

# Guan-Ting Lin

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## Summary

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Ph.D. student at National Taiwan University (NTU) under **Prof. Hung-yi Lee**, focusing on building **human-like end-to-end speech language models** for real-time dialogue interaction. Research spans **full-duplex spoken dialogue, reinforcement learning for speech LLMs, textless spoken language modeling, multimodal modeling of speaking styles**, and **test-time adaptation speech recognition**. Brings extensive industry research experience from internships at **Meta Superintelligence Lab, Google DeepMind, and Amazon**. Authored **10+ first/co-first papers** at leading Speech & NLP venues (ACL, EMNLP, ICASSP, Interspeech, ASRU, SLT), with research cited **1400+ times** on Google Scholar.

## Education

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### National Taiwan University (NTU)

PH.D. IN COMMUNICATION ENGINEERING, EECS COLLEGE

- Speech Processing and Machine Learning Laboratory. Advised by Prof. **Hung-yi Lee**.
- Transferred from M.S. program in Feb. 2023.

Taipei, Taiwan

Sep. 2021 – Dec. 2025 (expected)

### National Tsing Hua University (NTHU)

B.S. BIOMEDICAL ENGINEERING & ADVANCED AI PROGRAM

- Ranking: **1/ 48**, 3 Deans's List (top 5% students of the department), Phi Tau Phi Award (top 1 student).

Hsinchu, Taiwan

Sep. 2017 – Jun. 2021

## Research Experiences

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### Meta

*Research Scientist Intern* / MENTOR: Dr. Naoyuki Kanda

- **Meta Superintelligence Lab** Voice Modeling Team, working on improving **full-duplex speech LLM**.

Menlo Park, United States

Aug. 2025 - Nov. 2025

### Google DeepMind

*Student Researcher* / MENTOR: Dr. Kartik Audhkhasi, Dr. Bhuvana Ramabhadran

- Under **Gemini speech** team, working on novel methods to expand Gemini to low-resource languages.
- The project has been filed as a **U.S. patent** application by Google.

New York, United States

Feb. 2025 - April. 2025

### Amazon AGI

*Applied Scientist II Intern* / MENTOR: Dr. Prashanth Gurunath Shivakumar

- Proposed **Align-SLM**, an end-to-end speech-to-speech model with RL [ACL'25].
- Achieved state-of-the-art performance and provided the foundational technique for the production Nova Sonic model.

Seattle, United States

June. 2024 - Sep. 2024

### Amazon Alexa AI

*Applied Scientist II Intern* / MENTOR: Dr. Prashanth Gurunath Shivakumar, Dr. Andreas Stolcke

- Proposed **ParalingGPT**, a paralinguistics-enhanced multi-modal large language model for spoken dialogue [ICASSP'24].

Seattle, United States

June. 2023 - Sep. 2023

### Amazon Alexa AI

*Applied Scientist I Intern* / MENTOR: Dr. Chieh-Chi Kao, Dr. Qingming Tang

- Weight-sharing neural architecture search approach on acoustic event classification models [ICASSP'23].

Cambridge, United States

July. 2022 - Oct. 2022

### Speech Processing and Machine Learning Lab @ NTU

*Graduate Researcher* / ADVISOR: Prof. Hung-yi Lee

- Published **12 top-tier first/co-first conference papers**.
- Led multiple projects with internal & external collaborators on end-to-end spoken language understanding, test-time adaptation for ASR, and full-duplex evaluation.

Taipei, Taiwan

July. 2020 - Present

### 8th JASLT Summer Workshop

*Visiting Researcher*, ADVISOR: Prof. Nigel Ward, Prof. Hung-yi Lee

- Self-supervised speech representation learning for prosody [Best Paper Award of SLT'22].

Baltimore, United States

July. 2022

## Selected Publications

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Please see my [google scholar](#) for full publications. \* indicates equal contribution.

1. **Guan-Ting Lin**, Jiachen Lian, Tingle Li, Qirui Wang, Gopala Anumanchipalli, Alexander H. Liu, Hung-yi Lee, “**Full-Duplex Bench: A Benchmark to Evaluate Full-duplex Spoken Dialogue Models on Turn-taking Capabilities**” in [ASRU 2025](#)
2. **Guan-Ting Lin\***, Wei-Ping Huang\*, Hung-yi Lee, “**SUTA-LM: Bridging Test-Time Adaptation and Language Model Rescoring for Robust ASR**” in [ASRU 2025](#)
3. **Guan-Ting Lin**, Prashanth Gurunath Shivakumar, Aditya Gourav, Yile Gu, Ankur Gandhe, Hung-yi Lee, Ivan Bulyko, “**Align-SLM: Textless Spoken Language Models with Reinforcement Learning from AI Feedback**” in [ACL 2025](#)
4. **Guan-Ting Lin\***, Wei-Ping Huang\*, Hung-yi Lee, “**Continual Test-time Adaptation for End-to-end Speech Recognition on Noisy Speech**” in [EMNLP 2024](#)

5. **Guan-Ting Lin**, Hung-yi Lee, “Can LLMs Understand the Implication of Emphasized Sentences in Dialogue?” in *EMNLP 2024*
6. **Guan-Ting Lin**, Cheng-Han Chiang, Hung-yi Lee, “Advancing Large Language Models to Capture Varied Speaking Styles and Respond Properly in Spoken Conversations” in *ACL 2024*
7. **Guan-Ting Lin**, Prashanth Gurunath Shivakumar, Ankur Gandhe, Chao-Han Huck Yang, Yile Gu, Shalini Ghosh, Andreas Stolcke, Hung-yi Lee, Ivan Bulyko, “Paralinguistics-Enhanced Large Language Modeling of Spoken Dialogue” in *ICASSP 2024*
8. Chyi-Jiunn Lin, **Guan-Ting Lin**, Yung-Sung Chuang, Wei-Lun Wu, Shang-Wen Li, Abdelrahman Mohamed, Hung-yi Lee, Lin-shan Lee, “SpeechDPR: End-to-End Spoken Passage Retrieval for Open-Domain Spoken Question Answering” in *ICASSP 2024*
9. **Guan-Ting Lin\***, Guan-Wei Wu\*, Shang-Wen Li, Hung-yi Lee, “Improving Textless Spoken Language Understanding with Discrete Units as Intermediate Target” in *Interspeech 2023*
10. **Guan-Ting Lin**, Qingming Tang, Chieh-Chi Kao, Viktor Rozgic, Chao Wang, “Weight-sharing Supernet for Searching Specialized Acoustic Event Classification Networks Across Device Constraints” in *ICASSP 2023*
11. **Guan-Ting Lin\***, Chi-Luen Feng\*, Wei-Ping Huang, Yuan Tseng, Tzu-Han Lin, Chen-An Li, Hung-yi Lee, Nigel G. Ward, “On the Utility of Self-supervised Models for Prosody-related Tasks” in *SLT 2022 (Best Paper Award)*
12. **Guan-Ting Lin**, Yung-Sung Chuang, Ho-Lam Chung, Shu-wen Yang, Hsuan-Jui Chen, Shang-Wen Li, Abdelrahman Mohamed, Hung-yi Lee, Lin-shan Lee, “DUAL: Textless Spoken Question Answering with Speech Discrete Unit Adaptive Learning” in *Interspeech 2022*
13. **Guan-Ting Lin**, Shang-Wen Li, Hung-Yi Lee, “Listen, Adapt, Better WER: Source-free Single-utterance Test-time Adaptation for Automatic Speech Recognition” in *Interspeech 2022*
14. **Guan-Ting Lin\***, Chan-Jan Hsu\*, Da-Rong Liu, Hung-Yi Lee, Yu Tsao, “Analyzing the Robustness of Unsupervised Speech Recognition” in *ICASSP 2022*
15. Shu-wen Yang, Po-Han Chi, Yung-Sung Chuang, Cheng-I Jeff Lai, Kushal Lakhotia, Yist Y. Lin, Andy T. Liu, Jiatong Shi, Xuankai Chang, **Guan-Ting Lin**, Tzu-Hsien Huang, Wei-Cheng Tseng, Ko-tik Lee, Da-Rong Liu, Zili Huang, Shuyan Dong, Shang-Wen Li, Shinji Watanabe, Abdelrahman Mohamed, Hung-yi Lee, “SUPERB: Speech processing Universal PERformance Benchmark” in *Interspeech 2021*

## Honors & Awards

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### AWARDS

2023	<b>Best Paper Award</b> , 2 out of 363 accepted papers in IEEE SLT 2022, awarded with 500 USD	Doha, Qatar
2024	<b>IEEE Signal Processing Society Travel Grant</b> , Awarded with 500 USD for attending ICASSP 2024	Seoul, Korea
2022	<b>ISCA Travel Grant</b> , Awarded with 600 Euros for attending Interspeech 2022, only 60 students were selected.	Incheon, Korea
2023	<b>NTU Elite Doctoral Scholarship</b> , 4-year scholarship, only one student of each department.	Taiwan
2023	<b>GICE Elite Doctoral Scholarship</b> , The joint 4-year scholarship from Graduate Institute of Communication Engineering and NVIDIA	Taiwan
2022	<b>Appier scholarship for international top AI conferences</b> , Awarded with 25000 NTD for Interspeech 2022.	Taiwan
2020	<b>The Zhu Shun Yi He Qin Scholarship</b> , The highest honor for National Tsing Hua University student with about 3000 USD prize.	Taiwan
Jun. 2021	<b>Phi Tau Phi Award</b> , Top 1 graduation student of the department.	Taiwan
2018–9	<b>3 Deans's List</b> , Top 5% students of the department, (2018 Spring/2018 Fall/2019 Fall in NTHU).	Taiwan

### ACADEMIC SERVICES

Sep. 2021- **Reviewers**, ICLR'24'25, NeurIPS'24'25, ACL'24'25, EMNLP'24, NAACL'23'24'25, ICASSP'23'24, ISCSLP'22'23'24,  
Present COLING'25  
2025 **Notable Reviewer**, ICLR 2025

## Teaching

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### Machine Learning Summer School 2021, Taipei

National Taiwan University  
2021 summer

Head Teaching Assistant

Managed 30+ virtual Machine Learning courses with worldwide academic professors and lecturers for 1400+ international participants.

### Linear Algebra; Machine Learning

National Taiwan University  
2021 - 2022

Teaching Assistant

Designed assignments about JPEG compression and adversarial attack.

## Skills

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**Programming** Python, C, C++, Matlab, LaTeX, Git

**Machine Learning** Pytorch, Tensorflow, Jax, PyTorch Lightning, Huggingface