Esteban Andrés Gómez Mellado

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Education

Aalto University 2022 - present

Doctoral Programme in Electrical Engineering

- Research: Deep learning for real-time speech processing, noise suppression, dereverberation, artificial bandwidth extension.

Universitat Pompeu Fabra 2020 - 2021

Master in Sound and Music Computing

- GPA: 9.5 / 10.0
- Coursework: Audio Signal Processing for Music Applications, Natural Language Interaction, Music Information Retrieval, Music Perception and Cognition.
- Thesis: Deep Noise Suppression for Real Time Speech Enhancement in a Single Channel Wide Band Scenario.

Berklee College of Music 2016 - 2017

Master of Music in Music Production, Technology and Innovation

- GPA: 10.0 / 10.0
- Coursework: Computer Generated Music, Virtual Reality, Music Production, Music Mastering, Sound Design, Video Mapping, Sound Installation and Live Performances.

University of Chile 2010 - 2015

Bachelor of Arts with Concentration in Sound

(U.S. Equivalence: Bachelor of Science degree with a major in Sound Engineering)

- GPA - 3.74 / 4.0.
- Teaching Assistant for Differential Calculus, Integral Calculus, Multivariable Calculus and Differential Equations.
- Coursework: Calculus, Algebra, Statistics, Physics, Acoustics, Computer Science, Circuit Analysis, Electroacoustics, Sound Recording, Sound Synthesis, Research Techniques, Music Theory, Harmony, Music Literature, Ear Training.

Skills

Languages: Spanish (native); English (fluent); Catalan (elementary); Finnish (elementary).

Software and hardware resources: PyTorch, TensorFlow, ONNX, MATLAB, JUCE, Git, Visual Studio Code, Xcode, Max/MSP, music21, Reaper, Pro Tools, Ableton Live, Adobe Suite, WaveLab, Sibelius, Arena, Arduino, Raspberry Pi, EAGLE, OpenGL.

Programming, markup and domain-specific languages: C, C++, Rust, Python, JavaScript, HTML, CSS, PHP, SQL, Bash.

Professional Experience

Revoize Inc. 2025 - present

Senior Speech Researcher

- Real-time Generative Speech Enhancement Researcher.

Mitek Systems 2024 - 2025

Machine Learning Engineer

- IDVoice Research and Engineering.

Voicemod Inc. 2021 - 2024

Applied Machine Learning Engineer (Audio Processing)

- Deep learning methods for real-time speech enhancement, watermarking and deep fake detection.
- Research and implementation of 5+ on-device real-time and offline speech processing algorithms for desktop app and automatic data ingestion pipelines.
- Lead and contributed to implementation of audio watermarking system funded by the Spanish Government.

Intorno Labs 2017 - 2021

Software Tools Designer and Developer

- Programmer and designer of immersive audio plugins for artists including Open Sound Control and real-time trajectory tracing.
- Plugins used in several festivals and venues such as Sónar+D, Lapsus, MIRA, MUTEK, Arena di Verona (Italy), or Expo City (Dubai).

Berklee College of Music, Valencia Campus 2018 - 2021

Academic Technology Coordinator

- Setup, maintenance and software deployment in 2 technology laboratories and 5 recording studios including the Ann Kreis Scoring Stage.

Núcleo Emovere Research Group, University of Chile 2015 - 2017

Software Developer and Touring Artist

- Designed and programmed a real-time physiological data sonification system for research and live performances.
- 1 published paper, 20 live performances and 1 talk.

Audiovisual Archive, Chilean National Library 2014 - 2015

Audiovisual Consultant and Software Designer

- Designed the first digitization station of the archive.
- Digitized exclusive content of the poetess and Nobel Prize in Literature, Gabriela Mistral.
- Designed and programmed a software for remote audiovisual heritage management.

Publications and Talks

Publications

- Gómez Esteban, Bäckström Tom. “Real-time Joint Noise Suppression and Bandwidth Extension of Noisy Reverberant Wideband Speech”. International Workshop on Acoustic Signal Enhancement IWAENC, 2024.

- Gómez Esteban, Bäckström Tom. “Low-complexity Real-time Neural Network for Blind Bandwidth Extension of Wideband Speech”. 31st European Signal Processing Conference Proceedings EURASIP, 2023.

- Gómez Esteban, Wimmer Benedikt. “Temporal Evolution of Makam and Usul Relationship in Turkish Makam”. Musicological Annual, 58(2), 107-119, 2023.

- Bäckström Tom, Räsänen Okko, Zewoudie Abraham, Zarazaga Pablo, Koivusalo Liisa, Das Sneha, Gómez Esteban, Bouafif Mariem, Ramos Daniel. Introduction to Speech Processing, 2022.

- Gómez, Esteban, Javier Jaimovich. “Designing a Flexible Workflow for Complex Real-Time Interactive Performances.” Proceedings of the International Conference on New Interfaces for Musical Expression, 2016.

Talks

- Neural networks for real-time speech processing. Sound Engineering, University of Chile, 2022.

- Introduction to artificial intelligence in audio. Sound Engineering, University of Chile, 2021.

- Real-time Audio Technology Implementation Workshop, Sound Technology, Duoc UC, 2020.

- About Immersive Audio Techniques and Technologies, Audiovisual Programming, Sound Engineering, University of Chile, 2020.

- Plugin development in Max for Live. Formula to implementation. Advanced Topics in Audio Technology, Berklee College of Music, 2017.

- Designing Max for Live plugins for live performances. Ableton User Group Valencia, Berklee College of Music, 2017.

- Introduction to Gen in Max and Max for Live. Advanced Topics in Audio Technology, Berklee College of Music, 2017.

- Interactive Platform Design in Max/MSP. A/V Arts Fest, Startup Chile and Arts Faculty, University of Chile, 2016.