

Fang-Duo Tsai

📍 Taiwan ✉ fundwotsai2001@gmail.com ↗ 🔗 mywebsite ↗ 🔗 fundwotsai2001 ↗

Education

MS-PhD	National Taiwan University , Graduate Institute of Communication Engineering	09.2023 ~
	<ul style="list-style-type: none">• Research areas: Controllable Text-to-Music, Music editing, Diffusion Models• Advisors: Prof. Yi-Hsuan Yang, Prof. Hao-Chung Cheng	
BS	National Taiwan University , Electrical Engineering	02.2020 ~06.2023
	<ul style="list-style-type: none">• Research areas: Text-to-Music, Deep Learning and Computer Vision, Wifi motion detection• Advisors: Prof. Yi-Hsuan Yang, Prof. Yu-Chiang, Frank Wang, Prof. Hung-Yun Hsieh	

Publications

[1] Fang-Duo Tsai , Yi-An Lai, Fei-Yueh Chen, Li Chai, Hao-Chung Cheng, Yi-Hsuan Yang "ComposerFlow: Step-by-Step Compositional Song Generation." In <i>In International Conference on Learning Representations (under review)</i> , 2025.	09.2025
[pdf] [Demo website]	
[2] Fang-Duo Tsai , Yi-Hsuan Yang "Demonstrating Singing accompaniment capabilities for MuseControlLite" In <i>The Thirty-Ninth Annual Conference on Neural Information Processing Systems (Neurips Music4AI workshop demo)</i> , 2025. [pdf]	08.2025
[arXiv] [Demo website]	
[3] Wei-Jaw Lee, Fang-Chih Hsieh, Xuanjun Chen, Fang-Duo Tsai , Yi-Hsuan Yang "Exploring State-Space-Model based Language Model in Music Generation" In <i>The 26th International Society for Music Information Retrieval Conference (ISMIR LBD)</i> , 2025.	07.2025
[arXiv] [Demo website]	
[4] Fang-Duo Tsai , Shih-Lun Wu, Weijaw Lee, Sheng-Ping Yang, Bo-Rui Chen, Hao-Chung Cheng, Yi-Hsuan Yang. "MuseControlLite: Multifunctional Music Generation with Lightweight Conditioners" In <i>International Conference on Machine Learning (ICML)</i> , 2025.	01.2025
[arXiv] [Code] [Demo website] [google colab]	
[5] Fang-Duo Tsai , Shih-Lun Wu, Haven Kim, Bo-Yu Chen, Hao-Chung Cheng, Yi-Hsuan Yan. "Audio Prompt Adapter: Unleashing Music Editing Abilities for Text-to-Music with Lightweight Finetuning." In <i>International Society for Music Information Retrieval Conference (ISMIR)</i> 2024.	04.2024
[arXiv] [Code] [Demo website] [Demo video]	

Working experiences

Adobe , intern - Research scientist	05.2026 ~08.2026
Taiwan AI Lab , intern - Research scientist	03.2025 ~03.2026
<ul style="list-style-type: none">Proposed ComposerFlow, a song generation pipeline that leverages the knowledge of multiple models to achieve low-cost, fast training.Compared ComposerFlow with other song generation models with state-of-the-art models, and showed comparable performance, while retaining the flexibility to edit the vocal melody, chord progression and the backing music.	
Realtek , Software engineering	07.2022 ~08.2022
<ul style="list-style-type: none">Provided code for converting different audio encoding for audio files.Provided shell script for testing Google TV and Netflix on television chips.	

Other Research Experiences

Text-to-Music with RLAIF , Prof. Shao-Hua Sun, NTU [paper ↗]	09.2023 ~01.2024
Traditional Chinese Instrument Generation , Prof. Yi-Hsuan Yang, NTU	09.2023 ~12.2023
Computer vision and Personalization , Prof. Yu-Chiang Frank Wang, NTU	09.2022 ~06.2023
WiFi Estimation for Person Pose , Prof. Hung-Yun Hsieh, NTU	02.2022 ~06.2022

Teaching Experience

Deep Learning for Music Analysis and Generation ,	09.2025 ~12.2025
• Designed homework related to controllable text-to-music and retrieval. [slides ↗]	Teaching assistant
• Advised student for final project.	
Reinforcement Learning , instructed by Prof. Shao-Hua Sun, NTU	12.2024
• Invited as a judge for final project presentation.	Final presentation judge
Deep Learning for Computer Vision , instructed by Prof. Yu-Chiang Wang, NTU.	09.2024 ~12.2024
• Evaluated and scored programming assignments for 140 students.	Teaching assistant
• Organized and hosted a contest for the final project.	
Probability and statistics , instructed by Prof. Hung-Yun Hsieh, NTU.	02.2022 ~06.2022
• Evaluated and scored homework, quizzes, and exams for 130 students.	Teaching assistant
• Answered questions during office hours every week.	

Honors and Recognition

National Science and Technology concil PhD scholarship , awarded with NTD\$1,500,000 scholarship	09.2025
Direct PhD scholarship , awarded with NTD\$1,500,000 scholarship	06.2025
SIGMIR scholar , awarded with US\$1000 scholarship	08.2024
1st prize, 3D Reconstruction from Road Marker Feature Points contest NTUEE, against 15 teams.	06.2023
Best Creative Award of Robot Car Design Performance NTUEE, against 24 teams.	07.2020

Peer review

ICLR (2025), **Neurips Music4AI workshop** (2025), **ISMIR** (2025), **ACM survey journal** (2025)

Invited talks

"Controllable Text-to-Music", at NTU DeepMIR course .	10.2025
"MuseControlLite: Multifunctional Music Generation with Lightweight Conditioners" at Rochester Audio Information Research Lab.	07.2025

Extracurricular activities

Kick-boxer : Member of the NTU Kick-boxing team.	02.2020 ~02.2021
Violinist : Honorable Mention in Violin Solo, National Student's Music Contest	11.2017
Runner , school's fields day NEHS	2016 ~2018
• 1 st place: 100-meter race	
• 1 st place: 400-meter race	
• 2 nd place: 200-meter race	