

# Xintong Wang

## EDUCATION

---

### University of Hamburg

Ph.D. in Computer Science, Advisor: Prof. Dr. Chris Biemann

- Thesis: “Multimodal Representation Learning: Understanding and Leveraging”

Hamburg, Germany

Apr. 2021 - Sept. 2024

### South China University of Technology

M.S. in Computer Science, GPA: 3.70/4.00

- Thesis: “Research on Abstractive Summarization”

Guangzhou, China

Sept. 2016 - July 2019

### South China University of Technology

B.S. in Computer Science, GPA: 3.40/4.00

- Thesis: “Spatio-temporal Data Storage and Mining Systems”

Guangzhou, China

Sept. 2012 - June 2016

## EXPERIENCE

---

### The Chinese Academy of Sciences

Visiting Researcher, Advisor: Prof. Dr. Xingshan Li

- Language Models
- Understand Language Models from Cognition Perspective: Regression and Prediction

Beijing, China

Dec. 2022 - Mar. 2023

### University of Hamburg

Research Associate, Advisor: Prof. Dr. Chris Biemann

- Cross-modal Learning
- Cross-modal Learning for Improving Human Learning to Read

Hamburg, Germany

May. 2020 - Mar. 2021

### The Hong Kong Polytechnic University

Research Assistant, Advisor: Prof. Dr. Wenjie Li

- Summarization
- Fusing External Language Models in the Abstractive Summarization

Hong Kong, China

Oct. 2018 - Aug. 2019

### The Chinese Academy of Sciences

Visiting Student Researcher, Advisor: Prof. Dr. Min Yang

- Summarization
- Generative Adversarial Network for Abstractive Text Summarization with Multi-task Constraint

Shenzhen, China

Mar. 2018 - Oct. 2018

## PUBLICATIONS

---

1. **Xintong Wang**, Wei Wei, Qingqing Qu, Xingshan Li, and Chris Biemann, “Unifying Cognitive Knowledge with Language Models for Cognition-Specific Text Generation”, *Under Review. October 2023*
2. **Xintong Wang**, Jingheng Pan, Liang Ding, and Chris Biemann, “Improving Multimodal Alignment in Vision-Language Pretraining From Natural Language Supervision”, *Under Review. October 2023*
3. **Xintong Wang**, Yixiao Liu, and Chris Biemann, “Mitigating Biases in Chinese Toxic Language via Sentiment Polarity Consistent Rewrites”, *Under Review. October 2023*

4. **Xintong Wang**, Xiaoyu Li, Xingshan Li, and Chris Biemann, “Probing Large Language Models from A Human Behavioral Prospective”, *Under Review. June 2023*
5. **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*
6. 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 (AACL-IJCNLP SRW). November 2022*
7. **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*
8. 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 (NAACL SRW). June 2021*
9. 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
10. 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*
11. Jianming Lv, Qing Li, Qinghui Sun, and **Xintong Wang**, “T-CONV: A Convolutional Neural Network for Multi-scale Taxi Trajectory Prediction”, *Proceedings of the 2018 IEEE International Conference on Big Data and Smart Computing (bigcomp), January 2018*
12. 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*

## TEACHING

---

- **Project Mentor** at University of Hamburg Summer 2022/2023  
*Master Project Web Interfaces for Language Processing Systems*
- **Co-instructor** at University of Hamburg Winter 2020  
*Master Course Natural Language Processing for Web*

## SUPERVISION

---

### Master Theses

- **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

- **Yixiao Liu** BSc, at Southwest University, Chongqing, China 01.10.2023 - Current  
*Topic: Mitigating Biases in Chinese Toxic Language*
- **Jingheng Pan** MSc, at Universität Hamburg, Hamburg, Germany 15.09.2023 - Current  
*Topic: Data-Efficient Method for Improving Cross-modal Alignment*
- **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*

## SKILLS

- **Programming Languages:** Python, Java, C++, C
- **Toolkit for Deep Learning:** PyTorch, TensorFlow, Numpy, Pandas, Matplotlib, NLTK, spaCy, Scikit-learn

## LANGUAGES

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

## PROJECTS

- SFB TRR 169 Project C7: Crossmodal Learning for Improving Human Reading (Final Funding)  
 Funded by German Research Foundation: 01.2024 - 12.2024
- SFB TRR 169 Project C7: Crossmodal Learning for Improving Human Reading (Phase II)  
 Funded by German Research Foundation: 05.2020 - 12.2023

## SCHOLARSHIPS AND AWARDS

- 26th European Conference on Artificial Intelligence ECAI 2023, Travel Grant Award 2023
- South China University of Technology, Graduate Research Scholarships 2016–2019
- South China University of Technology, Bachelor Scholarships 2013–2016
- Tencent Research Scholarship 2016–2016
- Honorable Mention of Mathematical Contest In Modeling Certificate of Achievement 2015

## PROFESSIONAL ACTIVITIES

- Session Chair: ECAI 2023 Technical Sessions 2023  
*Speech and Natural Language Processing*
- Co-organizer: CLEF-2024 SemEval Task 2023  
*Multilingual Text Detoxification*
- Invited talk at the University of Wuppertal, Host: PD. Dr. Markus Hofmann, Prof. Dr. Ralph Radach 2023  
*Probing Large Language Models (LLMs) for Predicting Human Behavioral Data*
- Conference Reviewer: EMNLP, IJCNLP-AAACL, ACL, ACM MM, ECAI 2023  
*Multimodal Learning, Sentiment Analysis, Stylistic Analysis, and Argument Mining*
- Conference Reviewer: ACL, EMNLP, AAACL-IJCNLP, EAACL 2022

*Cognitive Modeling and Psycholinguistics, Summarization, Multimodal*

- Conference Reviewer: ACL, NAACL, IJCAI/Senior Program Committee 2021  
*Summarization, Generation, Crossmodal Learning*
- Conference Reviewer: ACL, EMNLP, AACL, IJCNLP 2020  
*Summarization, Generation, Multidisciplinary*
- Conference Reviewer: EMNLP, NLPCC 2019  
*Summarization, Conversational Bot/QA/IR/Dialogue*
- Reviewer for ACL Rolling Review (ARR) 2021–2023  
*Crossmodal Learning, Machine Translation*
- Reviewer for Journal TALLIP 2020–2021  
*Natural Language Processing*
- Reviewer for Journal IEEE Access 2020–2021  
*Computer Vision, Natural Language Processing*