

Guoguo Zhang

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EDUCATION

- **Royal Conservatoire of Scotland** 09/2024 - 06/2026 (Expected)
MMus in Piano Performance Glasgow, UK
 - Focus: Practice-based Research, Music Philosophy, Collaborative Performance.
- **Sun Yat-sen University** 09/2020 - 07/2024
Bachelor of Fine Arts Guangzhou, China
 - GPA: 3.3/4.0.

PUBLICATIONS

† DENOTES CORRESPONDING AUTHOR

- [1] Wanjuan Hu, Guanyi Li, Guoguo Zhang, Liang Chang, Dan Zeng. "**Learning Instructive Frequency Spectral and Curvature Features for Cloud Detection**". In: *IEEE Geoscience and Remote Sensing Letters*, vol. 22, Art. no. 5001605, pp. 1–5, 2025.
- [2] Qiujian Xu, Yutong Liu, Xinran Yuan, ..., Guoguo Zhang[†]. "**Harnessing auditory laughter to enhance pain tolerance: insights into its psychophysiological mechanisms**". Manuscript submitted to *Journal of Cognitive Neuroscience*.

RESEARCH EXPERIENCE

- **Music Education & Technology** 03/2025 – present
Yanshan University QinHuangDao, China
Researcher & PI; Teaching Assistant
 - **Teaching Assistant (Music Technology & Pedagogy)** — Led weekly labs and tutorials; demonstrated DAW and notation workflows; held office hours; supported diverse learners in performance, theory, and aural skills.
 - **AI-based Music Therapy System (clinical deployment at PKU Hospital)** — Designed end-to-end pipeline from EEG/audio intake to feedback; implemented data preprocessing and classifier prototyping.
 - **Real-Time Digital Human Dialogue System** — Built low-latency streaming stack with avatar rendering; integrated WebRTC for duplex A/V; demoed to **China Post Group**; deployed at the **Heilongjiang Provincial Court**.
- **AI Vocal Coaching Assistant** 05/2025 – 10/2025
Beijing Normal University Beijing, China
Research Assistant
 - Designed a real-time audio DSP pipeline for instant vocal assessment, including F0, formant resonances, vibrato, and dynamics.
 - Built an LLM feedback engine that converts metrics into rubric-based comments and targeted exercises.
- **Computer Music Synthesis and Composition** 06/2025 - 08/2025
Carnegie Mellon University Pittsburgh, USA
Advisor: Prof. Roger B. Dannenberg
 - Built synthesis demos in Nyquist and drafted a paper on computer-assisted composition.

PERFORMANCE EXPERIENCE

- **Carnegie Hall Featured Choir Concert** New York, USA 2015
- **American Choral Directors Association (ACDA) National Conference Showcase** Chicago, USA 2018
- **First Prize in The Fifth Asian International Piano Grand PRIX** Guangzhou, China 2024

WORK EXPERIENCE

- **Nova International Education LLC** 03/2024 – Present
Music Teacher San Leandro, USA
 - 1:1 & small-group teaching in performance, theory, and aural skills.
 - Organize student performances such as recitals and ensembles.
- **Pianist Intern** 12/2024 - 01/2025
Hillington Park Church of Scotland Glasgow, UK
 - Performed with choir at weekly and Christmas Eve concerts.
- **Yuyan High School** 12/2023 - 02/2024
Music Teacher Guangzhou, China
 - Directed a New Year choir concert for Xinjiang migrant students.

SKILLS

- **Music Skills:** Piano, Vocal, Guitar, Accordion
- **Programming Languages:** Python, JavaScript, HTML, SQL, TypeScript