Liam Elliot

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EDUCATION

Princeton University 2018–present
PhD Candidate in Music Composition, expected completion December 2024
Supervised by Daniel Trueman
Dissertation: *Worldmaking in Music, Sound Art, and Instrument Design*

University of Cambridge, Emmanuel College 2014–2015
MPhil in Music Studies – Composition
Supervised by Richard Causton, Joseph Phibbs, and Jeremy Thurlow

Acadia University 2010–2014
BMus – Composition
Supervised by Derek Charke and Dinuk Wijeratne

RESEARCH INTERESTS

- Hybrid acoustic/electronic signal processing in instrument design
- Applications of natural processes for sound generation and manipulation
- Spatialization and unconventional audio playback systems
- Nature and place in the audio arts
- Physical computing

TEACHING EXPERTISE

- Electronic and computer music history and practice
- Electronic music performance and improvisation
- Applied audio electronics and coding
- Recording, mixing, and production
- Acoustic and electroacoustic composition
- Sound art
- Acoustics

COURSES TAUGHT

Post-Graduate Research Associate/Lecturer (upcoming)
Princeton University

Handmade Sound Practices   2025

Explores the creation of DIY audio-based artmaking practices. Classes will combine hands-on experiential learning with creative presentations from faculty, students, and multidisciplinary guest artists. I am designing this seminar with joint sponsorship from the Department of Music and the Council on Science and Technology.

Assistant in Instruction (co-teaching)
Princeton University

Transformations in Engineering and the Arts   2023–2024

- Designed and delivered lectures on acoustics, synthesis, sound art, and audio programming
- Taught coding in p5.js, Max/MSP, Arduino, and Python
- Trained students in hands-on skills including physical computing, circuit design, laser cutting, 3D printing, and soldering
- Mentored student creative projects from concept to realization

Undergraduate and Graduate Lesson Instructor   2020–2023
Princeton University

Composition and Electronic Music Lessons

- Composition lesson topics include harmony, counterpoint, arranging for chamber ensembles, orchestral scoring, engraving, songwriting, and film scoring
- Electronic music lesson topics include modular and digital synthesis, studio recording techniques, and audio production in Ableton Live, Logic, and Reaper
- Students have gone on to graduate studies at institutions including UC Berkeley, NYU Steinhardt, the Royal Conservatoire of Scotland, and the Peabody Institute

Assistant in Instruction
Princeton University

Musical Instruments, Sound, Perception, and Creativity   2021–2023

- Taught classes on topics including acoustics, psychoacoustics, and instrument design
- Led labs exploring related topics through hands-on experimentation
- Refined existing curriculum and created a new lab on analog electronic sound

Computer and Electronic Music Composition   2021

- Assisted with classroom teaching on topics in composition, synthesis, and production
- Supported student creative projects from concept to realization

Music Theory Through Performance and Composition   2020

- Taught classes on tonal harmony, counterpoint, and composition
- Mentored student composition projects

Computer and Electronic Music through Programming, Performance, and Composition 2019

- Delivered lectures on video programming in Max/MSP
- Assisted with classroom teaching focused on ChucK and Max/MSP
- Worked with students individually and in groups to support creative coding projects

Teaching Assistant for Composition and Theory
Acadia University

Music Theory   2012–2014

- Led weekly theory workshops on topics in tonal harmony, counterpoint, and atonal theory

Musicianship Lab   2012–2014

- Tutored students on musicianship skills including sight singing, ear training, and piano

Introduction to Composition   2012–2014

- Provided feedback on composition projects
- Assisted in organizing group critiques, guest visits, and composition recitals

ACADEMIC SERVICE

Music Mentoring Program   2022–present

Mentored individual students from a wide variety of backgrounds in areas including:
- Navigating Princeton as a first-generation university student
- Understanding graduate and undergraduate student requirements, resources, and opportunities
- Developing an artistic career, approaches for artistic projects, and mentoring skills

Associate Director of the Princeton Laptop Orchestra (PLOrk)   2021–present

- Led rehearsals and performances
- Taught students technical skills including analog audio electronics, networked performance, interpreting and performing with graphic scores
- Max/MSP skills taught include Jitter, digital synthesis, and live audio manipulation
- Mentored member composers in developing code for creative projects

Composition Colloquium Series   2019-2020

Collaboratively curated and organized a series of talks from a diverse range of artists. My guests included Meredith Monk and Zosha Di Castri.

Guest Speaker   2022

Invited as a guest speaker at an Art and Science dinner talk hosted by the Princeton University Council on Science and Technology. Shared an artist's perspective on collaborative work between fine arts and the sciences.

HackPrinceton Guest Judge   2019

Invited as a guest judge and mentor at biennial hackathon event with over 600 students creating software and hardware products.

SELECTED RECENT PROJECTS

Resin   2024–2025

Received a Canada Council for the Arts: Concept to Realization grant to support the completion of a string feedback resonator instrument I have been developing for the last four years. *Resin* uses hybrid acoustic/electronic signal processing to create sounds ranging from subtle sympathetic resonance to complex feedback. I am recording an album with artists from across Canada and the US that explores the collaborative nature of the instrument.

Fallow   2024

Premiered by the JACK Quartet and composed using HEJI notation and just intonation. The performance is accompanied by video projection from a custom Jitter patch.

Glimmer   2024

Designed, programmed, and performed a live-video improvisation instrument for music by Dmitri Tymoczko. Premiered in Princeton with additional performance in Rome at the World Congress of Philosophy.

Breathe/Chime   2024

Performance/installation premiered by the Princeton Laptop Orchestra. Used RNBO to develop a web-based instrument for audience use. Built in collaboration with researcher David Borts from Princeton University's Computational Imaging Lab.

Carbon/Silicon   2024

Premiered by Sō Percussion. The piece explores hard panned stereo rhythms and performative amplification changes through a custom Max/MSP patch.

Sublimation 2024

Premiered by Alkali Collective with the support of a commission grant from the Canada Council for the Arts. The piece uses a spectral approach, beginning with high partials that later reveal an underlying melody.

Sonic Cellar 2024

Performances with Jeff Snyder (modular synthesizer) and Jacqui Kerrod (harp). Performed using custom improvisation-focused sequencers developed in Lua for the Norns platform.

Adulthood 2022–2024

Album recording and duo performances with HENDRA. Performances in Alberta, Nova Scotia, and the UK. Recorded with Juno Award-winning producer Dan Ledwell.

MIDI Typewriter 2023

Commissioned project to transform an antique typewriter into a MIDI controller. The final product used capacitive touch plates, a Teensy microcontroller, and custom firmware that allows for mode switching.

RESIDENCIES AND FESTIVALS

Musician in Residence 2017, 2020, 2021, 2023
Banff Centre for Arts and Creativity

- Live show development for performances with singer-songwriter HENDRA
- Collaboration with poet Susan McMaster and violist Sarah McCabe
- Performance with the International Contemporary Ensemble and other musicians
- Field recording and collaborative composition and improvisation

Sound Atlas Festival 2023
Calgary, Canada

Composed and performed *Winter Music* and *Oceans*, two pieces rooted in field recordings from Banff and Halifax and featuring poetry by Monica Kidd. Performance included quad sound, projection, and custom software instruments. *Winter Music* has also been recorded by India Gailey on their album *Lucid* and performed by several musicians internationally.

48h Neukölln Festival 2018–2022
Berlin, Germany

- Light-reactive oscillator installation/instrument
- Improvised electronic live performance including custom software
- Sound map to create a hybrid audio/visual 1:1 scale map
- Performances of notated works

RECENT AWARDS AND HONOURS

Exemplar Mentor Award   2024
Princeton University McGraw Center for Teaching and Learning

Recognizes a teacher/mentor who embodies the characteristics of "empathy, availability, enthusiasm, commitment, and a willingness to go 'above and beyond' to help mentees succeed in their professional, academic, and/or personal goals."

Dean's Completion Fellowship   2024
Princeton University Composition Department

Awarded to one composition student per year to support dissertation completion before awarding the position of Postgraduate Research Associate.

SKILLS

Composition

- Notated acoustic and electroacoustic music including solo, chamber, and large ensemble
- Fixed, improvised, and generative electronic music
- Music for visual media
- Song arrangement and orchestration
- Software and modular synthesis
- Just Intonation

Software

- Coding in Max/MSP, Lua, p5.js, Arduino, and ChucK
- Recording/production in Logic, Ableton Live, and Reaper
- Composition in Dorico, Sibelius, and MuseScore

Electronics and Hardware Design

- Signal processing with analog electronics
- Circuit and PCB design
- Soldering
- Testing and debugging
- 3D printing, laser cutting, and CNC

Recording and Production

- Studio, live, and field recording technique
- Sound design and synthesis
- Mixing and production

REFERENCES

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