

Xiaoqing Liu

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EDUCATION

Queen Mary University of London <i>PhD in Computer Science</i>	London, England 2021.09—Present
University of York <i>Master of Science in Audio and Music Technology (Merit)</i>	York, England 2019.09—2021.01

WORK EXPERIENCE

Hotone Audio <i>Algorithm Engineer (Intern)</i>	Changsha, China 2021.05—2021.09
<ul style="list-style-type: none">Designed advanced audio plugins, such as Ten Tap Delay and Rhythm Delay, using the JUCE platform, contributing to enhanced product functionality and providing creative tools for guitar performers.Implemented room impulse response algorithms to improve Reverb effects, significantly enhancing the realism and quality of audio.	

RESEARCH EXPERIENCE

Master Thesis: Analysis of Context Dependent OPUS compression for Ambisonics <i>Supported by Prof. Gavin Kearney</i>	York, England 2020.05—2020.09
<ul style="list-style-type: none">Designed a web-based video platform to conduct listening tests and perform data analysis on spatial audio quality.Gained proficiency in Shell scripting and Docker for efficient workflow automation.Gained in-depth knowledge of various bitrate audio formats, including their compression methods and impact on audio quality.Integrated VR video with spatial audio using GoPro Studio to create immersive multimedia experiences.	

PhD Research Area: Automatic Mixing, Spatial Audio, and Speech enhancement <i>Supervised by Prof. Joshua Reiss</i>	London, England 2021.09—Present
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Publications:

- X. J. Liu and J. D. Reiss, "An automatic mixing system for teleconferencing", Audio Engineering Society 154th convention, 2022.
- X. J. Liu and J. D. Reiss, "User preference evaluation of the masking ratio in multiple speaker scenarios", Audio Engineering Society 156th convention, 2024.
- X. J. Liu, H. W. Ai, and J. D. Reiss "An automatic mixing speech enhancement system for information integrity", Journal of Audio Engineering Society (JAES) accepted with revisions, 2025.
- X. J. Liu et al, "Visual-based spatial audio generation system for multi-speaker environments", submitted to ICME, 2024.

PROJECT EXPERIENCE

Audio Signal Processing <i>Independent work</i>	York, England 2020.02—2020.06
<ul style="list-style-type: none">Designed and developed the "Rainy Street" auditory scene, utilizing Mono, Stereo, Binaural, and Surround Sound formats to create an immersive and dynamic soundscape.Simulated room reverberation by measuring room impulse responses (RIR) and applying convolution techniques.	

Visual & Audio Cues for Spatial Audio Generation

London, England

Team Project Supported by QMUL & Google Deep Mind

2024.09—2024.12

- Led a team of two undergraduate students, coordinating tasks and ensuring project milestones were met.
- Trained YOLOv8 on the Wider Face dataset to extract visual features for audio alignment.
- Utilized Conv-TasNet to extract audio sources for high-quality spatial audio generation.
- Compared spatial audio quality using HRTF convolution and a 3D audio algorithm, evaluating system performance across multiple scenarios.

EXTRACURRICULAR ACTIVITIES

Queen Mary University of London

London, England

PhD Candidate

2021.09—present

- Participated in the Accessible Music Installation Design Workshop at Tsinghua University, contributing to inclusive design concepts in music technology.
- Served as a conference reviewer for ACM CHI, ICASSP, ICME, and the *Journal of the International Measurement Confederation*, providing critical evaluations of cutting-edge research.
- Acted as a Laboratory Demonstrator for courses ECS661U (*User Experience Design*) and ECS602U/ECS707P (*Foundation of Digital Signal Processing*), supporting students in mastering technical concepts and practical applications.

HONORS

- Postgraduate Research Fund (London) (2024)
- CSC (China Scholarship Council) scholarship (London) (2021)
- Jane Moody Scholarship (York) (2020)

SKILLS & INTERESTS

Languages: Mandarin (Native), English (Business fluent).

Computer Skills: Skilled in JavaScript, MATLAB, Python; proficient with JUCE (C++), and Pro Tools.

Interests: Reading, Cool Jazz, and Traveling.