Xinhao Mei
Curriculum Vitae

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Personal Webpage
Github   Linkedin

Education

2021–present   **PhD in Vision, Speech and Signal Processing**, *University of Surrey*, Guildford, UK.
Supervisor: Prof. Wenwu Wang

2019–2020 :   **Master of Science in Computer Vision, Machine Learning and Robotics**, *University of Surrey*, Guildford, UK.
Distinction

2015–2019 :   **Bachelor of Engineering in Software Engineering**, *Southwest Petroleum University*, Chengdu, China.
First Honor

Publications

Journal Articles

2022   **Xinhao Mei**, Xubo Liu, Mark D Plumbley, and Wenwu Wang. Automated audio captioning: an overview of recent progress and new challenges. *Journal on Audio, Speech, and Music Processing*, volume 26, 2022.

In Conference Proceedings

2022   **Xinhao Mei**, Xubo Liu, Jianyuan Sun, Mark D Plumbley, and Wenwu Wang. On Metric Learning for Audio-Text Cross-Modal Retrieval. In *INTERSPEECH*. ISCA, 2022.

2022   **Xinhao Mei**, Xubo Liu, Jianyuan Sun, Mark D Plumbley, and Wenwu Wang. Diverse Audio Captioning via Adversarial Training. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. IEEE, 2022.

2021   **Xinhao Mei**, Xubo Liu, Qiushi Huang, Mark D Plumbley, and Wenwu Wang. Audio Captioning Transformer. In *Proceedings of the Detection and Classification of Acoustic Scenes and Events Workshop*, 2021.

2021   **Xinhao Mei**, Qiushi Huang, Xubo Liu, Gengyun Chen, Jingqian Wu, Yusong Wu, et al. An Encoder-Decoder based Audio Captioning System with Transfer and Reinforcement Learning. In *Proceedings of the Detection and Classification of Acoustic Scenes and Events Workshop*, 2021.

Research Experience

2020–present   ***Audio-Text Cross-Modal Learning***.
Developed several novel algorithms to improve the performance of audio captioning system. Proposed models achieved state-of-the-art performance
Investigated language-based audio-text retrieval. Proposed methods achieved state-of-the-are performance on main audio captioning datasets

2019–2020   ***Large-Scale Speaker Verification in the Wild***.
Developed a speaker verification system in noisy and uncontrolled environment using deep learning techniques. Analyzed the impact of different metric learning objectives on learned speaker embeddings

Honors

2022   Awarded a Turing Scheme Mobility Fund (**£2000**).

2022   Achieved ***2nd*** place in ***Task 6b of DCASE Challenge 2022 (Language-Based Audio Retrieval)***.

2022   Achieved ***3rd*** place in ***Task 6a of DCASE Challenge 2022 (Automated Audio Captioning)***.

2022   Awarded a University of Surrey-Santander PhD Travel Award (**£1200**).

2021   Achieved ***3rd*** place in ***Task 6 of DCASE Challenge 2021 (Automated Audio Captioning)***.

2019   Awarded a Surrey International Masters Scholarship (**£5000**).

Teaching Assistantship

Spring, 2022 : **COM2028: Artificial Intelligence**, University of Surrey.
Spring, 2022 : **COM3025: Deep Learning and Advanced AI**, University of Surrey.
Fall, 2021 : **EEE2036: Laboratories, Design & Professional Studies III**, University of Surrey.
Fall, 2021 : **EEE1033: Computer and Digital Logic**, University of Surrey.

Skills

Programming Python, PyTorch, Matlab, Numpy
Typesetting Markdown, LaTeX
Languages Chinese(native), English(fluent)