Wenyi Song

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Research Interests

- Music Perception & Emotion, Cross-Culture Instruments, Music Timbres & Emotion
- Computer Music, Human-Computer Interaction (HCI)

Education

The Hong Kong University of Science and Technology   Sep 2020 – Mar 2025
PhD in Computer Science and Engineering   Hong Kong
Supervisor: Prof. Andrew Brian Horner
Thesis: A Comparative Analysis of Violin and Erhu Emotional Characteristics for Multiple Musical Excerpts

City University of Hong Kong   Aug 2015 - Oct 2016
MSc in Multimedia Information Technology (with Credit)   Hong Kong
Department of Electronic Engineering
Supervisor: Prof. Lai-Man PO
Dissertation: Face Diagnosis based on Face Recognition and Machine Learning Technologies

Zhejiang University City College   Sep 2011 - Jun 2015
BMgt. in Information Management and Information Systems (GPA: 3.79/4.0)   Hangzhou, China
School of Computer and Computing Science

Publications

The emotional characteristics of the violin with different pitches, dynamics, and vibrato
Proceedings of Meetings on Acoustics, Vol. 55, 035004 (Mar 2025)
Wenyi Song, Anh-Dung Dinh, Andrew Brian Horner

Emotional characteristics of the erhu and violin: A comparative study of emotional intensity in musical excerpts
Proceedings of Meetings on Acoustics, Vol. 55, 035003 (Mar 2025)
Wenyi Song, Andrew Brian Horner

A comparative study of violin and erhu emotional characteristics: Influence of playing techniques and instrument
Proceedings of Meetings on Acoustics, Vol. 54, 035002 (Aug 2024)
Wenyi Song, Ziya Zhou, Zeyu Huang, Andrew Brian Horner

A comparative analysis of violin and erhu: differences and similarities through statistical analysis of multiple musical excerpts
Proceedings of Meetings on Acoustics, Vol. 52, 035007 (May 2024)
***Wenyi Song**, Zeyu Huang, Andrew Brian Horner*

The emotional characteristics of bass drums, snare drums, and disengaged snare drums with different strokes and dynamics
(Student Paper Competition Winner)
Proceedings of Meetings on Acoustics, Vol, 52, 035005 (Apr 2024)
*Zeyu Huang, **Wenyi Song**, Xiaojuan Ma, Andrew Brian Horner*

The emotional characteristics of the piano, celeste, and harp with different pitch and dynamics
Proceedings of Meetings on Acoustics, Vol, 52, 050002 (Feb 2024)
Hiu Ting Chan, Bing Yen Chang, Andrew Brian Horner, Man Hei Law, **Wenyi Song**

Uncovering the differences between the violin and erhu musical instruments by statistical analysis of multiple musical pieces
Proceedings of Meetings on Acoustics, Vol, 50, 050005 (Mar 2023)
***Wenyi Song**, Andrew Brian Horner*

A head-to-head comparison of the emotional characteristics of the violin and erhu on the butterfly lovers concerto
ICMC 2021 - Proceedings of the International Computer Music Conference 2021, v. 2021, July 2021, p. 289-294
Dustin Lee, **Wenyi Song**, Andrew Brian Horner

Teaching

- Teaching Assistant, Comp1943 Creative Sound and Video Design, HKUST (*Fall 2020 – 2023*)
- Teaching Assistant, Comp4441 Music Video Creation, HKUST (*Spring 2021 – 2024*)

Selected Honors & Scholarships

- The International Union for Pure and Applied Physics (IUPAP) Young Acousticians Grant, Acoustics 2023 Sydney, *Acoustical Society of America*
- Department of Electronic Engineering Entrance Scholarships for MSc Programmes 2015/2016, *Department of Electronic Engineering, City University of Hong Kong*
- Outstanding Graduates, *Department of Education of Zhejiang Province* (May. 2015)
- National Scholarship, *Ministry of Education of the People's Republic of China* (30th, Nov. 2014)
- Honorable Mention, *The Mathematical Contest in Modeling (MCM)/The Interdisciplinary Contest in Modeling (ICM) of USA* (2014)

Experience

The Hong Kong University of Science and Technology (HKUST), *Research Assistant* — Dec 2017 - Aug 2020, Hong Kong
Multimedia Technology Research Center (MTrec), Department of CSE
Supervisor: Prof. Gary Shueng Han CHAN
Topic: System Design and Development, Indoor Positioning, Data Analysis & Visualization

The Chinese University of Hong Kong (CUHK), *Junior Research Assistant* — Dec 2016 - Nov 2017, Hong Kong
Center of Cyber Logistics (CCL), Asian Institute of Supply Chains and Logistics (AISCL)
Supervisors: Prof. Waiman Cheung and Prof. Sung-Chi Chu
Topic: Face Recognition, Machine Learning, Data Analysis & Visualization

Projects

"Virtual Balcony Concert" *(Global Classical Music Community for Beginners)* — 2020 - 2021
- Role: Arranger & Violin Performer *(Lead: Youtuber MusicOnline UK)*
- Arranged and performed a violin duet adaptation of Flower Duet to promote global musical exchange through online platforms during the pandemic
- Simplified arrangements to make classical music more accessible for beginners

"Tenkyuu" arr. for piano, violin & guitar *(Anime Music Community)* — Jan 2020 - Mar 2020
- Role: Arranger
- Adapted from *"Kono Oto Tomare! Sounds of Life"* (7 kotos), providing an accessible ensemble arrangement for anime and music enthusiasts, fostering community engagement through music and culture.

Content Management System (CMS) *(Mtrect, HKUST)* — Dec 2017 - Aug 2020
- Role: Research Assistant and Main Developer *(Supervisor & Lead: Prof. Gary Chan, Dr. Ki-Kit Lai)*
- Designed and developed CMS for shopping malls and indoor positioning sites for effective interactions

Local-Based Service (LBS) Projects for Indoor Positioning *(Mtrect, HKUST)* — Dec 2017 - Aug 2020
- Role: Research Assistant and Developer *(Supervisor & Lead: Prof. Gary Chan, Dr. KK Lai)*
- Developed and maintained more than 17 projects, including shopping malls (Harbor City, K11 Musea), hospitals (HK Children Hopital), universities (HKUST), construction sites, and vContact for Covid-19

IoT-Augmented Airfield Service System (AS2) *(CUHK-AISCL & HK International Airport)* — Jan 2017 – Nov 2017
- Role: Junior Research Assistant and Developer *(Supervisor & Lead: Prof. Sung-Chi Chu)*
- Designed "texture-based" and "feature-based" algorithms for face recognition
- Designed and developed a Web-based system for face verification using mobile devices
- Designed and developed a Web-based system for time- series visualization of pedestrian traffic and flight information