

Matthew William Jibson

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Areas of interest

Digital synthesis of pipe organs and pianos. I have written a paper on a method to synthesize pipe organs, referenced below. This research still has open problems.

Education

- 2009 **M.S., Electrical Engineering**
Colorado State University
ADVISOR: Tom Chen.
- 2007 **B.S., Computer Engineering**
Colorado State University.
- 2007 **B.M., Piano Performance**
Colorado State University.

Work Experience

- June 2011-present **Seagate Technology**
Senior Engineer, *Firmware Organization*
Developed custom tools and infrastructure support in mostly Python and SQL.
- 2000-present **US Geological Survey**
Consultant
Developed Java programs for seismic landslide analysis.
- June 2007-May 2009 **Innovative Advertising**
Primary Developer
Designed and created an online system for local ad distribution.
- May 2008-Dec. 2008 **Seagate Technology**
Intern, *Firmware Organization*
Replaced a failing, 3rd-party, business-critical application with a custom tool.
- June 2006-May 2007 **Apictura, LLC**
Intern
Wrote with JSP and Java EE servlets, networking services, servers, and other programming tasks.
- May 2005-Jan. 2006 **SpectraLink**
Intern
Wrote Wireshark dissectors in C for proprietary wireless protocols.
- May 2004-Aug. 2004 **IBM**
Intern
Created a Java tool to improve productivity of the printer analysis team.

Awards

- 2007 Second place in the Colorado State University Senior Design E-days Awards in Electrical Engineering. A dual electronic and pipe organ was built with an FPGA, custom windchest, and donated pipes and keyboard.
- 2006 Wendel Diebel Award from the Colorado State University Music Department for outstanding musicianship.

Software Development

- 2000-present [SLAMMER](#)
Programs for seismic landslide analysis in Java (primary developer).
- 2011 [Journalr](#)
A website for online, modern journaling in Python and Google App Engine (founder and developer).
- 2009-2010 [Mission Office](#)
A system and website for management, automated statistics, and office work of a medium-sized, distributed organization in Python and Google App Engine (creator and developer).
- 2007-2009 [Biosensor](#)
Analysis and graphing system for results of potentiostat experiments in Django (creator and developer).
- 2002-2008 [Crescent Island](#)
A multiplayer, online game in PHP and MySQL/PostgreSQL (principal developer).

Publications

THESES

Jibson, M.W., 2009, Electrochemical Biosensor Array Characterization, *M.S. Thesis in Electrical Engineering*, Colorado State University.

Jibson, M.W., 2007, Organ Sound Synthesis by Harmonic Interpolation, *Senior Design Thesis*, Colorado State University. [[PDF](#)]

SOFTWARE

Jibson, R.W., Rathje, E.M., **Jibson, M.W.**, and Lee, Y.W., in press, SLAMMER—Seismic LANDslide Movement Modeled using Earthquake Records, *U.S. Geological Survey Techniques and Methods*, on CD-ROM and Internet.

Jibson, R.W., and **Jibson, M.W.**, 2003, Java programs for using Newmark’s method and simplified decoupled analysis to model slope performance during earthquakes, *U.S. Geological Survey Open-File Report 03-005*, on CD-ROM and Internet.

Jibson, R.W., and **Jibson, M.W.**, 2002, Java programs for using Newmark’s method to model slope performance during earthquakes, *U.S. Geological Survey Open-File Report 02-201*, on CD-ROM.

Jibson, R.W., and **Jibson, M.W.**, 2001, Programs for using Newmark’s method to model slope performance during earthquakes, *U.S. Geological Survey Open-File Report 01-116*, on CD-ROM.

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<http://mattjibson.com/cv.pdf>