

**Weiting (Steven) Tan**  
(443) 440-2950, 960 Southerly Rd, Towson, MD 21204  
wtan12@jhu.edu

## EDUCATION

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<b>Johns Hopkins University</b> , GPA: 3.93/4.00	Baltimore, MD
BS/MS in Computer Science, Applied Mathematics & Statistics.	2018/09-2023/05
Ph.D. in Computer Science	2023/08-2026/05 (expected)

## SELECTED PUBLICATION

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**Weiting Tan**, Xinghua Qu, Ming Tu, Meng Ge, Andy T. Liu, Philipp Koehn, Lu Lu (2025). [Process-Supervised Reinforcement Learning for Interactive Multimodal Tool-Use Agents](#). *arXiv 2509.14480*

**Weiting Tan**, Jiachen Lian, Hirofumi Inaguma, Paden Tomasello, Philipp Koehn, Xutai Ma (2025). [Seeing is Believing: Emotion-Aware Audio-Visual Language Modeling for Expressive Speech Generation](#). *In Findings of EMNLP 2025*

**Weiting Tan**, Yunmo Chen, Tongfei Chen, Guanghui Qin, Haoran Xu, Heidi C. Zhang, Benjamin Van Durme, Philipp Koehn (2024). [Streaming Sequence Transduction with Dynamic Compression](#). *IWSLT 2025*

**Weiting Tan**, Hirofumi Inaguma, Ning Dong, Paden Tomasello, Xutai Ma (2024). [SSR: Alignment-Aware Modality Connector for Speech Language Models](#). *IWSLT 2025*

**Weiting Tan**, Jingyu Zhang, Lingfen Shen, Daniel Khashabi, Philipp Koehn (2024). [DiffNorm: Self-Supervised Normalization for Non-autoregressive Speech-to-speech Translation](#). *In Proceedings of NeurIPS 2024*

Haoran Xu, Amr Sharaf, Yunmo Chen, **Weiting Tan**, Lingfeng Shen, Benjamin Van Durme, Kenton Murray, Young Jin Kim (2024). [Contrastive Preference Optimization: Pushing the Boundaries of LLM Performance in Machine Translation](#). *In Proceedings of ICML 2024*

TaiMing Lu, Lingfeng Shen, Xinyu Yang, **Weiting Tan**, Beidi Chen, Huaxiu Yao (2024). [It Takes Two: On the Seamlessness between Reward and Policy Model in RLHF](#). *In FM-Wild Workshop of ICML 2024*

Lingfeng Shen, **Weiting Tan**, Sihao Chen, Yunmo Chen, Jingyu Zhang, Haoran Xu, Boyuan Zheng, Philipp Koehn, Daniel Khashabi (2023). [The Language Barrier: Dissecting Safety Challenges of LLMs in Multilingual Contexts](#). *In Findings of ACL 2024*

**Weiting Tan**, Haoran Xu, Lingfeng Shen, Shuyue Stella Li, Kenton Murray, Philipp Koehn, Benjamin Van Durme, and Yunmo Chen (2023). [Narrowing the Gap between Zero- and Few-shot Machine Translation by Matching Styles](#). *In Findings of NAACL 2024*

**Weiting Tan**, Kevin Heffernan, Holger Schwenk, and Philipp Koehn. (2023). [Multilingual Representation Distillation with Contrastive Learning](#). *In Proceedings of EACL 2023*

Lingfeng Shen\*, **Weiting Tan\***, Boyuan Zheng, and Daniel Khashabi. (2023). [Flatness-Aware Prompt Selection Improves Accuracy and Sample Efficiency](#). *In Findings of EMNLP 2023*

Haoran Xu, **Weiting Tan**, Shuyue Stella Li, Yunmo Chen, Benjamin Van Durme, Philipp Koehn, and Kenton Murray. (2023). [Condensing Multilingual Knowledge with Lightweight Language-Specific Module](#). *In Proceedings of EMNLP 2023*

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## RESEARCH & WORK EXPERIENCE

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<b>Research Scientist Intern – Bytedance</b>	May 2025 – Present
Mentored by Xinghua Qu	San Jose, CA

- Investigating and improving multi-modal, multi-agent tool-use ability through Reinforcement Learning
- Designed process-level reward to enhance credit assignment for long-horizon agentic task training.
- Training multimodal LLM for human centric audio-visual generation

**Research Scientist Intern – Meta AI (FAIR)**

May 2024 – May 2025

*Mentored by Xutai Ma**New York City, NY*

- Researched adapter-based modality fusion algorithms for Speech Large Language Models and Audio-Visual Language Models (AVLMs)
- Proposed an alignment-aware speech adapter with a two-stage training pipeline to fuse speech into pre-trained LLM, enhancing speech understanding performance while preserving pre-trained text abilities
- Developed pre-training and fine-tuning algorithm for AVLM to enhance expressive generation

**Applied Scientist Intern – Amazon Alexa AI**

May 2023 – Aug 2023

*Mentored by Eunah Cho**Seattle, WA*

- Developed large language model based evaluation model for conversational agents
- Proposed an ensemble method that improved evaluation accuracy and reduce hallucination through reweighting the evaluation model's predictive logits with a separately trained scorer model

**Research Scientist Intern – Facebook AI Research**

May 2022 – Aug 2022

*Mentored by Philipp Koehn**Menlo Park, CA*

- Improved multilingual distillation for models of low resource languages with data augmentation methods including back-translation and contrastive learning
- Distilled models with data augmentation achieved state-of-the-art mining performance on Khmer, Pashto, Sinhala as well as many extremely low-resource African languages

**Research Assistant – Center of Language and Speech Processing***Baltimore, MD**Advised by Philipp Koehn*

Aug 2020 – Present

- Conducted research on bitext mining for machine translation on low-resource languages
- Investigated compression and streaming algorithm for speech-to-text (more broadly, sequence-to-sequence) tasks, achieving better latency-quality trade-off for speech translation/transcription systems
- Built fast and high-quality speech-to-speech translation systems with a data-centric strategy that leverages Latent Diffusion Models to normalize speech features/units

**TEACHING EXPERIENCE**

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EN.601.664 Artificial Intelligence (Head Teaching Assistant)	Spring 2025
EN.601.465 Natural Language Processing (Course Assistant)	Fall 2022
EN.601.421 Objected-Oriented Software Engineering (Head Course Assistant)	Spring 2021, Fall 2021
EN.601.280 Full-stack JavaScript (Head Course Assistant)	Fall 2020
EN.601.226 Data Structures (Course Assistant)	Fall 2019, Spring 2020

**SKILLS**

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Experienced with popular packages/tools such as VERL, RL-Factory, Fairseq, Fairseq2, Faiss, etc.  
Experienced with software development using MERN stack, Laravel, Java Spark, and Flask

**AWARDS**

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Dean's List all semesters	
Recipient of Masson Fellowship for research	2022
Recipient of Williams Huggins Fellowship for summer research	2019

**SERVICE**

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Organizer and Program Chair of The 11th Mid-Atlantic Student Colloquium on Speech, Language and Learning  
Program Chair of The First Workshop on Personalized Generative AI @CIKM'23  
Student Representative of the CS Curriculum Committee at Johns Hopkins University  
Reviewer for ACL 2024/2025, EMNLP 2024, NeurIPS 2024, ICLR 2025, ICML 2025