



Photo courtesy of Hélène Martin

140 high school students hear Yoshi Kohno discuss security at the December 2011 programming contest

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## DawgBytes: A Taste of CSE

Students from kindergarten to high school appreciate the life-changing potential of technologies such as social networking, automatic translation or robotic prostheses. Despite this, few have the opportunity to explore how and by whom these technologies are created. At UW CSE, we strive to expose more young students to computing in an effort to attract diverse and better-prepared undergraduates to our program.

UW CSE has long been a leader in outreach to K-12 students and teachers. This year, we dedicated time and energy to formalize and expand our existing programs, now under the name of DawgBytes. Our continued success in outreach depends on participation from faculty, current students and alums. To learn more and get involved, please see: [www.cs.washington.edu/outreach/k12](http://www.cs.washington.edu/outreach/k12).

### *Supporting local teachers*

Dedicated and well-prepared teachers have a tremendous impact on the interests of large groups of students. Through multiple channels, we have focused on building strong relationships with local teachers of computer science and other related disciplines.

Local computer science teachers gather at UW CSE monthly for meetings of the Puget Sound Computer Science Teachers' Association. Discussions at these sessions



## From where I sit...



As I write today, we are extremely excited about CSE and the opportunities that will be available to us in the future. In particular, we were able to make a large number of faculty offers this year. While all the returns are not in yet, we have just announced several extraordinary hires as well as partner hires that strengthen both CSE and all of UW.

First, Carlos Guestrin, who is currently the Finmeccanica Associate Professor at Carnegie Mellon University's School of Computer Science, will join us in CSE next fall. Carlos is widely regarded as one of the world's leading researchers in machine learning for his GraphLab parallel machine learning system and many other contributions. Carlos' fiancé, Emily Fox, currently assistant professor in the Department of Statistics at The Wharton School, will join UW Statistics and will have an adjunct appointment in CSE. Emily works on Bayesian and nonparametric Bayesian approaches to time-series and longitudinal data analysis. She and Carlos will both have Amazon Professorships in Machine Learning, graciously provided by Amazon.com.

Second, Jeff Heer, assistant professor at Stanford University, will join us in 2013. Jeff is a superb researcher in the design of interactive, visual data-analysis tools, as well as tools for data cleaning and transformation. Jeff's fiancé, Daniela Rosner, is completing her PhD from the UC Berkeley Information School and will join UW's Department of Human Centered Design and Engineering (HCDE). Daniela's research combines her background in computer science and graphic design, focusing on the impact of culture and technology on the artifacts we create.

Finally, Kate Starbird, who is finishing her PhD at the University of Colorado, Boulder, will also be joining HCDE with an adjunct appointment in CSE. She brings her expertise on the use of social media in crisis situations, such as earthquakes and political uprisings. Kate received her BS in computer science at Stanford and played professional basketball before returning to academia for her PhD.

As a result of a recent state budget initiative, we are looking at significant growth in the future, both at the faculty level and in our undergraduate and graduate programs. We are thrilled to be able to enroll more students in our programs and to hire more game-changing faculty in the future. I hope to have more exciting news on new faculty hires in the next issue.

When this issue appears, we will be in the midst of our favorite event of the year – CSE's department graduation ceremony. It's incredibly moving to celebrate the many successes of our students, past and present, and to see so many students and their families filling UW's beautiful Meany Hall. We recently learned that two of our students will be celebrated at this year's UW graduation ceremonies. Every year the UW recognizes the top student in the previous year's Freshman, Sophomore, and Junior classes university wide as class Medalists. This year's UW Freshman Medalist is CSE's Eric Lei, who entered the UW after 10th grade through the Robinson Center's UW Academy. In addition, Melissa Winstanley, a dual major in Computer Science and Music, has been awarded the UW President's Medal as the most accomplished student in UW's 7500-member senior class. Since 2000, seventeen CSE students have won these medals, a full one third of all winners over that period – a stunning result and indication of the incredible quality of our students. Congratulations to Eric and Melissa and all of our CSE graduates this year!

Have a happy, healthy, and fun summer!

A handwritten signature in purple ink, appearing to read "H. Levy".

Henry M. Levy  
Chairman and Wissner-Slivka Chair

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# UW CSE Cyber Defense Team wins top national prize

Since 2008 – the inception of the Pacific Rim Collegiate Cyber Defense Competition – UW CSE has fielded a team to compete for a position at the national competition. Every year, UW CSE's team has taken first place in the regional competition. (This year the team finished with more than a 3500 point lead over the competition!) And, until last year when the underdog team pulled off a surprising victory, the UW CSE team historically had fallen just shy of placing at the national competition.

With a large number of new members this year, the team did not have high hopes of winning. After all, last year's win could have been a fluke. But this year, the UW CSE Cyber Defense Team again claimed the top spot in the National Collegiate Cyber Defense Competition (NCCDC), showing they are serious contenders in computer security. The eight team members were graduate student Karl Koscher, fifth-year masters student Cullen Walsh, and undergraduate students Mick Ayzenberg, Henry Baba-Weiss, Ian Finder, Landon Meernik, Lars Zornes, with Miles Sackler as the team captain. Melody Kadenko served as team coach, with Jake Appelbaum as assistant team coach.

## The competition

The NCCDC competition is a 3-day event during which teams must defend, administer, and maintain the computer systems of a fictional small company in the face of real attacks. The company network has all the typical small business components: a web server, email systems, network switch and firewall, a DNS server, customer data and personally identifiable information, intellectual property, workstations, servers, and so on. The types of systems vary (from multiple versions of Windows to different distributions of Linux and Solaris), and the teams do not know what they will face prior to the start of the competition. For a final twist, every system provided to the teams has countless security holes in nearly every piece of software. From weak passwords to unpatched software, it takes hours to successfully lock down the entire network.

As teams enter the competition area and sit behind their monitors, the red team (professional hackers from the Air Force, Navy, SPAWAR, and various consulting firms) begins attacking each company's network. To add pressure, competing teams have to perform standard business operations in the midst of these attacks: setting up VPNs, adding user accounts, performing password audits, and more.

There are no breaks or down-time. Tensions run high. Services go down. Websites get defaced. Customer data gets lost. There is always too much to do and too little time. If a team unplugs its network in order to patch, it loses a massive number of points and, ultimately, the competition.



Team members with the championship cup (l-r): Karl Koscher, Cullen Walsh, Henry Baba-Weiss, Melody Kadenko (team advisor), Lars Zornes, Miles Sackler, Landon Meernik, Ian Finder, Mick Ayzenberg

## The UW CSE team

The UW CSE team trained on recommissioned hardware in a makeshift lab in Sieg Hall (which, as alums know well, has seen better days). This year the team was fortunate to have ISEC Partners and Amazon Web Services as sponsors. Building on experience from their CSE education, one of the team's strengths was its ability to innovate, react quickly, and create ad hoc solutions on the spot. For example, one team member's investigation of their systems discovered which servers the red team was using and came up with a quick and effective method to block all traffic that communicated to those servers.

Competition rules did not allow tampering with other teams or attacking the red team, but the rules did not prevent practical jokes. After receiving a red team taunt to "provide a sad pic," the UW CSE team sprang into action. They quickly posted a picture on the red team's twitter feed showing one member looking quite sad in front of a row of green status checks; a taunt to remind the red team that UW's systems were online and doing fine.

When tensions ran high during the competition, the team used humor to bring the atmosphere back to normalcy. (The Angry Birds theme song was a common choice to keep each other laughing.)

## The results

The UW CSE team felt that they would finish in the top three, but they didn't expect to win this year. When another team was announced as the third place winner, UW CSE team members were surprised and hopeful. When yet another team was announced as the second place winner, the energy of the team spiked. The winning team was announced – UW CSE! The screaming team members were presented with a huge trophy, which again graces the Allen Center front office.

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## Carlos Guestrin and Emily Fox join the University of Washington

Carlos Guestrin and Emily Fox, experts in machine learning, will join the University of Washington in the fall, driving us to a new level of excellence and impact in this hugely important field.

Carlos is currently the Finmeccanica Associate Professor in the departments of Machine Learning and Computer Science in



Carnegie Mellon University's School of Computer Science, with courtesy appointments in Civil and Environmental Engineering and in the Robotics Institute. He is widely regarded as one of the world's leading researchers in machine learning for his GraphLab parallel machine learning system and many other contributions. He

received his PhD from Stanford Computer Science in 2003. Carlos will join UW Computer Science & Engineering. Learn more about Carlos here:

[www.cs.cmu.edu/~guestrin/research.html](http://www.cs.cmu.edu/~guestrin/research.html)

Emily is currently an assistant professor in the Department



of Statistics at The Wharton School, University of Pennsylvania. Her research interests include Bayesian and nonparametric Bayesian approaches to time-series and longitudinal data analysis, with an emphasis on extensions to high-dimensional data. She received her PhD from MIT EECS in 2009. Emily will join UW Statistics, with an adjunct appointment

in CSE. More information about Emily may be viewed here: [stat.wharton.upenn.edu/~ebfox/](http://stat.wharton.upenn.edu/~ebfox/).

Both Carlos and Emily will hold newly created Amazon Professorships in Machine Learning. Tremendous thanks to Amazon.com for this commitment to the future of computer science in our region!

We are thrilled to welcome Carlos and Emily to the University of Washington!

## Jeff Heer and Daniela Rosner join the University of Washington

Jeff Heer, currently a computer science faculty member at Stanford University, will be joining UW Computer Science & Engineering. Jeff is a superb researcher in the design of interactive, visual data-analysis tools, as well as tools for data cleaning and transformation. A UC Berkeley PhD alum, Jeff is the recipient of a Sloan

Research Fellowship and a Technology Review TR35 Award.

Learn more about Jeff here: [hci.stanford.edu/jheer/](http://hci.stanford.edu/jheer/)



In addition, Daniela Rosner, who combines backgrounds in both graphic design and computer science, will be joining the UW Department of Human Centered Design and Engineering (HCDE). Daniela is completing her PhD at UC Berkeley's Information School. Her research focuses on the impact of culture and technology on the artifacts we create. Learn more about Daniela here:

[people.ischool.berkeley.edu/~daniela/2012/](http://people.ischool.berkeley.edu/~daniela/2012/)

Jeff and Daniela will add tremendous strength to CSE, HCDE, and UW – particularly to the large consortium of researchers working on human-computer interaction and design at UW as part of "dub," and, in Jeff's case, also to efforts in data-driven discovery through the eScience Institute. Coming on the heels of the recruiting of machine learning experts Carlos Guestrin and Emily Fox, and social media expert Kate Starbird ([www.cs.colorado.edu/~starbird/](http://www.cs.colorado.edu/~starbird/)), it's a game-changing year for the University of Washington's leadership in these areas.

We are thrilled to welcome Jeff and Daniela to the University of Washington! (They will arrive in 2013.)



## Two new diamonds in the CSE trove

For the fourth time since 2006, the College of Engineering presented 2012 Diamond Awards to two CSE alumni. This year's honorees are Anne Condon (PhD '87), head of Computer Science at the University of British Columbia (UBC), and Greg Badros (PhD '00), vice president of products and engineering at Facebook. Condon received the award for Distinguished Achievement in Academia, and Badros received the Early Career Award, bestowed by Dean Matt O'Donnell at the May 18 Diamond Awards Dinner.

Anne Condon is a computer science theoretician whose work progressed from an award-winning doctoral dissertation on complexity theory to current research on DNA computing and algorithms for biology. After 12 years at the "other UW" in Madison, Wisconsin, she joined the faculty at UBC in 1999 and was appointed head of Computer Science last year. In an almost annual series of honors, she received the 2010 Computing Research Association Award for increasing participation of women and underrepresented groups in computing research, and last year CSE honored her with our Alumni Achievement Award.



Condon described receiving the Diamond Award as "incredible," with special acknowledgment for her mentors and peers at UW CSE who "gave me the passion for research and inspired me to

make a difference in the lives of students I work with." Read a profile of Condon on page 8 in the spring 2011 MSB profile: [www.cs.washington.edu/publications/msb/](http://www.cs.washington.edu/publications/msb/)



It's clear why Greg Badros merits the Early Career Award. After he tied a CSE record by finishing his PhD in three years and eight months, he caught the Internet wave, first working at Go2Net as chief technical architect. At Google he rose to senior director of engineering, leading consumer apps such as Gmail, Calendar, and Reader. After joining Facebook in 2009, Badros scaled up the technology for advertising systems, and now as vice president of products and engineering, he leads key areas including advertising, search, and data science.

Badros loves working in the high-impact universe of social media because "the amount of good we can do in the world is truly inspiring and makes me grateful for the opportunity I have." He said the Diamond Award is a "huge and special recognition" and reports the network of friends and colleagues he built up during his CSE years "has proven valuable again and again throughout my career."

Read more about the 2012 Diamond Award winners and CSE's past honorees at:

[www.engr.washington.edu/alumcomm/diamond/index.html](http://www.engr.washington.edu/alumcomm/diamond/index.html)

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## Cyber Champs (cont'd)

This year's winning team from NCCDC will also have a spot in the Capture the Flag competition at DefCon, the premier hacking conference held in Las Vegas. In late July, the CSE team will try to fend off the world's top security experts and hackers.

To learn more about the team or to read interviews given by the team to various media outlets, visit the CSE News page: [news.cs.washington.edu/2012/04/22/uw-cse-repeats-as-national-collegiate-cyber-defense-competition-champs/](http://news.cs.washington.edu/2012/04/22/uw-cse-repeats-as-national-collegiate-cyber-defense-competition-champs/).

For more information, to sponsor the team, to donate hardware, or to join, contact team advisor Melody Kadenko, [melody@cs.washington.edu](mailto:melody@cs.washington.edu).

The team website is at <http://secdef.cs.washington.edu/>.

## CSE returns to Bay Area



UW CSE will be in the Bay Area on June 28th. Here is a chance to reconnect with other CSE alums and friends in the Bay Area and with faculty members Ed Lazowska, Gaetano Borriello, Luis Ceze, and Dan Grossman. Join us for an evening of exploration, conversation, beverages

and appetizers at the California Academy of Sciences, Golden Gate Park, 6:30-9:00 p.m. (Thursday is NightLife at the museum. Guests must be 21+)

**RSVP is required!** Please respond by June 14th to Kay Beck-Benton, [kbeck@cs.uw.edu](mailto:kbeck@cs.uw.edu). Parking instructions will be sent to registered guests.



CALIFORNIA  
ACADEMY OF  
SCIENCES



## Third Annual CSE Alumni Achievement Awards

During its June 9th graduation ceremony and dinner the prior evening, CSE honored John K. Bennett and Wen-Hann Wang, alumni with wide-ranging interests and global vision. These awards affirm to all CSE graduates and students that each contributes to a long, successful line with impact that drives deep and extends far.

### John K. Bennett (PhD '88)

*Engineering educator/mentor, designer/builder, interdisciplinary catalyst*



John Bennett is passionate about innovation in undergraduate education and encouraging undergraduate students in any major to take an interest in engineering and learn the principles of design through hands-on experiences. While on the faculty at Rice University, he taught a Lego Robot course with no prerequisites that drew both engineering and liberal arts students, whom he challenged to design and build autonomous robots programmed to complete various tasks.

"Students learn engineering principles by practicing them," Bennett said. "Liberal arts majors bring a fresh perspective, and they are completely unfettered by what we engineers consider to be conventional wisdom."

Another recent mission is developing better ways to teach introductory computer science to both majors and non majors. He created a course using SecondLife as a laboratory to entice students to learn how to program by stimulating their desire to imbue their virtual creations with behavior.

"After teaching the course a couple of times I realized the substantial gap between 'I understand how to think computationally' and 'I am able to express that understanding using a programming language in a syntactically correct manner,'" Bennett said. "I created a Scratch-like programming environment called FS2LSL to make this possible."

(Information on FS2LSL may be viewed at:

[redwood.colorado.edu/jbk/fs2lsl/](http://redwood.colorado.edu/jbk/fs2lsl/))

Bennett, an expert in the design, implementation, and evaluation of distributed systems, joined the faculty at University of Colorado at Boulder in 2000, where he holds an endowed

professorship in computer science and is a professor of electrical and computer engineering. He also served as associate dean of engineering and sciences, and now directs the ATLAS Institute, the Alliance for Technology, Learning, and Society – a campus-wide entrepreneurial catalyst and incubator for innovative interdisciplinary research, education, and creative work.

Bennett has been active in Engineers Without Borders at UC and is a past president of the EWB national governing board. An expanding interest is the use of information communication technology (ICTD) to improve the quality of life in developing countries, and his work in this area has taken him to Kenya and Mali.

"I have championed inclusion of access to information as one of the steps out of poverty," Bennett said. "Here at ATLAS we have established the first graduate degree in the country that focuses on ICTD practice, and we graduate our first cohort this spring."

He earned BS and MS degrees in electrical engineering at Rice, then joined the Navy as a commissioned officer. He decided to enroll in UW CSE's doctoral program after he completed a posting at the Puget Sound Naval Shipyard, where he supervised the repair and overhaul of a destroyer two nuclear cruiser. At UW his dissertation research on distributed Smalltalk.

"A real engineer" is how his former doctoral advisor, Ed Lazowska, describes him. "John designs and builds things. He is a problem solver and is totally undeterred by the sorts of obstacles that would stop others in their tracks," Lazowska said. "He has made the ATLAS Institute a huge success at Colorado. It's a national model for engaging computer scientists with global challenges and with other disciplines."

True to his cross-disciplinary advocacy, Bennett's non-engineering pursuits range from a love of snowshoeing and motorcycles, to Renaissance literature, and weaving tapestries.

And his feelings about the Alumni Achievement Award? "I'm thrilled, honored, and humbled. It's sort of like your parents saying 'Way to go. Thanks for not screwing up.'"

*I have learned why so many of my engineering friends put themselves through hell to become engineers — it's because of the awesome sense of achievement you feel when you build something with your own two hands and intellect and make it work really well.*

Student in Lego Robots, engineering design course



(Continued from page 6)

### Wen-Hann Wang (PhD '89)

*Computer architecture/systems expert, R&D executive, globe crosser*

Wen-Hann Wang's educational and career odysseys have crossed four continents. Our man of the world is also our man at Intel, where he is vice president of Intel Labs in Hillsboro, Oregon, and director of circuits and systems research. A new area of responsibility is looking at how to apply circuit technologies to solve biologic challenges. During more than 20 years at Intel, Wang's assignments have included two postings to Shanghai and dozens of trips abroad to Russia, the Middle East, and Latin America. Closer to home travels include spring and fall visits to Seattle as Intel's liaison to the UW.



A native of Taiwan, Wang earned his BS there and MS in The Netherlands. For his doctoral research at UW he worked with Jean-Loup Baer on multi-cache level hierarchies and co-authored a ground-breaking paper that won the "test of time" award from the International Symposium of Computer Architecture in 2003.

Wang has kept in close touch with Baer, who considered him a "brilliant student, first-rate researcher, and still the nicest guy on earth" ... and of course, an exemplary choice for the Alumni Achievement Award.

"This award is an incredible honor to me," Wang said. "I felt immensely lucky to be admitted to UW back in 1985. This honor is much more than what I could have possibly dreamed for."

To read more about Wen-Hann, see the feature story on page 6 in the fall 2011 issue of MSB:

[www.cs.washington.edu/publications/msb/](http://www.cs.washington.edu/publications/msb/)

## DawgBytes (cont'd)

(Continued from first page)

center on pedagogical strategies and upcoming events, such as programming contests. Several of these teachers offer our CSE 142 and 143 courses through the UW in the High School program. Roosevelt High School CS teacher Andy Davidson recently remarked: "I'd just like to acknowledge the incredible contribution that CSE has made to teaching CS in the Seattle Public School district."

CS4HS, our annual summer workshop for math and science teachers, now serves more than 70 teachers. Participants learn about applications of CSE and leave with several curriculum modules they can implement in their classrooms.

We continue our tradition of recognizing high school and community college teachers who inspired UW CSE students. At the annual CSE Inspirational Teachers' dinner, teachers learn about CSE and reconnect with former students who are now in the department.

### Encouraging future computer scientists and engineers

In March 2012, we held a ceremony for the winners of the Washington State NCWIT Award for Aspirations in Computing. The 20 young women recognized have demonstrated remarkable accomplishments in computing and the event strengthened their resolve to pursue technical degrees. Following the event, one winner remarked that "women have more opportunities than [she] thought in computing."

UW graduate and undergraduate students participating in the K-12 Computing Education seminar will log more than 150 hours of volunteer time this quarter. Their projects have ranged from developing programming curriculum for middle schoolers to helping students struggling with AP Computer Science.

The Saturday Computing Experience introduces deaf and hard-of-hearing students to computers and programming. Students meet weekly for about two months and complete projects together. At the end of the program, the students will showcase their projects.

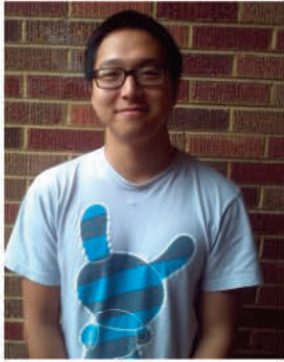
For the first time this summer, we will offer week-long camps for middle and high school students in conjunction with Women in Science and Engineering and the Society of Women Engineers.

Want to get involved with DawgBytes? Contact us at [outreach@cs.washington.edu](mailto:outreach@cs.washington.edu).



## Datagrams

### Willy Cheung wins Fulbright Scholarship



CSE bachelors alumnus Willy Cheung won a 2012-13 Fulbright Scholarship. He graduated with departmental honors in 2011 with a degree in CS. His honors thesis project involved developing brain-computer interfaces, which allows users to control devices directly with brain signals. On this project, he was able to combine

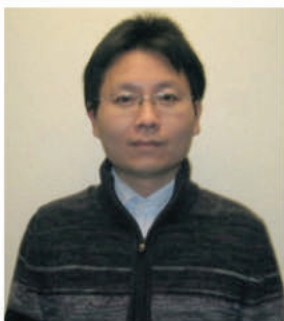
two of his passions: understanding the human brain and making technology accessible to people. While working on research, he also found he loved the personal responsibility required, and being actively involved in an academic community where every day brings new knowledge. Willy's Fulbright project involves developing a brain-computer interface framework based on reinforcing learning, so that the user and computer system can adapt to each other cooperatively. He will be conducting CS-related research and teaching English in Austria.

### Stuart Reges joins CSTA Board of Directors

CSE's Stuart Reges has been elected to the Board of Directors of the Computer Science Teachers Association (CSTA), as one of two "University Faculty Representatives." CSTA is a national organization that supports and promotes the teaching of computer science in K-12. Stuart has a long record of engagement with both the national CSTA organization and the Puget Sound chapter, PS CSTA.



### Peng Dai receives Honorable Mention in ICAPS 2012 Best Dissertation Award competition



Peng Dai, a 2011 PhD now working at Google, received Honorable Mention in the 2012 Best Dissertation Award competition of the International Conference on Automated Planning & Scheduling (ICAPS). The ICAPS Best Dissertation Awards honor outstanding PhD theses in any area of automated planning

and scheduling. Peng's dissertation, "Decision Making under Uncertainty: Scalability and Applications," was supervised by Dan Weld and Mausam.

### Seattle 2.0 Startup Awards, Hire of the Year: Kate Matsudaira, Decide.com

At the fourth annual Seattle 2.0 Startup Awards on May 3rd, Kate Matsudaira received the Hire of the Year award. From GeekWire's coverage of the event:



"Startup Decide [a UW CSE company] hired Kate Matsudaira as its vice president of engineering earlier this year, as she shifted from her previous position as vice president of engineering post at SEOmoz. The University of Washington computer science grad prevailed in the voting over a strong field of finalists — Daryn Nakhuda of Amazon, Dan Shapiro of Google, Wibe Wagemans of Big Fish Games and Mitch Hill of Opscode." More info on the Startup Awards here:

[www.geekwire.com/2012/revealed-winners-seattle-20-startup-awards/](http://www.geekwire.com/2012/revealed-winners-seattle-20-startup-awards/)

### David Notkin named Acting Associate Dean of Research and Graduate Studies

UW Dean of Engineering Matt O'Donnell has named CSE's David



Notkin as Acting Associate Dean of Research and Graduate Studies for the coming year. In announcing Notkin's appointment, O'Donnell stated: "He has won numerous awards including most recently, the ACM SIGSOFT Influential Educator Award in 2012. ... In this role,

David will foster multidisciplinary collaborations within and outside the college, work with new faculty to develop successful research programs, and strengthen programs to recruit and mentor top graduate students." Congratulations to David for his long-standing commitment to graduate education!

### Georg Seelig wins DARPA Young Faculty Award

UW CSE and EE professor Georg Seelig, an expert in quantitative

biology and DNA nanotechnology, has been named a recipient of a 2012 DARPA Young Faculty Award. Research in Seelig's lab focuses on understanding how biological organisms process information using complex biochemical networks and how such networks can be engineered to program cellular behavior, and particularly



on the identification of systematic design rules for the de novo construction of biological control circuits with DNA and RNA components. Congratulations, Georg!



### Aldrich, Chambers, and Notkin win ICSE "Test of Time" Award



Many major computer science conferences have established the annual tradition of identifying the most influential paper

from the conference a decade prior. UW CSE authors have received a number of these awards, a clear indication of the lasting impact of our research. "ArchJava: Connecting Software Architecture to Implementation" was named the "Most Influential Paper from ICSE 2002" (International Conference on Software Engineering). The ArchJava paper was co-authored by UW CSE PhD student Jonathan Aldrich (now a faculty member at Carnegie Mellon) and UW CSE professors Craig Chambers (now at Google Seattle) and David Notkin. The award will be presented at ICSE 2012 in Zurich, Switzerland in June. Congratulations to Jonathan, Craig, and David!

### Carl Ebeling wins "Top 25 in 20" from FPGA



For the 20th anniversary of the International Symposium on Field-Programmable Gate Arrays in 2012, a program committee has assembled a special volume to highlight the most significant papers from the conferences – 25 papers across all years and all major FPGA topics that best exemplify the contributions from the conference. These 25

papers represent roughly 5% of the 400-500 papers that have appeared in the conference to date. The paper "PathFinder: A Negotiation-Based Performance-Driven Router for FPGAs" by CSE's Larry McMurchie and Carl Ebeling was among the 25 papers selected. Congratulations Carl and Larry!

### Tom Anderson wins "Top 20 in 20" from HPDC

The International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC) has identified 20 "most influential" papers from the past 20 years. Among them is the paper "WebOS: Operating System Services For Wide Area Applications" by Amin Vahdat, Tom Anderson, Mike Dahlin, Eshwar Belani, David Culler, Paul Eastham, and Chad Yoshikawa.

Says Tom: "Perhaps a lesson in this – this paper was serially rejected from every conference we submitted it to, except the last one (HPDC). After all, in 1996, why would anyone want to have a web service that spanned multiple data centers?" Congratulations to Tom and his coauthors!



## Seth Cooper wins ACM Doctoral Dissertation Award



The Association for Computing Machinery (ACM), announced May 2 that Seth Cooper, 2011 PhD alum and current creative director of the UW Center for Game Science (CGS), has been named the recipient of the 2011 Doctoral Dissertation Award. The award is presented annually to the

author of the best doctoral dissertation in the field. (To put that into perspective, roughly 1,500 PhDs in computer science were awarded last year in the United States alone.)

Seth's dissertation, "A Framework for Scientific Discovery through Video Games," was advised by UW CSE professor Zoran Popović. The dissertation explores how the video game environment can be used for solving difficult scientific problems. Seth is the cocreator and lead designer and developer of Foldit. Employing the collective efforts of tens of thousands of gamers, Foldit players solved the structure of a key protein in the fight against HIV, putting the combined power of humans and computers toward solving problems that neither could solve alone.

The award makes UW CSE one of only three in the world that have won the ACM award two times. (UW CSE Ph.D. alum AnHai Doan, now a faculty member at the University of Wisconsin – Madison, won the award in 2003.)

When interviewed for an article in the *UW Daily*, Popović stated he is proud of the accomplishment of his former student, whom he considers "one of the best software developers he's ever known," but also believes it holds significance for the UW CSE department and the field of computer science at large.

"If you look over the last 10 years, there are only three CS departments in the world that have won the ACM award two times," he said. "We are one of them. It is a good indication that UW CSE is one of the top five computer-science departments. Thinking broader, his thesis shows how computer science, when integrated with limitless human cognitive ability, can solve hard problems facing society today."

Congratulations to Seth!



## Jenny Abrahamson, Nicki Dell win Anita Borg Scholarships

UW CSE graduate students Jenny Abrahamson and Nicki Dell are among 25 outstanding young women from across the U.S. named as winners of 2012 Google Anita Borg Memorial Scholarships.

Jenny is completing her fourth year of CSE's combined Bachelor's/Master's program. She has been working with Professor Mike Ernst on tools for analyzing systems from their execution logs. This summer she plans to intern at Google in Munich on the Infrastructure privacy team. Jenny will return next fall to complete her masters degree.



Nicki is a PhD student who is advised by Professor Gaetano Borriello and Professor Linda Shapiro. Her research interests are in computer vision, machine-learning and human-computer interaction, with a focus on designing and evaluating applications that improve the lives of underserved populations

in low-income regions. She is interested in investigating the potential for smartphones to be used as a platform for disease diagnosis and monitoring at the point of care in developing countries. Nicki runs the Change Seminar, a group at UW exploring how technology can improve the lives of underserved populations in low-income regions, and she is also actively involved in DUB, a multidisciplinary group at UW that leads research in Human Computer Interaction and Design.

The Google Anita Borg Memorial Scholarship honors the memory of Dr. Anita Borg, who devoted her life to encouraging the presence of women in computing and founded the Institute for Women in Technology in 1997. Anita passed away in 2003, and the Anita Borg Memorial Scholarship was established in 2004 to honor her memory. Anita's legacy lives on today through this scholarship and the organization she created, which has since been re-named the Anita Borg Institute for Women in Technology.

Jenny and Nicki join eighteen other women from UW CSE that have recognized with this honor. Congratulations to Jenny and Nicki!

## Raymond Zhang awarded a Goldwater Scholarship

CSE undergraduate Raymond Zhang is one of 282 top undergraduates from across the nation to have been awarded Goldwater Scholarships for the 2012-13 academic year. The Goldwater Scholars were selected on the basis of academic merit from a field of 1,123 mathematics, science, and engineering students who were nominated by the faculties of colleges and universities nationwide.

Raymond is pursuing dual degrees in computer engineering and biology. He was a part of the Early Entrance Program at the UW, starting college at age 13 in order to be challenged and to accelerate his learning.

Beginning with his sophomore year, Raymond has been part of a computational biology research group led by Ram Samudrala, Associate Professor in the Department of Microbiology. He is currently working on a project that will predict the three-dimensional structure of how proteins and nucleic acid strands will interact with each other; the project will use known structures of similar interactions as templates to build models. Previously in work he conducted in the Samudrala Compbio Group, Raymond re implemented a program to refine a protein model based on finding consensus in a collection of models for that protein.



Raymond participated in a Summer Undergraduate Research Program with Dr. Myles Akabas's lab at the Albert Einstein College of Medicine. He spent the summer working on a project to develop an assay to block a protein critical for the growth of a strain of malaria parasites (*P. falciparum*).

After his undergraduate career, Raymond plans to enter a combined M.D./Ph.D. program focusing on computational biology, with the long-term goal of being a physician scientist. He would like to use computers to model biological systems and develop innovative treatments for diseases.

At the ripe age of 16, Raymond is the 8th recent CSE student to be recognized with a Goldwater Scholarship. A list of our award winning students may be viewed here:

[www.cs.washington.edu/students/ugrad/allawards](http://www.cs.washington.edu/students/ugrad/allawards)

Congratulations, Raymond!



## CSE's Tom Lehmann: top crew athlete

Tom Lehmann, a senior majoring in computer science with a minor in math who hails from Rovershagen, Germany, is busy wrapping up his fourth and final year of collegiate rowing.

This past October, the UW men's crew team placed third at the internationally renowned Head of the Charles regatta in Boston, finishing just behind Harvard and a boat of US National Team rowers. The 2012 season kicked off at the end of spring break with the Class Day regatta – a UW internal race where freshmen, sophomores, juniors, and seniors compete against each other in eights. At the end of March, the UW crew swept all five races in the dual versus Brown. The next dual pitted the UW Huskies against UC Berkeley, long standing rivals, which the Husky men again swept. The varsity eight programs at Washington had no peers in winning their sixth straight Windermere Cup title. The 26th Annual Windermere Cup was held in early May and included crews from Stanford, OSU, Argentina, and others. Ranked No. 1 in the nation, the Washington men's crew program won all four races at the inaugural Pac-12 Rowing Championships held May 13th. The final regatta is IRA Championship held in New Jersey at the end of May.

Following the busy crew season, Tom looks forward to interning at eBay in Redmond this summer. After graduating, he would like to stay in the US to work.



## Melissa Winstanley: 2012 UW President's Medalist

The University of Washington President's Medal is awarded each year to the most accomplished student in UW's 7500-member senior class. Congratulations to CSE's Melissa Winstanley, the 2012 UW President's Medalist!



Melissa – a graduate of Bellevue High School – is a dual major in Computer Science and Music. She began her CSE career as the top student (out of 475) in CSE 142 and the top student (out of 297) in CSE 143. She has continued this extraordinary academic trajectory while serving as head Teaching Assistant for CSE 143 for the 2011-12 academic year, serving as chair of UW's ACM-W chapter, performing as saxophone principal in the University of Washington Wind Ensemble, and serving as an Honors Peer Mentor. Her summers have included two internships with Google, a research internship with UW's Community Ecology Lab, and a UW Honors Program summer in Rome.

For the past year, Melissa has worked on an honors research project on mobile tools for public health with UW CSE faculty Richard Anderson and Ruth Anderson. Using Google Maps, she has been developing a web tool for modeling geographic data to facilitate vaccine capacity analysis in Third World nations. One of the biggest bottlenecks of worldwide vaccination initiatives is a deficit of refrigerators: donated vaccines go bad without adequate refrigeration. Her research integrates with existing software from PATH and has been trialed by public health administrators in Africa. This summer, she plans to intern at Google Seattle, working on Google Maps and furthering her work with visualization and maps. Melissa will return in the fall to complete her Masters in CSE. She is excited to continue learning and to continue her work as a teaching assistant in the department.



## CSE's Eric Lei wins UW Freshman Medal

Each year, the UW recognizes the top student (of roughly 7,500) in the previous year's Freshman, Sophomore, and Junior classes as class Medalists. Congratulations to CSE's Eric Lei, this year's UW Freshman Medalist!

Eric entered the UW following 10th grade through the Robinson Center's UW Academy. He describes receiving the freshman medal as his "first real accomplishment" as a UW undergraduate. Pushing himself in his classes and participating in research are important factors for Eric in his undergraduate experience, and he is actively pursuing research opportunities that will enable him to apply classroom concepts to real-world applications. He is a member of the investment club Husky Traders, completed

an economics research internship in which he analyzed teachers' union bargaining contracts, and is a former tutor for elementary school math. This summer, Eric will intern as a programmer for Qualcomm. After graduation, Eric would like to work for a few years and then enter graduate school for either computer science or economics.



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## CSE Celebrates Inspirational Teachers

Each of us looks back on a small number of particularly inspirational K-12 or community college teachers who gave us a sense of academic purpose and direction. Each year, the department invites our students to nominate these teachers for recognition. We then host the teachers, their partners, and the students who nominated them at a dinner. Congratulations (and our thanks!) to the 2011-12 UW CSE Inspirational Teachers – and to all of the K-12 and community college teachers who inspire their students and send them on to UW CSE! 2011-12 UW CSE Inspirational Teachers may be viewed here:

[www.cs.washington.edu/public\\_files/ugrad/2011\\_2012teachers.htm](http://www.cs.washington.edu/public_files/ugrad/2011_2012teachers.htm)



UW CSE Inspirational Teachers Dinner, held May 10th, in the Microsoft Atrium of the Paul G. Allen Center for Computer Science & Engineering.



Ed Lazowska recognizes David Pevovar, as UW CSE "top dawg" inspirational teacher. David, a teacher who has been nominated every year by his students, is retiring at the end of this year from Central Kitsap High School.