

Dr. Andrew P. Goodney, PhD

CONTACT INFORMATION	Andrew P. Goodney 3318 W 27th St Los Angeles, CA 90018 USA	<i>Mobile:</i> +1-213-840-6045 <i>E-mail:</i> goodney@usc.edu <i>WWW:</i> www.goodney.com
RESEARCH INTERESTS	Sensing and sensor networks, energy harvesting, circuit and board level power monitoring and optimization, networks for the Smart Grid, computer network interconnects and performance, software defined networking, SAN disk architectures, distributed and cloud computing, database performance and scaling, mobile technology for health and wellness, computer science/electrical engineering education.	
EDUCATION	University of Southern California , Los Angeles, California USA Ph.D., Computer Science, August 2008 - August 2014 <ul style="list-style-type: none">• Advisor: Professor Young H. Cho• Area of Study: Sensor Networks• GPA: 4.0• Defense: September 2014• Diploma: May 2015 M.S., Electrical Engineering - Systems, December 2006 <ul style="list-style-type: none">• Area of Study: Multimedia and Creative Technologies• GPA: 3.87 B.S., Electrical Engineering - Systems, May 2000 <ul style="list-style-type: none">• Electrical specialization: emphasis on digital design• Minor in Multimedia and Creative Technologies	
PATENTS	Y. H. Cho, S. Bhargav, and A. Goodney, Method of Measuring Accurate Dynamic Power Consumption of Integrated Components and Sub-circuits, <i>USC Ref. 12-300, MWE Ref. 028080-0705, Filed December, 2012.</i> Y. H. Cho, D. Rae, C. Webb, G. LaFramboise, L. Olatinjo, A. Goodney, Pervasive Power Generation System, <i>Application #61716307, Filed March, 2013.</i> Y. H. Cho, S. Bhargav, and A. Goodney, Accurate Digital Sensors for Digital Circuits, <i>USC Ref. USC 13-529, Filed March, 2014.</i>	
PHD DISSERTATION	Sensing With Sound: Acoustic Tomography and Underwater Sensor Networks; Andrew Goodney; <i>PhD Dissertation, University of Southern California, March 2015</i>	
JOURNAL, CONFERENCE AND WORKSHOP PUBLICATIONS	Multipulse Acoustic Tomography: A New Technique for Mapping Water Temperatures; Andrew Goodney, Young H. Cho; <i>IEEE/MTS OCEANS'14, September 14th-19th 2014, St. John's Newfoundland and Labrador, Canada</i> Efficient PMU Networking with Software Defined Network; Andrew Goodney, Saurabh Kumar, Akshay Ravi, Young H. Cho; <i>IEEE SmartGridComm 2013, October 21st-24th 2013, Vancouver, British Columbia, Canada</i> Acoustic Tomography With An Underwater Sensor Network; Andrew Goodney and Young H. Cho; <i>Sea Technology Magazine, July 2013</i> (invited article)	

Physical Layer Sensing Using Long Pseudo Noise Codes; Andrew Goodney and Young H. Cho; *ACM WUWNet'12, November 6-7 2012, Los Angeles, California, USA.*

Acoustic Tomography With An Underwater Sensor Network; Andrew Goodney and Young H. Cho; *IEEE/MTS OCEANS'12, October 15-19 2012, Virginia Beach, Virginia, USA*

Water Temperature Sensing with Microtomography; Andrew Goodney and Young H. Cho; *International Journal of Sensor Networks (IJSNET) 2012*

Marina-scale Water Temperature Sensing in Real Time Using Microtomography; Andrew Goodney, Devang Negandhi, Kunal Joshi, Young H. Cho; *31st IEEE International Conference on Distributed Computing Systems Workshops (ICDCS 2011 Workshops), June 20-24, 2011 Minneapolis, Minnesota, USA.*

Dr. Droid: Assisting Stroke Rehabilitation Using Mobile Phones; Andrew Goodney, Jinho Jung, Scott Needham, Sameera Poduri; In *Proceedings of 2nd International ICST Conference on Mobile Computing, Applications, and Services (Mobi-CASE 2010)*, October 28, 2010, Santa Clara, CA, USA.

NetFPGA Logic Analyzer; Andrew Goodney, Shailesh Narayan, Mengchen Wang, Peigen Sun, Vivek Bhandwalkar, Young H. Cho; 2nd North American NetFPGA Developers Workshop; Stanford University, Palo Alto CA; August 13th, 2010

Pattern Based Packet Filtering using NetFPGA in DETER Infrastructure; Andrew Goodney, Shailesh Narayan, Vivek Bhandwalkar, Young H. Cho; 1st Asia NetFPGA Developers Workshop; Daejeon, Korea; June 14, 2010.

Taming the Storage Dragon: the Adventures of hoTMan; Ghandeharizadeh, S., Goodney, A., Sharma, C., Bissell, C., Carino, F., Nannapaneni, N., Wergeles, A., and Whitcomb, A. 2009. In *Proceedings of the 35th SIGMOD international Conference on Management of Data* (Providence, Rhode Island, USA, June 29 - July 02, 2009). C. Binnig and B. Dageville, Eds. SIGMOD '09. ACM, New York, NY, 925-930.

POSTERS

Andrew Goodney, Young H. Cho, Sensor Network Acoustic Tomography. *ISI Graduate Student Symposium, Marina Del Rey, California, November 2012*

Siddharth Bhargav, Andrew Goodney, Jonathan Friedman, Young H. Cho, Method of Measuring Dynamic Power Consumption of Integrated Components and Sub-Circuits. *ISI Offsite Meeting, Los Angeles, California, January 2012*

Andrew Goodney, Young H. Cho, Introducing Microtomography. *ISI Offsite Meeting, Los Angeles, California, January 2012*

Andrew Goodney, Yo Lee, and Young H. Cho, Remote Sensing with Pervasive Thermoelectric Generator. *CiSoft Research Review, Los Angeles, California, August 2011*

Andrew Goodney, Young H. Cho, Affan Syed, John Heidemann. Underwater Acoustic Sensing and Communications. *ISI Offsite Meeting, Santa Monica, California, January 2011*

Andrew Goodney, Young H. Cho, John Heidemann and John Wroclawski. *Towards an Automated, Extensible Underwater Network Testbed.* Poster session, *WUWNet2010, Woods Hole RI, September 2010*

Young H. Cho, Andrew Goodney, John Heidemann, Affan Syed, Jack Wills. *Underwater Sensornets: Communications and Testbeds.* *USC Research Review, Los Angeles, California, March 2010*

Young H. Cho, Andrew Goodney, John Heidemann, Affan Syed, Jack Wills. *Underwater Sensor networks: Communications and Testbeds. ISI Offsite Meeting*, Santa Monica, California, January 2010

AWARDS

ISI Graduate Student Symposium

- *Best Presentation* for Sensor Network Acoustic Tomography, November 2012

USC Computer Science Department

- *Best TA* for CSCI558L, 2011/2012 Academic Year

Stanford/NetFPGA Summer Camp

- *Best Project* for MAC Address Pair Based Probabilistic Packet Dropping, August 2011

ISI Graduate Student Symposium

- *Best Presentation* for Dr. Droid: Assisting Stroke Rehabilitation Using Mobile Phones, October 2010

TEACHING EXPERIENCE

University of Southern California, Los Angeles, California USA

Lecturer

Fall 2016 - Present

- Instructor for CSCI103 “Introduction to Programming”
- Instructor for CSCI572 “Information Retrieval and Web Search Engines”

Claremont-McKenna College, Claremont, California USA

Visiting Assistant Professor

Spring Semester 2016

- Instructor for CS052 “Fundamentals of Computer Science”
- Instructor for CS181 “Tweets, ’grams and Vines: Data Compression for a Multimedia Lifestyle”

Harvey Mudd College, Claremont, California USA

Adjunct Faculty

Fall Semester 2014

- Instructor for CS125 “Networks”
- Recitation Instructor E59 “Signals and Systems”

University of Southern California, Los Angeles, California USA

Teaching Assistant

Summer 2009 to 2011

- TA for CSCI-558L, Internetworking and Distributed Systems Laboratory
 - Spring 2010, Spring 2011 and Fall 2012
 - Responsible for all course management and administration of the student assignments and projects using DETER
 - Developed six laboratory assignments including experiments in TCP performance, FTP client/server development, software IP router implementation and distributed locking/filesystems
 - Overall TA evaluation score: 4

- TA for CSCI-580, 3D Graphics and Rendering
 - Fall 2010
 - Responsible for assignment grading criteria and extensive student questions related to the implementation of a 3D rendering pipeline
 - Overall TA evaluation score: 4.1
- TA for CSCI-402, Operating Systems
 - Fall 2010
 - Responsible for mid-term grading and extensive student questions and support related to the NACHOS operating system simulation environment.
 - Overall TA evaluation score: 4.25
- TA for CSCI-571, Web Technologies
 - Summer 2009

PROFESSIONAL
EXPERIENCE

Mad Old Nut Productions, Hollywood, California USA

CTO

June 2015 to August 2016

- Responsible for the technical direction of the company as well as designing and implementing custom software and hardware services

LaserPacific/Cinesite, Hollywood, California USA

Digital Imaging Engineer

January 2002 to August 2008

- Responsible for system design, maintenance and user support of computer, video and film equipment for the production of professional motion pictures/VFX

Blue Sky Labs, Santa Monica, California USA

Embedded Hardware/Software Engineer

2002/2003

- Designed, prototyped and programmed embedded Linux systems for home automation and medical devices.

NoCat Networks, Santa Monica, California USA

Co-founder, wireless last-mile ISP

2002/2003

- Designed, acquired and deployed wireless networking infrastructure to provide Internet service to businesses and residents in Santa Monica.

Alesis Electronics, Santa Monica, California USA

Audio Electronics Engineer

2001/2002

- Design, layout and prototyping of circuits and DSP code for musical instruments, keyboards, synthesizers and speakers.

Lowry Digital Imaging, Burbank, California USA

Systems Administrator

May 2000 to December 2000

- Design and implementation of a 200-node distributed image processing system for film restoration

Consulting

Video Engineering Consulting

- NBATV, MLBTV, 'The Oscars', HurstUSA

Database/SAN Consulting

- MySpace Inc., Xap Corp.

Professional Motion Picture Industry

- Heuris, Production Data Services, Kodak

MOTION PICTURE CREDITS

- **Sexy Evil Genius, 2013** IT/Engineering
- **The Collection, 2012** IT/Engineering
- **The Savages, 2007** Engineering Support
- **Harsh Times, 2005** Engineering Support
- **Spy Kids 2: Island of Lost Dreams, 2002** 2D Technical Director