

Ryan Michael McGee

PO Box 1432, Summerland, CA 93067
ryan [at] mat [dot] ucsb [dot] edu
830.822.4686

Engineer, programmer, musician, and new media artist experienced in spatial audio, sonification, sound design, image processing, interactivity, and mobile development. Interested in research, teaching, and freelance/consulting opportunities.

EDUCATION

- 9/2010 - Present University of California, Santa Barbara
Media Arts and Technology
PhD Student
- 9/2008 – 12/2010 University of California, Santa Barbara
Master of Science in Media Arts and Technology
Multimedia Engineering Emphasis
Media Arts and Technology Academic Fellowship
GPA: 3.9/4.0
Master's Project: Sound Element Spatializer – novel software for the rendering and control of spatial audio
Selected Coursework: Digital Audio Programming, Computing with Media Data, Spatial Computing, Computer Vision, Musical Acoustics, Computer Music Synthesis and Composition (JoAnn Kuchera-Morin), Advanced Electronic Music Composition (Curtis Roads), Derivation of Music from Other Sources (Clarence Barlow)
- 8/2005 – 5/2008 The University of Texas at Dallas
Bachelor of Science in Electrical Engineering, Cum Laude
Academic and Engineering Honors Scholarships
GPA: 3.7/4.0
Selected Coursework: Digital Signal Processing, Communication Systems, Sound Design, Computer Music, Technical Writing

ACADEMIC EXPERIENCE

- 9/2009 – Present Teaching Assistant
Media Arts and Technology
University of California, Santa Barbara
Courses:
- 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)
- Taught lab and discussion sections involving C++ audio APIs, digital sound synthesis (Max/MSP), audio engineering (recording, mixing, mastering via Pro Tools, Live, and Logic), multi-touch computing, and sound spatialization techniques

- 9/2010 – Present Teaching Assistant
 Department of Physics
 University of California, Santa Barbara
 Introductory Physics and Basic Physics
 Course TA and instructor for lab and discussion sections involving mechanics, waves, optics, and magnetism.
- 6/2010 – 9/2010 Graduate Student Researcher
 Department of Physics
 University of California, Santa Barbara
 Developed software for the sonification of cosmic microwave background power spectra. Awarded NASA California Space Grant.
- 8/2006 – 5/2007 Student Mentor
 The University of Texas at Dallas
 Taught two review sessions per week for Differential Equations and Advanced Engineering Mathematics. Made practice tests, held office hours, and provided individual tutoring.

PROFESSIONAL EXPERIENCE

- 6/2011 – 9/2011 Research Intern
 Nokia Research Hollywood, Santa Monica, CA
 Designed and programmed a novel application for the dynamic mapping of mobile sensors to sound synthesis parameters. Authored a custom C++ sound synthesis and effects library to use with Qt for development.
- 6/2009 – 9/2009
 (Consultant) Electrical Design Engineer
 Polatomic Inc, Richardson, TX
 Designed user interface and programmed DSP algorithms for an embedded data acquisition system used on Navy P-3 aircraft. Worked with a team of software engineers to develop a standalone LabVIEW application for the display, recording, and processing of magnetic field data on a PC/104 computer. Generated system-level wiring diagrams for all hardware above. Provided on-site installation and support of systems for US Navy.
- 8/2007 – 8/2008
 (Full-Time) Student Engineer
 Southwest Research Institute, San Antonio, TX
 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
- 1/2006 – 5/2007 Campus Rep
 Apple
 Promoted and supported Apple products through on-campus marketing events, founded and organized the first Apple User Group at the University of Texas at Dallas, awarded Apple Product Professional Certification

- 5/2005 – 1/2007 Mac Specialist
Apple Willow Bend Retail Store, Plano, TX
Taught one-on-one and group classes for Apple multimedia software including Final Cut Studio and Logic Pro, matched retail customers with appropriate computer software and hardware
- 1/2006 – 7/2008 Gallery Intern
And/Or Gallery (www.andorgallery.com)
Installed new media artwork, assisted in coordinating events, and provided information to customers.

PUBLICATIONS

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 / PERFORMANCES

George Legrady, *Voice of Sisyphus*, 2011. Multimedia Installation. Edward Cella Gallery, Los Angeles, CA. Software development for computational processing and sonification of images.

Electroland, *Skate 1.0*, 2011. Multimedia Installation. Architecture and Design Museum, Los Angeles, CA. Software development to synchronously spatialize sounds with moving lights.

Ryan McGee, *No Heritage*, 2011. 8-channel Composition. CREATE Concert, Lotte Lehmann Concert Hall, Santa Barbara, CA.

Ryan McGee, *WANTS*, 2010. 8-channel Composition. Composers Concert, Lotte Lehmann Concert Hall, Santa Barbara, CA.

Ryan McGee, *Life Orange*, 2009. Electronica/Noise Music. Biko Garage, Isla Vista, CA

WEBSITE

www.lifeorange.com