

# HANZHANG

ARTIST, COMPUTER MUSICIAN, ENGINEER, PERFORMER

## CONTACT INFO

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## EDUCATION

**Ph.D. Student in Computer Music** 2020.9 - Present  
*University of California, San Diego | Music Department*

- Principal teachers: Tom Erbe, Miller Puckette, Amy Cimini, Alexandro Segade

**M.S. in Electrical Engineering** 2019.8 - 2021.6  
*Northwestern University | McCormick School of Engineering*

- Principal Advisor: Thrasyvoulos Pappas, Julius Smith(CCRMA, Stanford University), Bryan Pardo
- Thesis topic: Interpretable Parameters and Interface for Music Timbre Design

**B.S. in Automation** 2015.8 - 2019.7  
*Tsinghua University | Department of Automation*

**Minor in Music Technology and Engineering** 2017.8 - 2019.7  
*Tsinghua University | Center for Arts Education*

## EXPERIENCE

**Visiting Scholar** 2021.8 - 2022.5  
*UC Berkeley | Center of New Music and Audio Technology*

## RESIDENCY

**Oracle Egg** 2025.1  
*Broiler Experimental Performance Series | Los Angeles*

- De-dimension*, participatory experimental live music performance, as half of the ãññ duo.

## COMMISSION

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**Duo Lingua** 2024.7  
*Composition* | Bogotá, Colombia

- *me hiciste falta*, for live electronics, two musicians and four ham radios

## APPEARANCE

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- Performance**
- (<e>), The DiMenna Center, NYC (2025)
  - 0=====), Centro Mexicano para la Música y las Artes Sonoras(CMMAS), Morelia, Mexico (2025)
  - ïîï, Studio Culture, San Diego, CA (2025)
  - *The particles we immersed*, Rocky Mountain College of Art + Design, Denver, CO (2025)
  - *De-dimension*, Oracle Egg, Los Angeles, CA (2025)
  - *Loom - As we Embrace*, Qualcomm Institute, IDEA performance series, San Diego, CA (2025)
  - *In the swings that we share*, Project [BLANK], working title series, San Diego, CA (2025)
  - *me hiciste falta*, Project [BLANK], Duo Lingua, San Diego, CA (2025)
  - *Cycle to Learn*, Future Stage, NYC (2024)
  - *me hiciste falta*, libres en el sonido, Duo Lingua, Bogotá, Colombia (2024)
  - *Learning to move, learning to play, learning to animate*, Qualcomm Institute, IDEA performance series, San Diego, CA (2024)
  - *Tea for Three, Seedback*, UC San Diego, synth ensemble, San Diego, CA (2024)
  - *Leave No Trace, for 6 channel electronics and a hiker*, Qualcomm Institute, IDEA performance series, San Diego, CA (2023)
- Exhibition**
- Plexus Projects, GUI/GOOEY, *Learning to move, learning to play, learning to animate*, Brooklyn (2024)

## RESEARCH PROJECT

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**Joint time-frequency spectral modeling of music timbre** 2023.1 - Present

- With the awareness of the drawback of the Fast Fourier Transform and the traditional spectral modeling schemes, this project aims for a semantically describable and concisely controllable spectral model that considers both temporal and spectral characters. Moreover, exempting the separation step of amplitude and phase spectrograms and taking the implementation of FFT into account, this scheme goals for dealing with classic problems in spectral synthesis like phase reconstruction, sinusoidal leakage, and so forth.

**Computer-assisted auto-orchestration and texture generation** 2021.8 - Present

- Proposed a workflow for generating musically reasonable multi-track scores for orchestra given the constraints of configuration, timbre morphology, and measures of textural complexity. Currently modeling a deep learning framework based on generative neural networks and realizing the auto transformation from parameter space of conditions to symbolic space of scores.

**Timbre analysis and synthesis** 2020.5 - 2021.6

- Designed a framework for the extraction and modification of harmonics morphological features for musical timbre. Practiced experiments to verify the analytic power of the the model, including musical instrument recognition and timbre descriptor mapping. Developed a synthesis method that allows sound reconstruction, design, and morphing based on understandable features. Implemented a GUI with PyQT that integrated all the functions and allowed future exploration of the model.

**PUBLICATION**

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| <b>Recording</b>    | <ul style="list-style-type: none"><li>• <i>me hiciste falta</i>, Duo Lingua, Bogotana Record, Colombia, 2024</li></ul>  |
| <b>Short Film</b>   | <ul style="list-style-type: none"><li>• <i>woowaaaaditeeeeer</i>, Han Zhang, Anqi Liu in aññā duo, released with Music For Your Inbox, 2024</li></ul>   |
| <b>Article</b>      | <ul style="list-style-type: none"><li>• Han Zhang, Mingyong Cheng. <i>Cycle to Learn: Exploring Human-AI Relation Through Breath-Driven Interactive Art Installation</i>, in Proceedings of ARTeFACTo, 2024</li><li>• Zehao Wang, Han Zhang, Yifan Guo. <i>ModPhy: System Design for Real-time Modular Sound Synthesis with Physically-Modeled Objects</i>, in Proceedings of the International Computer Music Conference (ICMC), 2023.</li></ul> |
| <b>Presentation</b> | <ul style="list-style-type: none"><li>• Han Zhang, Mingyong Cheng, Sophia Sun, Lindsey Gu. <i>Learning to Move, Learning to Play, Learning to Animate: a Multimedia Exploration of the More-than-human Intelligence</i>, NeurIPS Creative AI Track, Vancouver, Canada, 2024.</li></ul>  |

**TEACHING**

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| <b>Instructor</b>          | <ul style="list-style-type: none"><li>• X-Institute, Principal Instructor in Music Technology Program, Shenzhen, China, 2024 - Present</li></ul>   |
| <b>Teaching Assistance</b> | <ul style="list-style-type: none"><li>• UC San Diego, Department of Music: MUS1C Music Theory, MUS9 Orchestra, MUS15 Hip Hop Music, MUS173 Music Production, MUS17 Popular Music, MUS174A Studio Technique, MUS174B Mixing and Mastering</li><li>• University of California, COSMOS Program, music technology cluster (2023, 2024)</li></ul> |

**SERVICE**

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| <b>Studio Tech Team</b><br><i>Music Department, UC San Diego</i> | <b>2023.9 - Present</b> |
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