

# Yue Qiao

---

## Princeton University

Dept. of Mechanical & Aerospace Engineering  
H101 EQuad  
Olden Street  
Princeton, NJ 08544

Phone: (609) 933-1271  
Email: yqiao@princeton.edu

## Education

---

- Princeton University**, Princeton, NJ 2019 - Present  
Ph.D., Mechanical and Aerospace Engineering  
Advisor: Edgar Choueiri
- Penn State University**, University Park, PA 2019 - 2020  
Graduate program in Acoustics (Distance Education, non-degree seeking)
- Peking University**, Beijing, China 2015 - 2019  
B.S., Physics  
Minor in Theory and History of Arts (Musicology oriented)
- Hong Kong University of Science and Technology**, Hong Kong SAR 2017  
Exchange program at School of Science

## Academic and Research Experience

---

- 3-D Audio and Applied Acoustics (3D3A) Laboratory, Princeton University** 2019 - Present  
*Assistant in Research*, advisor: Edgar Choueiri  
Working on head-tracked binaural audio reproduction through loudspeakers and personal audio delivery.
- Speech and Hearing Research Center (SHRC), Peking University** 2018 - 2019  
*Undergraduate Research Assistant*, advisor: Tianshu Qu  
Worked on developing a spherical microphone array for sound field recording and implementing its encoding and decoding system in 4th-order Ambisonics.
- Center for Computer Research in Music and Acoustics (CCRMA), Stanford University** 2018  
*Undergraduate Visiting Research Intern*, advisor: Fernando Lopez-Lezcano, Chris Chafe  
Worked on interactive musical performance based on Ambisonics and physical modeling of sound objects using Leap Motion for gesture control.

## Awards and Honors

---

- **Best Poster Award** in the 6th Peking University Young Scientists Symposium on Informatics
- **Weiming Physics Students Fellowship**, Peking University *Fall 2018*
- **Award for Scientific Research**, Peking University *Fall 2017*
- **3<sup>rd</sup> Prize** in Chinese Undergraduate Physicists' Tournament on-campus contest *Spring 2016*
- **Bronze Medal** in the 31<sup>st</sup> Chinese Physics Olympiad *Fall 2014*
- **2<sup>nd</sup> Place** in Semifinals of the 31<sup>st</sup> Chinese Physics Olympiad, Gansu Province *Fall 2014*
- **1<sup>st</sup> Prize** in Chinese Mathematics Olympiad, Gansu Province *Fall 2014*

## Publications

---

### Peer-reviewed conference and journal publications

(Submitted) **Yue Qiao**, Léo Guadagnin, and Edgar Choueiri. "A Hybrid Beam Shaping and Pressure Matching Method for Personal Audio Using A Linear Loudspeaker Array", in *IEEE International Conference on Acoustics, Speech and Signal Processing*. Singapore, 2022.

**Yue Qiao** and Edgar Choueiri. "Real-time Implementation of the Spectral Division Method for Binaural Personal Audio Delivery with Head Tracking." in *Audio Engineering Society Convention 151*. Online, 2021.

Mengfan Zhang, **Yue Qiao**, Xihong Wu, and Tianshu Qu. "Distance-Dependent Modeling of Head-Related Transfer Functions." in *IEEE International Conference on Acoustics, Speech and Signal Processing*. Brighton, UK, 2019.

Zhongshu Ge, **Yue Qiao**, Shusen Wang, Xihong Wu, and Tianshu Qu. "Subjective Evaluation of Virtual Room Auralization System based on the Ambisonics Matching Projection Decoding Method", in *Audio Engineering Society Convention 145*. New York, NY, USA, 2018.

Tianshu Qu, Zhichao Huang, **Yue Qiao**, and Xihong Wu. "Matching Projection Decoding Method for Ambisonics System", in *IEEE International Conference on Acoustics, Speech and Signal Processing*. Calgary, Alberta, Canada, 2018.

### Technical reports

3D Sound Field Recording and Playback Using Spherical Microphone Arrays, in *the 6th Peking University Young Scientists Symposium on Informatics*, Beijing, Nov 2018.

A microphone distribution method on spherical microphone arrays using Ambisonics, in *the 64th Conference of Audio Video coding Standard Workgroup of China*, Dalian, Aug 2017.

## Teaching Experience

---

### Teaching Assistant

- Fall 2021, MAE 433 Automatic Control Systems, Princeton MAE department.
- Spring 2021, MAE 224 Integrated Engineering Science Laboratory, Princeton MAE department.