



## Congratulations to the 2011-2012 PhD Graduates!

This year's 2011-2012 graduating PhD class is the largest PhD graduating class in CSE history! There are 34 PhD graduates! Many of this year's graduates have secured employment in academia, as well as positions within industry. The CSE Department wants to congratulate all of them on their wonderful achievements and wish them the best of luck in their future endeavors!



### **Mohammad Al-Fares**

Advisor: Amin Vahdat

Dissertation Title: A Scalable, Adaptive, and Extensible Data Center Network Architecture

Current Employment: Google, Software Engineer



### **Raid Ayoub**

Advisor: Tajana Rosing

Dissertation Title: Temperature and Cooling Management in Computing Systems

Current Employment: Intel, Research Scientist



### **Boris Babenko**

Advisor: Serge Belongie

Dissertation Title: Training Discriminative Computer Vision Models with Weak Supervision

Current Employment: Anchovi Labs, Inc., President



### **Natalie Castellana**

Advisor: Vineet Bafna

Dissertation Title: Proteogenomics: Applications of Mass Spectrometry at the Interface of Genomics and Proteomics

Current Employment: Digital Proteomics, Chief Technology Officer



### **Stephen Checkoway**

Advisor: Hovav Shacham

Dissertation Title: Low-Level Software Security: Exploiting Memory Safety Vulnerabilities and Assumptions

Current Employment: John Hopkins University, Asst. Research Professor



### **Youngmin Cho**

Advisor: Lawrence Saul

Dissertation Title: Kernel Methods for Deep Learning

Current Employment: Google, GSR



### **Joel Coburn**

Advisor: Rajesh Gupta & Steven Swanson

Dissertation Title: Providing Fast and Safe Access to Next-Generation, Non-Volatile Memories

Preferred Employment: To be determined



**Elio Damaggio**

Advisor: Alin Deutsch & Victor Vianu

Dissertation Title: Verification of Business Process Specifications with Arithmetic and Data Dependencies

Current Employment: Microsoft, Program Manager



**Matt DeVuyst**

Advisor: Dean Tullsen

Dissertation Title: Efficient Use of Execution Resources in Multicore Processor Architectures

Preferred Employment: To be determined



**Peng Du**

Advisor: Chung K. Cheng

Dissertation Title: Power Network Verification and Optimization at Planning Stages

Current Employment: Google, Software Engineer



**Toshiya Hachisuka**

Advisor: Henrik Wann Jensen

Dissertation Title: Robust Light Transport Simulation Using Progressive Density Estimation

Current Employment: Aarhus University, Assistant Professor



**Diane Hu**

Advisor: Lawrence Saul

Dissertation Title: Probabilistic Topic Models for Automatic Harmonic Analysis of Music

Preferred Employment: To be determined



**Chris Kanich**

Advisor: Geoff Voelker & Stefan Savage

Dissertation Title: Characterizing Internet Scams through Underground Infrastructure Infiltration

Current Employment: University of Illinois, Assistant Professor



**Han Suk Kim**

Advisor: Jurgen Schulze

Dissertation Title: Visual Exploration in Volume Rendering for Multi-Channel Data

Current Employment: Apple Inc., Software Engineer



**Sangtae Kim**

Advisor: Pavel Pevzner

Dissertation Title: Generating Functions of Tandem Mass Spectra and Their Applications for Peptide Identifications

Current Employment: Pacific Northwest National Laboratory, Staff Scientist



**Kaisen Lin**

Advisor: Rajesh Gupta

Dissertation Title: Toward a Sensor-Actuation Software Platform

Preferred Employment: To be determined



**Wan-Yen Lo**

Advisor: Henrik Jensen & Matthias Zwicker

Dissertation Title: Interactive Motion Planning with Motion Capture Data

Current Employment: Google Switzerland, Software Engineer



**Dionysios Logothetis**

Advisor: Kenneth Yocum

Dissertation Title: Architectures for Stateful Data-intensive Analytics

Current Employment: Telefonica Research, Associate Researcher



**William Matthews**

Advisor: Russell Impagliazzo & Mohan Paturi

Dissertation Title: A Satisfiability Algorithm for Constant Depth Boolean Circuits with Unbounded Fan-In Gates

Current Employment: Google, Software Engineer



**Brian McFee**

Advisor: Gert Lanckriet

Dissertation Title: More like this: Machine Learning Approaches to Music Similarity

Preferred Employment: Academia



**Marti Motoyama**

Advisor: Stefan Savage, George Varghese, & Geoffery M. Voelker

Dissertation Title: Understanding the Role of Outsourced Labor in Web Service Abuse

Current Employment: Fitbit, Software Engineer



**Catherine Olschanowsky**

Advisor: Allan Snavely

Dissertation Title: HPC Application Address Stream Compression, Replay and Scaling

Current Employment: Colorado State University, Post Doc.



**Shengjun Pan**

Advisor: Alon Orlitsky (ECE)

Dissertation Title: On the Theory and Application of Pattern Maximum Likelihood

Current Employment: Eperian, Scientist



**Qian Peng**

Advisor: Pavel Pevzner

Dissertation Title: Computational Methods and Analyses in Comparative Genomics and Epigenomics

Current Employment: Scripps Research Institute, Research Associate



**Leo Porter**

Advisor: Dean M. Tullsen

Dissertation Title: Single Thread Performance in the Multi-core Era

Current Employment: Skidmore College, Assistant Professor



**Shervin Sharifi**

Advisor: Tajana Rosing

Dissertation Title: Accurate Temperature Sensing and Efficient Dynamic Thermal Management in MPSoCs

Current Employment: SoC Architect Qualcomm, Staff Engineer



**Amirali Shayan Arani**

Advisor: Chung K. Cheng

Dissertation Title: System Level Design of Power Distribution Network for Mobile Computing Platforms

Current Employment: Qualcomm, Staff Engineer



**Michael Benjamin Stepp**

Advisor: Sorin Lerner

Dissertation Title: Equality Saturation: Engineering Challenges and Applications

Current Employment: Google, Software Engineer



**Cynthia Taylor**

Advisor: Joe Pasquale

Dissertation Title: The Networked Device Driver Architecture: A Solution for Remote I/O

Current Employment: Oberlin College, Assistant Professor



**Alexander Tsiatas**

Advisor: Fan Chung Graham

Dissertation Title: Diffusion and Clustering on Large Graphs

Current Employment: Google, Software Engineer



**Didem Unat**

Advisor: Scott B. Baden

Dissertation Title: Domain-Specific Translator and Optimizer for Massive On-Chip Parallelism

Current Employment: Lawrence Berkeley National Laboratory, Post Doc. Fellow



**Avinash Vyas**

Advisor: Alin Deutsch

Dissertation Title: Policy-Aware Sender Anonymity in Location-Based Services

Current Employment: Alcatel-Lucent; Member of Technical Staff at Bell Labs



## Congrats again to all the CSE PhD graduates & good luck!



### So Yamaoka

Advisor: Falko Kuester

Dissertation Title: Visual Analytics in Scalable Visualization Environments

Current Employment: Apple Inc., Software Engineer



### Wenbo Zhao

Advisor: Fan Chung Graham

Dissertation Title: Ranking and Sparsifying Edges of a Graph

Current Employment: Two Sigma Investments, Software Engineer

# 2 FRIENDS OF CSE & CALIT2 WIN 2012 GÖDEL PRIZE!

Congratulations to two friends of Calit2 and UCSD's Computer Science and Engineering department: Christos Papadimitriou of UC Berkeley and the University of Athens' Elias Koutsoupias have won the 2012 Gödel Prize, which recognizes outstanding papers in theoretical computer science published over the past 14 years.

The 2012 prize honored the authors of three prominent papers that helped to launch the field of Algorithmic Game Theory. In one of those papers, "Worst-case Equilibria," Koutsoupias and Papadimitriou introduced the "price of anarchy" concept, a measure of the extent to which competition approximates cooperation. It quantifies how much performance is lost due to selfish behaviors in systems like the Internet, which operates without a system designer or monitor striving to achieve the "social optimum." Their answer, surprisingly often, is "not that much." Koutsoupias earned his Ph.D. from JSOE's CSE department in 1994, and Papadimitriou (who was also a former CSE Faculty member) co-authored the textbook "Algorithms" (2006) with CSE's Sanjoy Dasgupta. Papadimitriou was Koutsoupias thesis adviser at UCSD before Papadimitriou left UCSD for Berkeley. Papadimitriou also participated in Calit2's Behavioral, Social and Computer Sciences Seminar Series in 2009. His talk in that series, "The Algorithmic Lens: How the Computational Perspective Is Transforming the Sciences," introduced by Mohan Paturi, is available on our SciVee feed:

<http://bit.ly/h0Uc00>



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## CHECK OUT NEW BOOK FROM CSE PROFESSOR YOAV FREUND!

A new book was just published and written by CSE professor Yoav Freund along with Professor Rob Schapire from Princeton. The book is titled : "Boosting: Foundations and Algorithms" and can be purchased on Amazon.com. Check out the links below for more info.

<http://mitpress.mit.edu/9780262017183>

<http://www.amazon.com/Boosting-Foundations-Algorithms-Adaptive-Computation/dp/0262017180>