

- **Programming Languages:** Python, Java, C++, C
- **Toolkit for DL and LLMs:** PyTorch, Hugging Face Transformers, DeepSpeed, vLLM, NumPy, Pandas, Matplotlib, Scikit-learn, NLTK, spaCy, Weights & Biases

Languages

- **Chinese:** Native speaker
- **English:** Highly proficient in spoken and written (C1)
- **German:** Basic communication skills (A2)