

Education

Doctor of Philosophy, Music Composition (ABD)	2021
University of California, Santa Barbara, USA	
Committee: João Pedro Oliveira (chair), Curtis Roads, JoAnn Kuchera-Morin	
Master of Science, Media Arts & Technology	2021
University of California, Santa Barbara, USA	
Committee: Curtis Roads (chair), JoAnn Kuchera-Morin, Karl Yerkes	
Master of Arts, Music Composition	2019
University of California, Santa Barbara, USA	
Committee: Clarence Barlow (chair), Curtis Roads, Ben Levy	
Bachelor of Arts, Interdisciplinary Major in Music and Psychology (with distinction)	2013
St. Thomas University, Fredericton, Canada	

Principal Teachers

Curtis Roads, João Pedro Oliveira, Clarence Barlow, JoAnn Kuchera-Morin, Andrew Tholl, Martín Kutnowski

Additional Teachers (Masterclasses, Workshops, Academies)

Field Recording: Douglas Quin, Philip Samartzis (Bogong Centre for Sound Culture)

Live Electronics: Alvis Vidolin, Nicola Bernardini (Accademia Musicale Chigiana)

Acousmatic Composition: Annette Vande Gorne, Hans Tutschku (Musiques & Recherches)

Conducting: Alfredo Coral (St. Thomas University)

Awards, Grants, & Fellowships

2021	Dorothy and Sherrill C. Corwin Award for Excellence in Composition <i>1st prize in solo/chamber category for Coacervate</i>
2020	Musica Nova International Electroacoustic Music Competition 2020 Finalist <i>De Rerum Natura</i>
	Destellos International Electroacoustic Competition 2020 Honorable Mention <i>De Rerum Natura</i>
	SIMEC Electroacoustic Music Competition 2020 Finalist <i>De Rerum Natura</i>
	Graduate Division Dissertation Fellowship
	MAT Merit Supplemental Support Research Stipend
	ASCAP/SEAMUS Award Finalist <i>De Rerum Natura (under the name "Dimensionless")</i>
2019	Summer Culture and Community Grant <i>UCSB Summer Music Festival</i>
	Dorothy and Sherrill C. Corwin Award for Excellence in Composition <i>1st prize in Percussion category for Sisyphe Heureux</i>
	Dorothy and Sherrill C. Corwin Award for Excellence in Composition <i>2nd prize in Electroacoustic category for Glossopoeia</i>
	Peter Racine Fricker Research Stipend
2018	International Doctoral Recruitment Fellowship

Awards, Grants, & Fellowships (cont.)

Summer Cultural and Enrichment Grant

UCSB Summer Music Festival

Corwin Grant

UCSB Summer Music Festival

- 2017 **The Peter Racine Fricker Fellowship for Studies in Composition**
UCSB Regents Departmental Fellowship
International Doctoral Recruitment Fellowship
Peter Racine Fricker Research Stipend
- 2016 **The Peter Racine Fricker Fellowship for Studies in Composition**
UCSB Regents Departmental Fellowship

Academic Appointments

- 2021 **Teaching Associate - Intermediate Composition** (as Instructor of Record)
University of California, Santa Barbara
- Gave one-on-one lessons to mentor students majoring in composition
 - Tailored study plans for each student based on artistic and technical development outcomes.
- Teaching Associate - Class Composition** (as Instructor of Record)
University of California, Santa Barbara
- Created a custom curriculum and course materials for students minoring in composition.
 - Designed flipped classroom format for hybrid synchronous-asynchronous virtual learning.
- 2018-2020 **Teaching Assistant – Computer Music** (Instructor of Record: Curtis Roads)
University of California, Santa Barbara
- Electronic Music: History & Aesthetics, Sequencing & Synthesis, and Sound Transformation
 - Gave group and individual lessons on the concepts, techniques, and history of electronic music and digital recording. Facilitated group lab sessions in electronic composition.
- 2010-2012 **Tutor – Music Department**
St. Thomas University
- Tutored on music theory and composition in group and one-on-one contexts.
- Tutor – Psychology Department**
St. Thomas University
- Tutored for first-year Psychology students.

Professional Activities

- 2021- **Co-Creative Director – Nomadic Soundsters**
Virtual
- Along with the Core Team (Joanna Hui and Claire Igawa) founded an arts collective aimed at promoting equitable artistic collaboration and virtual community building.
 - Currently running a year-long residency program with 23 artists. Organizing workshops, guest lectures, outreach, and other community building activities.
- 2017-2020 **CREATE Technical Coordinator**
University of California, Santa Barbara
- Lead engineer and technical director for all CREATE concerts (4 concerts per year). Presented in 8-channel surround, often involving complex routing and live electronics.
 - Managed 3 multi-channel electronic music studios. Responsible for access control, maintenance, and upgrades of software, hardware, and facilities.
- 2020 **A1 Engineer – Alliance of Women in Media Arts and Science Conference**
University of California, Santa Barbara

Professional Activities (cont.)

- 2019 **Co-Artistic Director – UCSB Summer Music Festival**
University of California, Santa Barbara
- Organized 2-day festival featuring 11 distinct events (10 concerts, 1 exhibition) showcasing diverse musical traditions and interdisciplinary collaborations.
 - Responsibilities included consulting (for other festival organizers), concert programming, financial direction (grant writing, budgeting, negotiating), and booking venues.
- A1 Engineer – Alliance of Women in Media Arts and Technology Conference**
University of California, Santa Barbara
- 2018 **Executive Director – UCSB Summer Music Festival**
University of California, Santa Barbara
- Executive Director of 2-day festival featuring 10 distinct events (9 concerts, 1 exhibition) in traditional and non-traditional spaces.
 - Responsible for the entire planning and execution of the festival.
 - Specific responsibilities included artistic direction (program planning, hiring artists), financial direction (grant writing, budgeting, negotiating), and technical direction (booking venues, production, execution).
- Technical Director – Alliance of Women in Media Arts and Technology Conference**
University of California, Santa Barbara
- Lead audio engineer and technical director for all conference concerts and talks
- 2017 **Composition Forum Coordinator**
University of California, Santa Barbara
- 2016 **Research Assistant – First-Year Seminars**
University of California, Santa Barbara – Supervisor: Clarence Barlow
- Producer – *Bending Light* (Tactus)**
- Vocal engineer and producer for full-length progressive metal album *Bending Light* by Tactus
 - Vocal Editing using Melodyne
- 2014 **Producer – *T* (Tactus)**
- Vocal engineer and producer for progressive metal EP *T* by Tactus
 - Vocal Editing using Melodyne
- 2012 **Lab Assistant – Psychology Department**
St. Thomas University
- 2010 **Research Assistant – Music Department**
St. Thomas University – Supervisor: Martín Kutnowski

Service

- Adjudicator** – Society for Electroacoustic Music in the United States (SEAMUS) Conference 2022
- Adjudicator** – Society for Electroacoustic Music in the United States (SEAMUS) Conference 2021
- Translator** – Francis Dhomont “Abstraction et figuration dans ma musique”

Conference Presentations & Guest Lectures

- Sep 23, 2021 Visiones Sonoras
- Performance: *Coacervate*
- Sep 22, 2021 Visiones Sonoras
- Presentation: *CHON: A Physics-Based LFO Array*
- Aug 28, 2021 2021 SCI National Student Conference
- Performance: *Coacervate*

Conference Presentations & Guest Lectures (cont.)

- Apr 24, 2021 SEAMUS 2021 National Conference
- Performance: *Coacervate*
- Mar 19, 2021 Sonic Art (Colby College)
- Guest Lecture: *Algorithmic Composition*
- Feb 23, 2021 Composition LAB (Estonian Academy of Music and Theatre)
- Guest Lecture: *CHON: from physics to musical gesture*
- Oct 30, 2020 Composition Forum (University of California Santa Barbara)
- Presentation: *Controlling EmissionControl2*
- Apr 22, 2020 Earth Day Art Model 2020
- Performance: *HeatWaves*
 - Co-Presenters: SUDO Ensemble
- Mar 12, 2020 SEAMUS 2020 National Conference
- Performance: *Dimensionless*
- Feb 4, 2020 Alliance of Women in Media, Arts, & Sciences Conference 2020
- Workshop: *Introduction to Computer Music Programming in Pure-Data*
 - Co-Presenter: Elizabeth Hambleton
- Jan 18, 2020 Womxn/Hacks 2.0
- Workshop: *Intro to Computer Music Programming*
- Nov 8, 2019 NowNet Arts Conference 2019
- Performance: *Trans-Pacific Concert between University of California Santa Barbara and the Elder Conservatorium of Music in Adelaide*
 - Co-Presenters: Ken Fields, Elder Conservatorium network ensemble, UCSB network ensemble
- May 2, 2019 Sound + Science Symposium 2.0, UCLA
- Performance and Panel: *"Artsmesh Network Music Performance and Discussion"*
 - Co-Presenters Ken Fields, Joel Ong, Gil Kuno
- Oct 30, 2018 Art22: Introduction to Programming for the Arts (University of California Santa Barbara)
- Guest Lecture: *"Coding as Compositional Process"*
- Aug 8, 2018 International Computer Music Conference 2018, Daegu, South Korea
- Performance: *Bachflip*

List of Works & Performances

2021 **Coacervate**

Violin and Electronics

1st prize Dorothy and Sherrill C. Corwin Award in Solo/Chamber category

Sep 2021: Chelsea Edwards, Visiones Sonoras, Morelia, Michoacán, Mexico (online)

Aug 2021: Chelsea Edwards, SCI National Student Conference, Online

Jun 2021: Chelsea Edwards, Synesthesias: New Music at UCSB 2, Santa Barbara (online)

Apr 2021: Chelsea Edwards, SEAMUS 2021, Online

Dec 2020: Chelsea Edwards, ECM Concert, Santa Barbara (online), Premiere

2020 **Pandæmonium**

Piano Four Hands

Aug 2020: HOCKET, UCSB Summer Music Festival 2020, Santa Barbara (Online), Premiere

List of Works & Performances (cont.)

De Rerum Natura

2-channel fixed media

ASCAP/SEAMUS Award 2020 Finalist

SIMEC Electroacoustic Music Competition 2020 Finalist

Destellos International Electroacoustic Competition 2020 Honorable Mention

Musica Nova International Electroacoustic Music Competition 2020 Finalist

Oct 2021: Rodney DuPlessis, Musiques Démesurées, Clermont-Ferrand, France

Dec 2020: Rodney DuPlessis, Musica Nova Concert of finalists, Prague, Czech Republic (online)

Mar 2020: Rodney DuPlessis, SEAMUS 2020, Charlottesville, Virginia, (online)

Aug 2019: Rodney DuPlessis (live diffusion on the Musiques & Recherches Acousmonium), Influx Summer Festival, Brussels, Belgium, Premiere

Oscilla

Interactive Exhibit

Oct 2020 – Ongoing: The Museum of Sensory and Movement Experiences, Santa Barbara

2019 **Mysterium Cosmographicum**

2-channel Audio and Oscilloscope

Aug 2019: UCSB Summer Music Festival 2019, Santa Barbara

Jun 2019: MAT End of Year Show, Santa Barbara

Mar 2019: First Thursday @ SBCAST, Santa Barbara, Premiere

2018 **Sisyphé Heureux**

for percussion quartet and electronic playback

1st prize Dorothy and Sherrill C. Corwin Award in Percussion category

Aug 2018: Los Angeles Percussion Quartet, Santa Barbara, Premiere

Follow the Lieder

for viola and live electronics

Premiere forthcoming

Disconnect

for saxophone and HASGS (Hybrid Augmented System of Gestural Symbiosis)

Nov 2018: Henrique Portovedo, I Encontro de LiveLoopists, Aveiro, Portugal

Jun 2018: Henrique Portovedo, ICLI 2018, Porto, Portugal

Mar 2018: Henrique Portovedo, Santa Barbara, Premiere

Quinto Suono

for string quartet

Jan 2018: Formalist Quartet, Santa Barbara, Premiere

2017 **2fl v – 2fl**

for flute duo

Aug 2017: Adriane Hill and Cynthia Vong, Santa Barbara, Premiere

BachFlip

4-channel fixed media

Aug 2018: International Computer Music Conference (ICMC) 2018, Daegu, Korea

Jun 2017: Santa Barbara, Premiere

Feedback

for double bass and live electronics

May 2017: Scott Worthington, Santa Barbara, Premiere

List of Works & Performances (cont.)

- 2016 **Glossopoeia**
2-channel fixed media
2nd prize Dorothy and Sherrill C. Corwin Award in Electroacoustic category
Apr 2018: CEMEC, CCRMA/Stanford
Apr 2018: CEMEC, Santa Barbara
Nov 2017: CREATE presents: Sound Resistance, Santa Barbara, Premiere
- Surface Tension**
4-channel fixed media
Apr 2017: CEMEC, Mills College
Apr 2017: CEMEC, San Diego, Premiere
- Bending Light** (collaborators: Adrian Barnes, Alec Dobbelsteyn, Ben Maclean)
for progressive metal quintet
Jan 2017: Tactus, Fredericton, Premiere
Oct 2016: Tactus, Worldwide, digital and physical album release
- Back to Zero**
original score and sound design (Theatre)
Mar 2016 (4 shows): Next Folding Theatre Company, Fredericton, Premiere
- The Bacchae**
original score and sound design (Theatre)
Feb 2016 (4 shows): Theatre St. Thomas and The Coop, Fredericton, Premiere
- 2015 **Memory of a Rêverie**
for orchestra
Dec 2015: Yokohama Youth Orchestra, Yokohama, Reading
- Trudeau and the FLQ**
original score and sound design (Theatre)
Nov 2015 (5 shows): Theatre St. Thomas, Fredericton, Premiere
- 2014 **The Taming of the Shrew**
original score and sound design (Theatre)
Nov 2014 (5 shows): Theatre St. Thomas, Fredericton, Premiere
- Rêverie**
for piano, flute, and cello
Jun 2014: Windsor University Trio, Fredericton, Premiere
- T** (collaborators: Adrian Barnes, Alec Dobbelsteyn, Ben Maclean)
for progressive metal quintet
Jun 2014: Tactus, Fredericton, Premiere
- 2013 **Chimes**
fixed media installation
Nov 2013: Fredericton, Premiere
- 2012 **Elements**
for piano
- 2011 **Kosala & Maghada**
clarinet concerto with violin, viola, and cello
- 2010 **Upon Lonely Seas**
for string quartet
Dec 2010: Eurodam String Quartet, The Caribbean Sea, Reading

Selection of Original Software & Programs

PRISM (C++, JUCE)

PRISM is a forthcoming suite of spectral processing VST plugins. It aims to provide unusual and novel spectral processing possibilities for sound design and composition. It will include a recreation of the spectral dilation algorithm of PISCES in VST form, and several other effects.

QHOSYN (C++)

QHOSYN is the Quantum Harmonic Oscillator Synthesizer. The software employs an accurate quantum simulation of an observable in a superposition of eigenstates up to the $n=15$ energy level. It can be used to generate evolving sound and control signals directly using a quantum wave function based on the time-dependent Schrödinger equation. Through sonic exploration, the user can create “quantum sounds” and gain an aesthetic understanding of quantum objects.

CHON (C++)

Coupled Harmonic Oscillator Network (CHON) is a real-time, interactive application for generating sonic gestures and textures using a simulation of a physical dynamical system as a musical interface. The physical system is a network of particles connected by a spring-like force. The user sets the system into motion by displacing a particle, which causes a chain reaction governed by Newtonian mechanics. An evolution of the LFO, the system generates complex yet tangible control data that can be used to drive parameters for sound synthesis and other purposes.

EmissionControl2 (C++) Collaborators: Jack Kilgore, Curtis Roads

EmissionControl2 (EC2) is a standalone interactive real-time application for granular synthesis. It is available for MacOS, Linux, and Windows. This project was a two-year endeavor to revive Curtis Roads' and David Thall's EmissionControl (2005). It turned into a complete overhaul with innumerable new features and improvements. EC2 has been downloaded by over 5000 musicians worldwide.

Alloscope (C++)

Alloscope is an X-Y or "octopus" configuration oscilloscope application for visualizing stereo audio files. It can be used to explore Lissajous curves and vector art that usually requires a vector display like an analog oscilloscope or Vectrex. This software aims to mimic these analog machines as much as possible, but on a pixel-based display like your computer screen. Available for Windows, MacOS, and Linux.

Pulsar- (Pure Data)

An implementation of Pulsar Synthesis as described in “Composing with Pulsars” (Roads, 2000) in Pure Data. Features include loading an arbitrary waveform as a pulsaret, versatile enveloping, real time control over fundamental and formant frequencies, sync or phase-locking, and a masking input that accepts a binary list as a masking pattern (numbers between 1 and 0 can also be given for partial masking).

Sieves [revised version, 2019] (C) Collaborator: Curtis Roads

Originally written in BASIC by Iannis Xenakis and later translated to C by Gérard Marino, the entire code was written out in chapter XII of Formalized Music (Xenakis, 1990). However, the code relied on deprecated libraries and contained other errors, so we revised and adapted the code to work with C standard libraries and submitted the revised program to the Centre Iannis Xenakis for preservation.

Xieves (Pure Data)

An implementation of Xenakis' Sieve technique of series generation in Pure Data. The versatility of the Pure Data environment allows the output of the object (a number series) to be used in a myriad of constructions from scales and harmonies to rhythmic patterns and envelopes; anything that can accept a sequence of integers. In addition, this program expands on the original sieve software designed by Xenakis (1990) by allowing for the then-unfeasible ability to realize Xenakis' conception of *metabolae* (transformations of the sieve) in real time.

PISCES (C++)

An original program for realizing my concept of Spectral Dilation, a process whereby the power of a spectrum is pulled toward or repelled from a chosen frequency. This software has two modes: one allows the user to construct a synthesized spectrum through additive synthesis, and the other allows real-time manipulation of an audio stream.

Professional Affiliations

ASCAP, ICMA, SEAMUS, AES, SCI, SUDO Ensemble, Nomadic Soundsters

Additional Proficiencies

Languages

Spoken: English, French

Computer: C++, Python, Rust, HTML, Pure Data, Max/MSP, Bash, Processing(Java), Csound

Software

DAWs: Logic Pro, Pro Tools, Ableton Live, Ardour, Audacity, Reaper

Notation: Lilypond, MuseScore, Sibelius, Finale

Specialized: Melodyne, SPEAR, Metasynth, Audiosculpt, GIMP, KDenlive

Production

Studio: Recording, mixing, editing, post-production, studio maintenance and management

Live: Multi-channel concert design and execution, live electronics, live diffusion

Other

Acoustics, sound design, digital signal processing, music engraving (Lilypond), web design, human-computer interaction (GUI design), network music ensemble