

MICHAEL LESTER

1785 STONE ROAD
NEW HARMONY, IN 47631

305.979.6262

MIKE.R.LESTER@GMAIL.COM

HTTP://WWW.M-LESTER.COM

OBJECTIVE

Consulting and Contracting Digital Audio Processing for Interesting Projects around the country. Short term assignments are welcome, working relationships may become long term

EDUCATION

Master of Science in Electrical and Computer Engineering **Purdue University, IN**
Emphasis on Digital Signal Processing

Thesis: Low Latency and Low Complexity Sub Band Filtering for Music and Audio Applications

Expected Date of Graduation: May 2007

GPA: 3.76 out of 4.0

Pertinent Courses Include:

Digital Signal Processing *Multimedia Applications* *Psychophysics*
Advanced Multimedia Applications and Mobile Computing *Lumped System Theory*

Bachelor of Music in Music Engineering **May 2005, University of Miami, FL**
Minor in Electrical Engineering

Dean's List/President's Honor Roll Student GPA in Major: 3.96 Overall: 3.7 on a 4.0 scale

Pertinent Courses Include:

Digital Signal Processing *Filter Banks and Wavelets* *Digital Audio I, II* *Acoustics*
Audio Analysis and Synthesis *Real-time DSP Lab* *Audio Electronics with Design Workshop*
Speech and Audio Processing *Transducer Theory* *Audio Controllers and Plug-ins*

EXPERIENCE

January 2007 – Present **Shure Incorporated** **Chicago, IL**

- **DSP Development Engineer** – Duties include signal processing research regarding audio quality and data communication, filter bank implementation/applications
- Software Development engineer which works on cross-functional project teams to design, implement, test, and release digital signal processing algorithms for professional audio equipment
- Responsible for the overall audio quality of the product through design and listening test evaluations

August 2006 – Dec 2006 **Indiana/Purdue University** **Indianapolis, IN**

- **Teacher Assistant – Multimedia Applications** – duties include teaching the laboratory section of the Multimedia Applications course. This course covers data compression, speech coding (ADPCM, Linear Prediction), image compression (DCT, JPEG), video compression (MPEG). The laboratory uses the Motorola 563xx series to implement various course content including discussion of architecture, addressing modes and instruction set of multimedia processors

Summer 2005 and Summer 2006 **Shure Incorporated** **Chicago, IL**

- **Audio Processing DSP Intern** – duties include development and implementation of real-time DSP algorithms using ADI SHARC for live sound reinforcement and speech applications
- Developed and implemented a blind adaptive algorithm to detect and reduce the microphone proximity effect on an Analog Devices 21161 SHARC processor
- Other responsibilities include benchmarking DSP functional blocks, testing correctness of DSP algorithms and documenting the process, and participating in code design reviews

August 2005 – December 2005 **Acterna through Purdue University** **Indianapolis, IN**

- **DSP engineering consultant** – duties include floating to fixed point processing conversion and DSP/embedded implementation of QAM16 demodulation scheme using Motorola 56800 hybrid microcontroller / DSP

August 2000 – May 2005 Weeks Recording Studio Coral Gables, FL

- **Chief Maintenance Engineer** – duties include repair/maintenance of all electrical, electronic, and mechanical aspects of the recording studio
- Projects include installing new digital systems, engineering studio wiring, and installation of Dolby Digital recording capabilities

AWARDS AND HONORS

Electrical and Computer Engineering Scholarship Recipient – 2006	Purdue University
Electrical and Computer Engineering Fellowship Recipient – 2005-2006	Purdue University
President’s and Provost’s Honor Roll, Dean’s List – 2000-2005	University of Miami
Arnold Volpe Academic Scholarship – 2000- 2005	University of Miami

ACTIVITIES

- **President: ECE Student Advisory Committee, Purdue, 2005-2006**
- **Member: AES, 2002-2007**
- **Member: IEEE Student Chapter including Signal Processing Society, 2003-2005**
- **Member: SMPTE, 2004**
- **Active Piano, Bass, and Saxophone Musician**

RELEVANT PROJECTS

- **Master’s Thesis: Low Latency and Low Complexity Sub Band Filtering for Music and Audio Applications**
- **Implemented Acoustic Echo Cancellation on Motorola StarCore DSP Processor**
- **Implemented JPEG Encoding on Motorola 56300 DSP Processor**
- **Implemented Isolated Speech Recognition using Dynamic Time Warping in Matlab**
- **Implemented Digital Audio Effects on Analog Devices ADSP 2181**
- **Implemented the Karplus-Strong String Algorithm on an Analog Devices ADSP 2181**
- **Implemented a Phase Vocoder in Matlab**
- **Designed a Multi-Rate Filter Bank for Multi-band Dynamic Compression**
- **Adaptation and Improvement of the MPEG Model 1 Standard in C and MATLAB**

SKILLS

Languages:	C/C++, Analog Devices SHARC Assembly, Freescale 56XXX Assembly, Freescale StarCore Assembly/C, Texas Instruments 55x Assembly/C
Software:	Matlab, Simulink, Audio Precision, SMAART Live, SystemView, Visual DSP++, Code Warrior, Code Composer Studio, MS Office, All Adobe products, All Sonic Foundry(Sony) Products, ProTools