

Minsik Choi

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Profile

Sound, Music, and Interaction: How can music shape everyday sonic interactions through computational tools and AI?

I design creativity support tools, investigate AI-assisted everyday interactions informed by musical engagement, and evaluate their impact through mixed-methods user studies. My research interests include how musical principles can inform everyday interactions while everyday practices, in turn, enrich musical activities, and what enables creativity in AI-mediated interactions.

Human-Computer Interaction, Sonic Interaction Design, Auditory Interface, Creative Computing, Creativity Support Tools

Education

Australian National University

Ph.D. Computer Science

Mar 2023 - Current

- AI-Assisted Creativity Support Tool for Sonic Interaction Design with Musical Tension and Release
- Sound, Music, and Creative Computing Lab, Supervised by Dr. Charles Patrick Martin

Seoul National University

M.S. Industrial Engineering

Mar 2021 - Feb 2023

- Validation and Preference User Test of In-Vehicle Virtual Sound
- Center for Human Interface Systems, Supervised by Dr. Myung Hwan Yun

Seoul National University

B.M. Musicology and Music Theory

Mar 2013 - Feb 2020

- Historical Interpretation of Clarinet Repertoire and Ethnomusicology, Cum Laude, Supervised by Dr. Eungi Min

Sunhwa Arts High School

Clarinet Performance

Mar 2010 - Feb 2013

- Student President and Academic Excellence Awards

Publications

A Musical Tension and Release Framework for Sonic Interaction Designers

[Minsik Choi](#), Josh Andres, Alexander Hunter, Charles Patrick Martin

Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, 2025, Yokohama, Japan

GenAICHI 2025: Generative AI and HCI at CHI 2025

Michael Muller, Lydia B Chilton, Mary Lou Maher, Charles Patrick Martin, [Minsik Choi](#), Greg Walsh, Anna Kantosalo

Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, 2025, Yokohama, Japan

Scenario-Based Design to Envision How GenAI Can Support Sound Design Practices

[Minsik Choi](#), Josh Andres, Alexander Hunter, Charles Patrick Martin

Proceedings of the 36th Australian Computer-Human Interaction Conference (OzCHI), 2024, Brisbane, Australia

Tonal Cognition in Sonification: Exploring the Needs of Practitioners in Sonic Interaction Design

[Minsik Choi](#), Josh Andres, Charles Patrick Martin

Proceedings of the 19th International Audio Mostly Conference (AM), 2024, Milan, Italy

Subjective Perception based on Acoustical Parameters for In-Vehicle Virtual Sound

[Minsik Choi](#), Woochul Jung, Sungho Kim, May Jorella Lazaro, Jeonghwan Lee, Soyoun Moon, Myung Hwan Yun

AES International Conference on Automotive Audio, 2024, Göteborg, Sweden

Music Theoretical Approach to Auditory Interface Design: Progressive, Explainable, and Accessible

[Minsik Choi](#)

Factors Affecting Interior Acceleration Sound Preference for Electric Vehicles: a Path Analysis

May Jorella Lazaro, Sungho Kim, Adriance Wilfred Anggang, [Minsik Choi](#), Myung Hwan Yun

Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 2022

Design and Evaluation of Electric Vehicle Sound Using Granular Synthesis

May Jorella Lazaro, Sungho Kim, [Minsik Choi](#), Kichang Kim, Dongchul Park, Soyoun Moon, Myung Hwan Yun

The Journal of the Audio Engineering Society. Audio Engineering Society, 2022

Human-Centered Design in Acoustics Education for Undergraduate Music Majors

[Minsik Choi](#), Max Kapur

The Journal of the Acoustical Society of America. Acoustical Society of America, 2022

Experience

PhD Student Researcher

Sound, Music, and Creative Computing Lab

Mar 2023 - Current

- Sonic interaction design tool development for practitioners combining workflows and tonal tension and release with AI
- Prototyping using JavaScript, React, p5.js, Tone.js, Tonal.js, Python, GenAI APIs, and Figma
- User studies using interviews, focus groups, scenarios, personas, lab experiments, and thematic/statistical analysis
- PRISMA-based scoping reviews and framework development integrating in-depth literature analysis and practical needs

Master's Student Researcher

Center for Human Interface Systems

Mar 2021 - Feb 2023

- User evaluation on in-vehicle virtual sound with Harman International; an in-vehicle experiment with 30 musicians
- Industry projects involving user experiment design and execution with descriptive and inferential statistical analysis

Tutor (course teaching) and Teaching Assistant

Australian National University and Seoul National University

Sep 2019 - Current

- Human-Computer Interaction, undergraduate and graduate, *COMP3900/6390 tutor ANU 2023, 2024, 2025*
- Sound and Music Computing, undergraduate and graduate, *COMP4350/8350 tutor ANU 2025*
- Art and Interaction Computing, undergraduate and graduate, *COMP1720/6720 tutor ANU 2023*
- Human Factors, undergraduate, *406.304 TA SNU 2021*
- Human Interface Design, undergraduate, *406.427A TA SNU 2021*
- History of Western Classical Music, undergraduate, *650.2242 TA SNU 2019*

Student Mentoring

Australian National University

Aug 2025 - Current

- Designing Soundscapes for Verbal Interactions, ongoing undergraduate, *Anneysha Sarkar*
- Sonifying Health Data for Moderating Respiration Rate, ongoing undergraduate, *Aditya Grama*

Professional Service

Conferences in HCI, Sound, and Music

Mar 2023 - Current

- Workshops Co-Chair (NIME' 25); Workshop Co-Organiser (GenAI CHI' 25); Regional Chapter Leader (KASEA ANU' 25)
- Reviewer (CHI' 24, DIS' 25, NIME' 25, CHI' 26, OzCHI' 26)

Music Education Project Manager

SNU, Naver, and Korea Educational Broadcasting System

Jan 2021 - Jun 2022

- Planned and coordinated lesson programmes with SNU music faculty
- Led on-site filming and production for large-scale online music education
- Delivered 300 online music lessons published on Naver

Internships

Start-up Experiences

Apr 2020 - Aug 2020

- Ailys: Developed market-entry ideas for the Middle East and led channel acquisition in Southeast Asia for an ML-based solution
- Outliers: Designed BTL-focused user events as part of the early-stage setup of a social networking service

Projects

PhD Project

Sound, Music, and Creative Computing Lab

Mar 2023 - Current

- Tool development and evaluation; CadenceFlow: Creating Sonic Interactions through Musical Tension and Release
- Framework design with GenAI; A Musical Tension and Release Framework for Sonic Interaction Designers
- Prototyping with GenAI; Scenario-Based Design to Envision How GenAI Can Support Sound Design Practices
- Needs finding user study; Tonal Cognition in Sonification: Exploring the Needs of Practitioners in Sonic Interaction Design
- Systematic scoping review; Sonification and Music: A Systematic Scoping Review

Industry Projects

Human Interface Systems Lab

Sep 2021 - Jan 2023

- Subjective evaluation on in-vehicle virtual sound, *Harman International (Samsung Electronics)*
- Auditory display usability tests for electric vehicles, *Hyundai MOBIS*
- Usability evaluation tool for virtual engine sound, *Hyundai Motors*
- Galvanic vestibular stimulation device development for pilots, *Republic of Korea Air Force*

Undergraduate Projects

SNU and Korean Provincial Government

Sep 2016 - Dec 2016

- An ethnographic study on cheering culture of Korea University, Dr. Hilary Finchum-Sung
- An interpretation of clarinet repertoire from a performance perspective, Dr. Eungi Min
- Silk Road cultural project exploring 10 ports in 9 countries as a musician, Gyeongsangbuk-do

Clarinet Performance

Composition Presentations and Concert Performances

2013 - Current

- ANU Orchestra Concert, Australian National University, 2024
- Paris - Unwise Prince, Sungshin Women's University, 2022
- Reflection for 3 Clarinets in B flat, Ehwa Womans University, 2017
- The Last Resort, Hanyang University, 2016
- Chamber Music Night, Ewon Art Hall, 2013
- Root Woodwind Quintet Recital, Yonsei University, 2013

Achievements

2023-26 **PhD Scholarship**, Stipend for 3.5 years, travel and removal allowances

ANU

2023-26 **Fee Remission Merit Scholarship**, Doctoral program full tuition fee waiver

ANU

2021-22 **Scholarship for Next Academic Generation**, Master's program full tuition fee waiver

SNU

2017 **Undergraduate Independent Research Award**, Research grant and Encouragement award

SNU