

Ryan Michael McGee, PhD

ryan@lifeorange.com | www.lifeorange.com | (830) 822-4686 | PO Box 1432, Summerland, CA 93067

Software engineer, composer, researcher, teacher, and new media artist experienced in development of custom and commercial software for spatial audio, sonification, sound design, visualization, interactivity, and mobile apps.

EDUCATION

- PhD in Media Arts and Technology | University of California, Santa Barbara | 2015
Dissertation: "Scanning Spaces: Paradigms for Spatial Sonification and Synthesis"
Committee: JoAnn Kuchera-Morin (Chair), Curtis Roads, George Legrady
Deutsch Foundation Fellowship (2013-2014)
Graduate Dean's Advancement Fellowship (2013)
- Master of Science in Media Arts and Technology | University of California, Santa Barbara | 2010
University of California, Santa Barbara
Thesis Project: "Sound Element Spatializer"
GPA: 3.9/4.0
- Bachelor of Science in Electrical Engineering | The University of Texas at Dallas | 2008
GPA: 3.7/4.0 (Cum Laude)
Engineering Honors Scholarship (2005-2008)

PROFESSIONAL EXPERIENCE

- Owner / Developer | Unfiltered Audio LLC | 2012-Present
Development of creative audio effect plug-ins: www.unfilteredaudio.com
- Contract Software Developer | 2012-Present via Life Orange LLC
Software development for several pro-audio companies, interactive multimedia artworks, mobile, and multi-touch applications. Notably, I was the sole developer for the original Raven MTX/MTi mixing consoles and lead a small team to develop all software products for Slate Media Technology (2012-2015)
Skills: C/C++, JUCE, Git, DSP, VST/AU, AAX Plug-Ins, openFrameworks, Cinder, Mac, Windows, iOS
- Research Intern | Nokia Research Hollywood | 2011
Created a C++ Qt application for dynamic mapping of mobile sensors to sound synthesis parameters.
- Electrical Design Engineer | Polatomic Inc, Richardson, TX | 2007-2008
Designed and programmed user interface for an embedded data acquisition system used on Navy P-3 aircraft.
- Student Engineer | Southwest Research Institute, San Antonio, TX | 2007
Surveillance and Geolocation Division, Tracking Systems Section
Developed MATLAB scripts to predict orbit propagations, designed simple analog circuits, tested and calibrated digital audio recording systems, authored technical documents
- Intern | And/Or Gallery, Dallas, TX | 2006-2007
Installed artwork and provided customer information for a new media art gallery
- Mac Specialist | Apple Store Willow Bend, Plano, TX | 2005-2006
Assisted retail customers and lead public workshops on Final Cut Pro/iMovie/iTunes

ACADEMIC EXPERIENCE

- Teaching Associate/Lecturer | UCSB Department of Art | Fall 2015/Winter 2016
Art 22: Introduction to Computer Programming for the Arts
- AlloSphere Research Group | UCSB | 2012-2014
Development of custom C++ software for spatial audio, sonification, and immersive graphics within a 10 meter spherical 3D audio-visual display
- Teaching Associate | UCSB Department of Art | Fall 2014
Art 102: Advanced topics course on audio/visual creative coding in the browser
- Teaching Associate | UCSB Department of Art | Spring 2013
Art 122: Advanced topics course on software and hardware development using Processing and Arduino
- Teaching Assistant | UCSB, Media Arts and Technology | 2009-2011
Taught lab and discussion sections involving C++ audio APIs, digital sound synthesis, audio recording/mixing, multi-touch computing, sound spatialization, and ray tracing
 - Realistic Image Synthesis (Fall 2011)
 - Digital Audio Programming: Spatial Audio (Winter 2011)
 - Multimedia Engineering Technology (Spring 2010)
 - Music and Technology (Winter 2010)
 - Digital Audio Programming: Sound Synthesis (Fall 2009)
- Teaching Assistant | UCSB Department of Physics | 2010-2011
Course TA and instructor for undergraduate lab and discussion sections involving mechanics, waves, optics, and magnetism.
- Graduate Student Researcher | UCSB Department of Physics | 2010
Developed cross-platform software application for the sonification of cosmic microwave background power spectra. Awarded NASA California Space Grant.

PUBLICATIONS

- McGee, R., Rogers, D.V., Musification of Seismic Data. Proceedings of the International Conference on Auditory Display (ICAD) 2016
- McGee, R., Spatial Modulation Synthesis. Proceedings of the International Computer Music Conference (ICMC). 2015.
- McGee, R., VOSIS: a Multi-touch Image Sonification Interface. Proceedings of New Interfaces for Musical Expression (NIME). 2013.
- McGee, R., Dickinson J., Legrady G. The Voice of Sisyphus: an Image Sonification Multimedia Installation. Proceedings of the International Conference on Auditory Display (ICAD). 2012.
- McGee, R., Ashbrook D., White S. SenSynth: a Mobile Application for Dynamic Sensor to Sound Mapping. Proceedings of New Interfaces for Musical Expression (NIME). 2012.
- McGee, R. and Wright, M. Sound Element Spatializer. Proceedings of the International Computer Music Conference (ICMC). 2011.
- McGee, R., Fan, Y.Y., and Ali, S.R. BioRhythm: a Biologically-inspired Audio-Visual Installation. Proceedings of New Interfaces for Musical Expression (NIME). 2011.
- McGee, R., van der Veen, J., Wright, M., Kuchera-Morin, J., Alper, B., and Lubin, P. Sonifying the Cosmic Microwave Background. Proceedings of International Conference on Auditory Display (ICAD). 2011.

INSTALLATIONS / TALKS / PERFORMANCES

- *TABULA* | Custom LED graphics control software for permanent lighting installation, 385 Sherman, Palo Alto, CA
- *SV+VS (Sonifying Visuals + Visualizing Sound)* | DDP (DongDaeMoon Design Plaza), Seoul | Aug - Sep, 2016
VOSIS iPad image sonification software installation
- *Life Orange* | Live Radio Performance on KCSB, Santa Barbara | August 12th, 2016
Utilized custom software for image sonification, earthquake audification and live-coding in Gibber
- *Magnitude* | @Nitro, Sydney, NSW | July 17th, 2016
1 hour public sound/led performance of electronica and light generated from seismic data
- *Terramomentum* | Australian National University, Canberra NSW | July 4-7th, 2016
Subsonic, haptic, seismic installation as part of ICAD 2016
- *Kinetic v3* | SBCAST, Santa Barbara, CA | May 28th and June 2nd, 2016
Live audio-visual performance over quadraphonic outdoor PA with wall projection
- *Kinetic v3* | AlloSphere, UCSB | May 27th, 2016
Live audio-visual performance over a 32.1 spherical sound system with full surround 3D projection
- *SV+VS (Sonifying Visuals + Visualizing Sound)* | Fellows of Contemporary Art, LA | Jan-March 2016
Participating artist and iPad image sonification performance
- *Creating the Sensorial Space* | Dolby, San Francisco, CA | November 12th 2015
Panel discussion on spatial sound design and composition
- *Concourse* | Dolby, San Francisco, CA | September-October 2015
30 Channel Generative Sound Installation Synchronized with 100ft Display Wall (with Reza Ali)
- *Seismic Spaces* | Futra Presents Pangea, Los Angeles, CA | November 7th, 2015
Live performance of music made from sonifications of major earthquakes
- *Seismic Spaces* | Materials and Applications, Silverlake, CA | May 30th, 2015
Live performance of music made from sonifications of major earthquakes
- *Kinetic v2* | AlloSphere, UCSB | May 29th, 2015
Live audio-visual performance over a 32.1 spherical sound system with full surround 3D projection
- *Kinetic* | AlloSphere, UCSB | June 6th, 2014
Acousmatic audio-visual piece over a 32.1 spherical sound system with full surround 3D projection
- *No Heritage* | Lotte Lehman Concert Hall, UCSB | October 13th, 2011
Octaphonic acousmatic work featuring accelerometer audification, image sonification, and high-speed Doppler
- *Skate 1.0* | Los Angeles Architecture and Design Museum | July - September, 2011
Collaborative 12.2 channel light and sound installation with Electroland
- *BioRhythm* | Mindshare, Los Angeles | August 19th, 2010
Collaborative real-time ppg bio sonification installation with Yuan-Yi Fan
- *W.A.N.T.S.* | Lotte Lehman Concert Hall, UCSB | February 25th, 2010
Octaphonic acousmatic work for soprano and motorcyclist featuring fibonacci spirals of sound
- *Life Orange* | Biko House, Isla Vista, CA | Feb/March/May 2009
Live electronica, chip-tune, and musique concrète performances