Tingle Li

Incoming Ph.D. Student, UC Berkeley

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Education

University of California, Berkeley — Berkeley, CA
Incoming *Ph.D.* in Computer Science — Starting from *Aug. 2022*
- Affiliated to Berkeley Artificial Intelligence Research (BAIR) Lab

Tiangong University — Tianjin, China
B.Eng. in Computer Science and Technology — *Sep. 2016 - Jun. 2020*
- Pilot class of Artificial Intelligence (an elite program for top 10% students)
- **Advisor:** Prof. *Ming Li* (Duke Kunshan University)

Research Interests

Audio Processing: Source Separation, Voice Conversion, Music Information Retrieval
Multi-modal Perception: Audio-visual Learning, Self-supervised Learning, Computer Vision

Publications & Preprints

Tingle Li, Yichen Liu, Andrew Owens, Hang Zhao. "Learning Visual Styles from Audio-Visual Associations". *In Proc. ECCV*, 2022.

Running Zhao, Jiangtao Yu, **Tingle Li**, Edith C.H. Ngai, Hang Zhao. "Radio2Speech: High Quality Speech Recovery from Radio Frequency Signals". *In Proc. Interspeech*, 2022.

Chenxu Hu, Qiao Tian, **Tingle Li**, Yuxuan Wang, Hang Zhao. "Neural Dubber: Dubbing for Videos According to Scripts". *In Proc. NeurIPS*, 2021.

Tingle Li, Yichen Liu, Chenxu Hu, Hang Zhao. "CVC: Contrastive Learning for Non-parallel Voice Conversion". *In Proc. Interspeech*, 2021.

Tingle Li, Jiawei Chen, Haowen Hou, Ming Li. "Sams-Net: A Sliced Attention-based Neural Network for Music Source Separation". *In Proc. ISCSLP*, 2021. (**Oral Presentation**)

Qingjian Lin, **Tingle Li**, Lin Yang, Junjie Wang, Ming Li. "Optimal Mapping Loss: A Faster Loss for End-to-End Speaker Diarization". *In Proc. Odyssey*, 2020.

Tingle Li, Qingjian Lin, Yuanyuan Bao, Ming Li. "Atss-Net: Target Speaker Separation via Attention-based Neural Network". *In Proc. Interspeech*, 2020.

Qingjian Lin, **Tingle Li**, Ming Li. "The DKU Speech Activity Detection and Speaker Identification Systems for Fearless Steps Challenge Phase-02". *In Proc. Interspeech*, 2020.

Research Experience

Electrical Engineering and Computer Science — University of Michigan
Advisor : Prof. *Andrew Owens* — *Apr. 2021 - Present*
Learning Visual Styles from Audio-Visual Associations
- Proposed a novel task termed *audio-driven image stylization*, which aims to convert the texture of a visual scene conditioned on sound (project page).

Institute for Interdisciplinary Information Sciences (IIIS) — Tsinghua University
Advisor : Prof. *Hang Zhao* — *Jul. 2020 - Present*
CVC: Contrastive Learning for Non-parallel Voice Conversion
- Explored a voice conversion model based on noise contrastive estimation loss, which enables one-way conversion in the non-parallel voice conversion setting (project page).

Neural Dubber: Dubbing for Videos According to Scripts
- Introduced a novel task called *automatic video dubbing*, which aims to synthesize speech temporally synchronized with the video given scripts (project page).

Modality Laziness: Everybody's Business is Nobody's Business
- Discussed an optimization problem in multi-modal fusion methods, where encoders from multimodal training suffer from learning insufficient representations of each modality (paper).

Data Science Research Center Duke Kunshan University
Advisor : Prof. *Ming Li* *Jul. 2019 – Jul. 2020*

Atss-Net: Target Speaker Separation via Attention-based Neural Network
- Proposed a method that leverages the attention mechanism to incorporate the mixture spectrogram and target speaker embedding (project page).

Sams-Net: A Sliced Attention-based Neural Network for Music Source Separation
- Proposed a method in which the scope of attention is narrowed down to the intra-chunk features that are most likely to affect each other (project page).

Optimal Mapping Loss: A Faster Loss for End-to-End Speaker Diarization
- Developed a novel optimal mapping loss between the output and ground-truth speaker sequences through the Hungarian algorithm (paper).

Awards & Achievements

Berkeley Graduate Student Fellowship *Aug. 2022*
BAIR Research Ignition Award *Aug. 2022*
ISCA Travel Grant Award, Interspeech 2021 *Jun. 2021*
Best Undergraduate Dissertation (**top 1%**) *Jun. 2020*
1st for SID & **3rd** for SAD, Fearless Steps Challenge Phase-2, Interspeech 2020 *May. 2020*
Presidential Scholarship for Outstanding Students (**top 5%**) *Dec. 2017, 2018, 2019*
1st Prize, China Students Innovation and Entrepreneurship Competition (**top 8%**) *May. 2019*
3rd Prize, Lan-Qiao Cup National Selection Competition *May. 2017*