

Gregory Shear

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Work Experience

Studio Manager / Technical Coordinator, March 2009 - Present

Center for Research in Electronic Art Technology, University of California, Santa Barbara, CA

- Laboratory, studio, and performance space management
- Design and implementation of facility upgrades

Teaching Assistant, March 2008 - Present

Department of Physics, University of California, Santa Barbara, CA

- Waves & Optics Lab Instructor
- Engineering 3 Section Instructor (Intro to C programming, Unix shell, MATLAB)
- Digital Electronics Lab Instructor

Assistant Programmer, June 2008 - September 2008

Data Visualization Art Commission - George Legrady, Santa Barbara, CA

- Developed visualization of web traffic data using MySQL, Java, and OpenGL
- Debugged and developed lead programmer's OpenGL wrapper library

General Manager, 2005 - 2008

Metropolis Bike Shop, North Hollywood, CA

- Managed repair mechanics and the workflow of "in-process" bikes. Instructed employees in bike assembly, repair, and computer inventory/sales system
- Installed and maintained the retail sales and inventory management system and assumed ongoing system administration function
- Authored graphic content for shop website

Private Tutor, 2006 - 2007

Los Angeles, CA

- Tutored high school students in various subjects including calculus and physics

Audio Engineer/Studio Assistant, 2005

Departure Studios, Los Angeles, CA

- ADR, sound editing and tracking, foley recording, Protools, etc.
- Scheduled facility, supervised interns, maintained studio appearance

Research Assistant, 2004

Ithaca College Physics Department, Ithaca, NY / Silver City, NM

- Conducted archaeological surveys in Silver City using advanced sensing and data collection equipment (high resolution cesium beam magnetometers); processed and visualized data for analysis
- Isolated sources of error. Designed and built a device to eliminate positional error during data acquisition. The device is under consideration for patent application by Ithaca College
- Presentation poster available at www.ThePersistentBeat.com/Tech.html

Sound & Lighting Technical Assistant, 2003 - 2004

State Street Theater, Ithaca, NY

- Assisted in setup, operation, and striking of sound and lighting equipment for various music and theater performances

Teaching Assistant / Tutor, 2002 - 2004

Ithaca College, Ithaca, NY

- Intro Physics - Newtonian Mechanics
- Intro Physics - Electricity & Magnetism
- Audio Production

Education

Graduate Studies

**M.S. Media Arts & Technology - University of California Santa Barbara
Santa Barbara, CA**

September 2007 - Present

Cumulative GPA: 3.85

Selected Coursework and Related Projects

MAT 533 - Intro to C++ and OpenGL

- Music visualization project, 3D animations triggered by musical events, digital filtering

MAT 200A - Art & Technology

MAT 200B - Music & Technology

- Granular synthesizer project coded in Cocoa/Objective-C
- Music composition using granular synthesizer and Rhodes electric piano

MAT 201B - Computing with Media Data

- Multicore computing research project, demonstrated parallel processing of FFTs using nVidia's CUDA API

MAT 594O - Sensors and Interfaces for Media Arts

- Designed and built Open Sound Control hardware interface for granular synthesizer using Arduino microcontroller and various hardware sensors
- Improvised musical performance at local experimental arts venue

MAT 240E - Digital Audio Programming: Control and Distributed Processing

- Open Sound Control application project to interface with Monome hardware device
- MIDI note event to control message translator project to interface hardware vocoder with MIDI keyboard

MAT 275 - Music Systems Programming in Supercollider

- Percussive synthesizer patch for use with Monome hardware device and x-y touchpad interface
- Granular synthesizer patch for use with x-y touchpad
- Music composition and performance as part of a trio (flute and two laptops)

MAT 594CM - Fundamentals of Spatial Computing

- Developed application for visualizing archaeological ceramics data using OpenGL and the GLSL shader library, more info available at www.ThePersistentBeat.com/Tech.html

Undergraduate Studies

**B.A. Physics - Ithaca College
Ithaca, NY**

Graduated August 2005

Minors: Mathematics, Audio Production

Cumulative GPA: 3.30

Selected Coursework

- Analog & Digital Circuits
- Independent Project in Audio Mixer Design
- Physics of Sound
- Advanced Mathematical Methods in Physics, Multivariable Calculus, Linear Algebra & Differential Equations
- Machine Shop (precision metal work, component design and production)

Miscellaneous Academics

GRE Scores

June 2007

- Quantitative 750
- Qualitative 670
- Analytical Writing 4.0

UCLA Extension

Los Angeles, CA

June 2007

Engineering X 422.18 - Digital Filtering

- Audio signal analysis and pitch detection project: projectile location and trajectory estimation from doppler shift pitch curve