
Curriculum Vitae

Profile

- » Two decades transforming vision into action as an impactful organizational and education leader and strategist, active and inclusive learning innovator, program developer, learning designer, and all things creative, with diverse teams and audiences
- » Leading academic and professional teams in designing and delivering data-informed, active, learner-centered teaching and learning experiences, strategies, programs, curricula, assessments, analytics, and technology to optimize efficacy and engagement, responsive to audience, goals, deadlines, and budget
- » The ability to advance the efficiency, efficacy, and spirit of teams and craft meaningful, data-driven, human-centered learning experiences that catalyze system-wide change
- » A talent for tech, a knack for storytelling, and the vision to transform how organizations engage their audiences and each other

Specialties: Education Leadership, Organizational Strategy, Arts Administration, Program Development, Project Management, Education Theory, Learner Success, Instructional Technology, Instructional Design, Active Learning, Learning and Development, Curriculum Design, Online/eLearning, Creative Technology, Intermedia Production

Education

2023

Certificate, Computational Thinking for Problem Solving

University of Pennsylvania, School of Engineering and Applied Science, Philadelphia, PA, USA
Decomposition / Pattern Recognition / Data Representation and Abstraction / Expressing and Analyzing Algorithms / Computational Thinking Processes in Python

2017

Master of Science (MSc), Digital Education (Honours)

The University of Edinburgh, Moray House School of Education, College of Arts, Edinburgh, Scotland, UK
Institutional Strategy for Online Education / Learning Engineering / Education Theory Research / Instructional Design / Learning Technologies / Learning Analytics / Educational Data Mining / Digital Game-Based Learning / Education Equity, Diversity, and Inclusion

2016

Learning Analytics: Process and Theory, Graduate coursework

Columbia University, Teachers College, New York, NY, USA
Educational Data Mining / Intelligent Tutoring Systems / Artificial Intelligence in Human Learning

2011

Intelligent Audio Systems, Post-baccalaureate

Stanford University, Center for Computer Research in Music and Acoustics (CCRMA), Stanford, CA, USA
Music Information Retrieval / Data Mining / Human-Computer Interaction / Machine Learning

2011

Creative Coding, Post-baccalaureate

Gray Area Foundation For The Arts, San Francisco, CA, USA
Creative Coding / Human-Computer Interaction / Music Information Retrieval / Interactive Applications

2007

Certificate, Algorithmic Computer Music (WACM)

University of California, Santa Cruz, Santa Cruz, CA, USA

2006 – 2020

Apple Certified Master Trainer Certification ACT T3 (28 Certifications)

Apple, Boston, MA, USA

2001

Bachelor of Applied Science (BASc), Sound Arts (Honors)

Ex'pression Center for New Media, Emeryville, CA, USA

Acoustics / Recording / Mixing / Mastering / Sound Design / Post Production / Signal Processing / Electronics /

Electronic Composition / Interactive Audio / Multimedia Programming

Education Experience

September 2017 – present

Learning Engineer

Unforgettable Learning, San Francisco, CA (Remote)

- Lead academic and professional teams in designing and delivering data-informed, active, learner-centered teaching and learning experiences, strategies, programs, curricula, assessments, analytics, and technology to optimize efficacy and engagement.
- Responsive to audience, goals, deadlines, and budget.
- Human-centered design and systematic application of evidence-based principles and methods from educational technology and the learning sciences to create engaging and effective learning experiences, support the difficulties and challenges of learners as they learn, and come to better understand learners and learning.
- Design and develop learning solutions, leveraging tested instructional design theories, practices, and methods to create learning activities that are engaging, activity-based, and results-oriented.
- Develop and maintain learning solutions that satisfy the needs of a diverse set of learners (instructor-led videos, online courses, quick reference guides, job aids, and performance support)
- Develop design documents, storyboards, scripts, media lists, and assessment tools.
- Translate written content into visual descriptions (graphics, animations, interactive charts and graphs, video-based scenarios) with accuracy and appropriateness.
- Drive effective project management in all projects by identifying scope, key stakeholders, and RACI.
- Deliver and facilitate pilots and train-the-trainer [T3] sessions.
- Perform learning-needs analysis and prescribe the appropriate learning experience to close performance gaps.

Skills:

- Proficient in adult learning and instructional design methodology.
- Ability to convert technical or complex information into easily used and understandable text and graphics.
- Experience designing and developing Policy training.
- Proficient in designing and developing Virtual Instructor Led training and Blended Learning solutions.
- Proficient in e-learning authoring tools.

January 2021 – November 2022

North America Director of Learning Design

SAE Institute, North America (Remote)

- Founded the Learning Design department for the North America system of colleges from scratch.
- Created more than 400 learning experiences in the first six months while hiring and training a team and establishing the department from the ground up.
- Led learning designers and learning media developers in collaboration with curriculum committees, SMEs, and XFNs to develop and implement creative arts higher education teaching and active learning applications in multiple modalities for 7 North American campuses.
- Served as the institutional expert for online and hybrid learning.
- Led academic and instructional innovation initiatives.
- Led the integration of learning design in the curriculum development of new academic programs and the enhancement of legacy programs.

- Oversaw systemwide learning management systems.
- Ensured institutional accreditation compliance and global educational quality standards.

October 2018 - September 2021

Director of Education

Expression College, Emeryville, CA

- Chief academic and student affairs officer for the campus.
- Responsible for all aspects of academic operations.
- Hiring and regularly training 60+ Program Chairs and faculty and supporting thousands of students.
- Oversaw the Office of the Registrar, Office of Student Affairs, library/learning resource center, and learning technology.
- Development, implementation, and maintenance of internal and external policies, including Standards of Accreditation.
- SEVIS principal designated school official (PDSO).
- Programs: Animation and Visual Effects, Game Art, Game Design and Development, Digital Filmmaking, Audio, Sound Arts, Interactive Audio, and Entertainment Business, career preparation, fine arts, core, and general education.

November 2015 - March 2019

North America Chair of Curriculum Design

SAE Institute, North America (Remote)

- Led North America team of instructional designers and SMEs in original program development.
- Led institutional strategy, compliance, market relevance, articulation, curricula, resources, active teaching and learning tools, and online platform initiatives.
- Developed Diplomas, Associate's, and Bachelor's degrees for 9 colleges.

January 2018 - January 2019

Instructional Designer (Volunteer)

After-School All-Stars, Oakland, CA

- Developed comprehensive after-school arts programs in underserved communities.

April 2010 - December 2018

Academic Programs Chair

Expression College, Emeryville, CA

- Taught courses in Audio, Game, Motion Graphics, and Film programs, including Sound Design, Post Production, Electronic Music, Game Audio, Experimental Composition, Intermedia Installation, Interactive Environment Design, Recording Arts, Signal Processing, Technical and Creative Project Development, Capstone Research & Thesis Advisor.
- Developed and managed the rollout of baccalaureate programs across campuses.
- College representative for Ed, Tech, and community panels, conferences, and workshops.
- Awarded Instructor of the Year. Awarded Faculty Member of the Year.
- Responsible for improving KPIs, including measurable student success, new enrollments, attrition, and reentries.
- Original Accreditation and renewal experience.
- Experienced in U.S. DoE Gainful Employment regulations for Title IV eligible programs.
- Experienced in Title IX regulations. Experienced in ADA protections and accommodations.
- Designed and executed annual budgets and purchases of \$XXM.
- Managed 124,000 square feet of zero-downtime audio/video facilities and equipment across two campuses.
- Advised, planned, and supported Facilities in the design and development of the branch campus and the multi-million-dollar build-out of the main campus.

September 2012 - November 2015

Lecturer and Instructional Designer

San Francisco State University, San Francisco, CA

- Lecturer and Instructional Designer for Graduate and Undergraduate level courses.
- Sound Design, Advanced Recording & Production, Post Production, Electronic Music, and Game Audio.
- Student review average: 9.73/10.

February 2011 – June 2015

Executive Director

Apple Training Hawaii, Kilauea, HI

- Founded professional certification training centers from the ground up.
- Complete P&L responsibility.
- Oversaw academics and operations.
- Designed programs, courses, curricula, instructional tools, and policies.

September 2008 – June 2014

Executive Director of Professional Training

Expression College, Emeryville, CA

- Independently developed and led the college's professional training and certification branch from the ground up.
- 221 unique students in the first year.
- Complete P&L responsibility.
- Authorized Training Center/Partner initiation experience. Apple Gold Level distinction.
- Courses/certifications in Apple (AATC), Avid (ALP), Ableton (ACTC), Adobe, social media, animation/visual effects, game design, filmmaking, creative coding, electronic music, synthesis, electronics, projection mapping, and installation.
- Ongoing training of 40 Pixar artists.
- Accreditation initiation and compliance.
- Hired, developed, and managed faculty and staff, developed curricula, instructional design, scheduling, budget, student advising, social media, and online course development.

January 2009 – January 2012

Manager of Program Development

Expression College, Emeryville, CA

- Responsible for the development of new academic degree programs.
- Developed the college's most populous programs.

June 2002 – April 2010

Academic Course Director and Assistant Professor

Expression College, Emeryville, CA

- Responsible for the development and management of academic courses.
- Taught in the Audio, Game, Motion Graphics, and Film programs.

Creative Experience

July 1993 – present

Chief Creative

THE STUDI/O, Oakland, CA

- Multimedia expert production and consulting.
- Music/sound, games/interactive media, AR/VR, and mixed media composition, design, studio, performance, installation, and production for hundreds of artists and companies.
- Clients include Apple, Google, LeapFrog, Honor Code, Legends The Game, Robot Invader, Eagre Games, OtoCast, Universal Audio, Ableton, Twisted Tools, iZotope, Imagine Research, Tarpan Studios, WorkforceLogic, Bag End, City of Emeryville, SEAMUS, Peachpit Press, Focal Press, KSFR Santa Fe Public Radio, Shure, SMACNA, 1Light Media, Country Road Films, Harbor Picture Company, Stardust Brands, Alsona, Mazrine, Massimiliano Giornetti, Salvatore Ferragamo, GQ, Vogue Magazine, PSY, PETA, (dub pioneer) Scientist, Greg Phillinganes, Siedah Garrett, Narada Michael Walden, James Taylor, Carole King, Smokey Robinson, Billy Joel, Sting, Elton John, and Katy Perry.

March 1991 – present

Interdisciplinary Artist

Independent, Oakland, CA

- Electronic and electroacoustic music, light, sound and video design, studio, performance, and mixed media installation.

February 2011 – August 2015

Producer, Composer, Music Supervisor

Country Road Films, Los Angeles, CA

- Multimedia production, mastering, composition, and performance for clientele including GQ, Vogue, PSY, and Katy Perry.

July 2001 – September 2004

Producer, Songwriter, Arranger, Recording, Mixing, and Mastering Engineer

Narada Michael Walden – Tarpan Studios, San Rafael, CA/Los Angeles, CA

- Worked closely with one of Billboard Magazine's Top Ten Producers of All Time: 57 #1 Hits, multi-GRAMMY, Emmy & multi-Platinum, Producer and Artist Narada Michael Walden.
- Worked on countless projects, including work for artists Greg Phillinganes, Siedah Garrett, James Taylor, Carole King, Smokey Robinson, Billy Joel, Sting, and Elton John.

"A man for all seasons...from Ahmad Jamal to the hippest in contemporary music, Chris knows how it's done...a whiz with the computer and the drums. Chris has the genius touch." – Narada Michael Walden

September 1997 – May 1998

On Air Host and Show Producer

KSFR Santa Fe Public Radio, Santa Fe, NM

- Producer and On-Air Host for prime-time radio shows 'Artist Portrait,' 'Stereo Jelly,' 'Eclecticism,' and 'All Talk Don't Bounce.'

Selected Writings

2023

Augmenting the Reality of Interactive Learning Environments

Education Technology Insights (*coming soon*)

2017

Learning Efficacy of Multimedia in Interactive Augmented Reality Environments

Augmented Reality is an incipient technology rooted in traditional multimedia with attractive applications for education. Mobile devices travel with billions of people globally, and the inherently mobile nature of AR, with its simple and inexpensive implementation relative to the potentialities exhibited for pervasive, personal, and connected learning, indicates that it is poised to supplement the future of multimodal educational dissemination. The present study explored the learning efficacy of multimedia forms within interactive augmented reality environments. The results are important for confirming academic quality when employing emergent practices. This information may be of value for educators, instructional designers, and learners seeking to utilize empirical evidence as the basis of educational design decisions and learning strategies. The study isolated media types within AR experiences and evaluated their efficacy for learning.

2016

Effects of Arts Education and Underserved Communities

This article explores the potential of arts education access and practice and advocates that arts education is integral to human rights, social justice, and intellectual, democratic, and cultural inclusivity with qualities of importance to the empowerment and equity of underrepresented communities.

2016

Adaptive Learning Design Implications: Effects of Multimedia on Learning Efficacy and Cognitive Load

An experimental and data-driven study to inform effective adaptive learning domain model development decisions with an incipient exploration of cognitive load and learning efficacy when utilizing multimedia stimuli. These platforms' systems rely on sophisticated feedback from human interaction, educational theory, learning analytics, and educational data mining. The pilot comprised an overview of the proposed research, relevant literature on orthogonal and intersecting agendas, imbricated methodological experimentation, data processing, and anticipated challenges. Results demonstrate that media types and combinations of media exhibit varying cognitive load, consequently impacting learning efficacy.

2009

Apple Pro Training Series: Logic Pro 9 and Logic Express 9: Professional Audio Production

Peachpit Press, Technical Reviewer, Apple Pro Training Series: Logic Pro 9 and Logic Express 9: Professional Audio Production

Certifications

Computational Thinking for Problem Solving, University of Pennsylvania	2023
Measuring Learning Effectiveness, Project Management Institute	2023
Pro Tools Certification, Avid	2017
Algorithmic Computer Music (WACM), University of California, Santa Cruz	2007
Apple Certified Master Trainer (28 Certifications), Apple	2006

Academic Awards

Honours, The University of Edinburgh	2017
Fellow, Advance HE, in recognition of attainment against the UK Professional Standards Framework for teaching and learning in higher education	2016
Faculty Member of the Year, Expression College – Staff Selection	2009
Instructor of the Year, Expression College – Students' Selection	2008
Honors, Ex'pression Center for New Media	2001
Artistic Merit Scholarship, Ex'pression Center for New Media	2000

Professional Associations

Acoustical Society of America (ASA)
 Advance HE (AHE)
 Association for Computing Machinery (ACM)
 Audio Engineering Society (AES)
 Center for New Music (C4NM)
 Fractured Atlas
 Game Audio Network Guild (GANG)
 Institute of Electrical and Electronics Engineers (IEEE)
 Interactive Audio Special Interest Group (IASIG)
 International Society for Music Information Retrieval (ISMIR)
 Society for Electro-Acoustic Music in the United States (SEAMUS)
 Society of Professional Audio Recording Services (SPARS)
 Special Interest Group on Computer Graphics (SIGGRAPH)

Selected Broadcasts

Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Steve Reich	May 31, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Grisey and Murail	May 24, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Alexander Scriabin	May 17, 1998

Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Morton Feldman	May 10, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Daphne Oram	May 3, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Prince Far I	April 26, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: King Tubby	April 19, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: François Bayle	April 12, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Pierre Schaeffer	April 5, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Edgard Varèse	March 29, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Éliane Radigue	March 22, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Laurie Spiegel	March 15, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Pierre Boulez	March 8, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Bernard Parmegiani	March 1, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Mathews and Risset	Feb. 22, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Pauline Oliveros	Feb. 22, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Earle Brown	Feb. 15, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: David Bowie	Feb. 8, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: R. Stevie Moore	Feb. 1, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Stereo Jelly: Punk, Noise, Avant-Garde	Jan. 25, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, All Talk Don't Bounce	Jan. 25, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: La Barbara and Monk	Jan. 25, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Stereo Jelly: Punk, Noise, Avant-Garde	Jan. 18, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, All Talk Don't Bounce	Jan. 18, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Coltrane, Jones, Ali	Jan. 18, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Stereo Jelly: Punk, Noise, Avant-Garde	Jan. 11, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Eclecticism: Reggae, Rap, Jazz, Electronic, World	Jan. 11, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Pérotin and Arvo Pärt	Jan. 11, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Stereo Jelly: Punk, Noise, Avant-Garde	Jan. 4, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Eclecticism: Reggae, Rap, Jazz, Electronic, World	Jan. 4, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Ayler, Coleman, Dolphy, Braxton	Jan. 4, 1998
Host KSFR 90.7 FM, Santa Fe Public Radio, Stereo Jelly: Punk, Noise, Avant-Garde	Dec. 28, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Eclecticism: Reggae, Rap, Jazz, Electronic, World	Dec. 28, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: The Velvet Underground	Dec. 28, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Iannis Xenakis	Dec. 21, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Terry Riley	Dec. 14, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Scelsi and Schnittke	Dec. 7, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Berg and Webern	Nov. 30, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Aphex Twin	Nov. 23, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Squarepusher	Nov. 16, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Autechre	Nov. 9, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Negativland	Nov. 2, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Alvin Lucier	Oct. 26, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Christian Wolff	Oct. 19, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: David Tudor	Oct. 12, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: La Monte Young	Oct. 5, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: John Cage	Sept. 28, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Messiaen and Satie	Sept. 21, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: Fela Kuti	Sept. 14, 1997
Host KSFR 90.7 FM, Santa Fe Public Radio, Artist Portrait: KRS-ONE	Sept. 7, 1997
Guest Co-Host WZRD 88.3 FM, Northeastern Illinois University, Chicago, IL	March 1992
Guest Co-Host WZRD 88.3 FM, Northeastern Illinois University, Chicago, IL	Feb. 1992
Guest Co-Host WZRD 88.3 FM, Northeastern Illinois University, Chicago, IL	Jan. 1992

Selected Works and Exhibitions

200+ Producing, Recording, Mixing, Mastering, Sound Design, AR/VR, and Game Credits	1993 – present
Adjudicator , Society for Electro-Acoustic Music in the United States (SEAMUS) Judge for SEAMUS 2020 and 2021 National Conferences	2019 – 2022
OtoCast Mobile App, The City of Emeryville, Content Producer/Sound Designer/Audio Engineer	2019
ZED , Eagre Games Multiplatform/VR, Recording Engineer, Sound Designer, VO Editor, Dialog Processing / Mastering	2019
Dead Secret Circle , Robot Invader Multiplatform/VR, Recording Engineer, Sound Designer, VO Editor, Dialog Processing / Mastering	2018
Narcosis , Honor Code Inc., Multiplatform/VR, Audio support	2017
Stratum , Center for New Music, San Francisco, CA	2017
Salvatore Ferragamo , Composer, Lo Splendore Della Vita, International, >1M views	2016
St0cHastAk0v1Ch , autocomposer A fully programmable sequencer application developed in a graphical environment. Probability distribution autocomposer functionality with Dmitri Shostakovich homage-scale constraint. Controls for independent and global pitch and velocity, independent and vector linear pitch and modulation, independent and global note on/off, and quick-drum-sequencer section.	2016
Electroacoustic Compositions for Guitar featuring Mike Keneally	2015
Nightingale , sonification of Phaedrus Plato's dialog Phaedrus, represented by sound and musical traits; morphology; phonology.	2015
Skeuomorph , algorithmic concatenation Atmospheric story generated from a narration library employing corpus-based concatenative synthesis.	2015
Designing Musical Software , San Francisco State University, A.S. Theater Presentation of live audio coding in a graphical environment, followed by an interactive performance utilizing original music software.	2014
Earthquakes (Remix), The Candle Thieves	2014
Simulacrum , formant transformations with Kyma	2014
Face2Phase , facial gestural controller for audio and visual synthesis	2013
PSY , Composer, Vogue Italia feature, International	2013
C² , Boulevard, Chicago, IL. Electronic performance, laptop, objects, electronics, controllers	2013
Adaptive Systems Toolkit , development in Kismet, graphical environments for interactive design	2012
Katy Perry , algorithmically produced composition, Vogue Italia, International	2012
GQ , Composer, International	2011
Laptop Quintet , Impromptu, CCRMA, Stanford University, Stanford, CA	2011
PETA , Composer, Save the Seals campaign, International	2011

SynthesImage , spectral synthesis, audio sonification of imagery Spectral synthesis audio sonification of image gallery.	2010
Twisted Tools Sound Designer and Drum Programmer for Vortex, Scapes, Rolodecks, S-Layer, and Buffeater instruments.	2010
Playboy , Composer, features, International	2010
CodeTrain , algorithmic analysis and performance Algorithmic compositional tool coded in LISP to create new performances in the style of John Coltrane. The software is designed to recognize patterns in rhythm, note order, and melodic, harmonic, and contrapuntal movements and progressions, producing new music in the style of the recorded data set.	2009
Glitch Machine v1.2 LISP-coded system used to analyze and modulate rhythm data sets and create rhythmically new, complex, and polyrhythmic patterns.	2008
C² , Tonic Room, Chicago, IL. Electronic performance, laptop, objects, electronics, controllers	2008
a-morph-ous , algorithmic composer Transformative algorithmic compositional software written under the mentorship of David Cope and his Experiments in Musical Intelligence, with the original intent to produce new symphonic works in the styles of Gustav Mahler and Béla Bartók. Developed as a model, the software recognizes patterns in rhythm, note order, and melodic, harmonic, and contrapuntal progressions, producing new music in the style of the input data set. Developed as three analysis systems: polyphonic without rhythm for intractability, polyphonic with rhythm utilizing a Markov decision model, and polyphonic with rhythm and measure structure using a Markov model while constraining analysis to smaller segments for less divergent composition.	2007
eLiS , list sonification Data analysis tool written in Common LISP. Intentioned initially to provide an auditory representation of inaudible information such as earthquake activity, populations across locations, weather patterns, and extraterrestrial storms. eLiS scales and translates lists of information into MIDI pitch, velocity, on-times, duration, and channels, among other parameters, to observe audibly.	2007
IMPULSION - electroacoustic improvisation & field recording soundscape Multi-channel installation of an improvised performance of a self-designed percussion instrument and found sounds processed by discrete impulse responses captured at their original recording location - autonomously generated, the signals are processed to effect perception.	2006
Legends The Game , complete sound design	2006
Viriconium , Muse Gallery, Chicago, IL. Autonomous and interactive prepared percussion and synthesis installation utilizing a recursive feedback instrument.	2006
Girl on a Train , McGonigal's, Barrington, IL. Live electronics, sound and light experiments with live electronic ensemble 7 League Boots	2005
Scientist , Dub Pioneer Hopeton Brown, Engineer	2005
Colour and Silence , The Onion, Chicago, IL. Electronic performance, live electronics, sound and light experiments, noisemakers, controllers, drum kit	2004
Explorer Smart Globe , LeapFrog, Sound Designer and Editor (contract)	2004
String dissection Interactive music concatenation system developed within a game engine.	2004
C² , Lilly's, Chicago, IL. Electronic performance, laptop, objects, electronics, controllers, drum kit	2003

Carole King , Arranger, Rock for the Rainforest, Carnegie Hall	2002
Billy Joel , Arranger, Rock for the Rainforest, Carnegie Hall	2002
Elton John , Arranger, Rock for the Rainforest, Carnegie Hall	2002
James Taylor , Arranger, Rock for the Rainforest, Carnegie Hall	2002
Siedah Garrett (Michael Jackson/Madonna), Engineer, Siedah	2002
Smokey Robinson , Arranger, Rock for the Rainforest, Carnegie Hall	2002
Sting , Arranger, Rock for the Rainforest, Rainforest Foundation Concert, Carnegie Hall Reconceptualization of previously composed work. Worked with Musical Director Narada Michael Walden on high-profile conversancy benefit spearheaded by Sting and Trudie Styler.	2002
About Time , tape effects study	2001
Jack Kerouack Composed by transforming recordings of Jack Kerouac reading his work. Conversely, the spoken word is affected by parameters unique to the newly generated composition.	2000
इंडिया, field recording library created throughout Australia and India	1999
Duets , J. Angelo (saxes, flute) C. Colatos (drums/electronics) live KSFR Santa Fe Public Radio	1998
Blight , Cerrillos Historical Society, Duet, w/ J. Angelo. Cerrillos, NM	1997
Inharmonique Michael Wilding Gallery, Santa Fe, NM. Installation, drone, two reel-to-reel tape machines and electronics, experiments in equal temperament, alternative tunings, and beating.	1997
صلح, Improvised processed drone ensemble. Whispering Dove, Santa Fe, NM	1997
Baroque Ornaments Santa Fe Art Institute, Santa Fe, NM. Artist-in-residence. Soundscape installation for tape and projection of reimagined and recorded historical and contemporary local sound.	1996
Percussion Ensemble , International Community School, Addis Ababa, Ethiopia	1996
ጫጫታ, field recording library created throughout East Africa	1996