I have to start with my heartfelt THANKS to Rami Melhem. We are all thankful for the great job Rami has done in the last nine years in the chair’s office (we even had to change the by-laws of the Department to convince him to run for a third term!). He took the CSD from the slump of the dot-com boom/bust to a thriving CSD now. Big shoes to fill.

And just how do we do that? I am a firm believer in community and education. So, that is what we'll do. Easier said than done!

We will continue building the community, both in terms of research grants and in terms of visibility to the outsiders (we know we’re great, we just need to show others!). We accomplish this by having more interactions with other units within the University, writing joint grants, and using our already-interdisciplinary faculty resources to leverage different types of grants and funding.

We also need to build on the great momentum we have in terms of education. Our professors are consistently above the School average and we want to continue and improve. Our goal is to increase retention and recruitment of bright students. For that, we plan on improving the way courses for non-majors are taught (recruitment) and the way introductory CS courses are taught and managed (retention). We will enhance assessment of the quality of education, the way instructors work, the progress of students through the major, the research and industry experience, and the overall student and teacher experience.

Exciting times ahead! Drop me a line, give me your best ideas, let’s make our CSD flourish even more!
New Faculty: KyoungSoo Park

KyoungSoo Park joined the Computer Science Department as an assistant professor in the Spring of 2009. He received his MA and PhD degrees in computer science from Princeton University in 2004 and 2007 respectively, and his BS in computer science from Seoul National University in South Korea in 1997. After finishing his BS degree, he worked for Hangul and Computer in Seoul and developed Hangul, the best-selling word processing software in South Korea.

Dr. Park’s research focuses on the scalability, reliability, and performance of distributed and networked systems. His goal is to establish the fundamental principles in designing and implementing the large-scale networks that impact the daily lives of millions of people. During his doctoral program, he worked on improving the performance and reliability of the Domain Name System (DNS) and large-scale content distribution networks (CDNs) to scalably deliver popular content simultaneously to tens of thousands of people. His research Co* systems (CoDeeN, CoDNS, CoBlitz, etc.) have been developed and deployed for real service on PlanetLab and have been used by more than six million people for the past five years. Based on his research, he cofounded CoBlitz, Inc. in 2007, which provides high-performance CDN solutions to ISPs and Telcos.

His recent work includes HashCache, a high-performance Web proxy cache storage with a tiny memory footprint and Waprox, a wide-area network (WAN) Web accelerator for low-bandwidth and high-latency links. He is currently working with OLPC and the Intel Classmate PC to deploy these systems in developing regions. MIT Technology Review lists HashCache as one of the 10 emerging technologies of 2009.

New Staff: Wendy Bergstein

Our newest staff member is Wendy Bergstein. Wendy joined the department in August 2008, just in time for the hustle and bustle of the students’ return for the Fall semester. Her responsibilities keep her hopping between Computer Science and the Intelligent Systems Program.

Wendy is a recent Carlow University graduate with a BS in Information Systems Management. As a full-time, non-traditional student at Carlow, Wendy studied abroad at the American University of Rome, Italy, in the spring of 2005. She is looking forward to further travel and to continuing her education at Pitt.

Wendy lives in Squirrel Hill and has two children, Jessica and Joel, and one granddaughter, Isabelle. Jessica is due with her second daughter in October! Jessica and her family live in Ithaca, N.Y., and Joel lives in Roanoke, Va. Wendy spends many weekends traveling to the Finger Lakes Region of New York and the Blue Ridge Mountains of central Virginia.

Wendy is also an auto enthusiast. A member of the Sports Car Club of America (SCCA), she competes in autocross events. For the past six years, Wendy has raced her Miata with local clubs as well as some as far away as Danville, Va. When she is not driving, she has a key role in operating the computerized timing and scoring system during the events. Wendy also enjoys leisurely cruises with the Western PA Miata Club.

Wendy’s future plans include continuing to visit National Parks, monuments, and national treasures. She has discovered that although it is wonderful to travel abroad, there are many places right here in the United States that she wants to visit and experience.

Faculty Briefs

- Assistant Professor Sangyeun Cho received one of the two 2008 A. Richard Newton Graduate Scholarships. Each scholarship is awarded to support one or more graduate students in design and test automation of electronic and computer systems. The title of Dr. Cho’s award proposal is “Bridging Technology Fragility and Next-generation Many-core Processor Architectures and System Research.”

- Assistant Professor G. Elisabeta Marai received one of the 2009 Provost’s Advisory Council on Instructional Excellence (ACIE) Innovation in Education Awards. Her proposal, “Immersive Software Engineering,” is one of only 11 to receive an ACIE award this year.

- Professor Rami Melhem organized the 2009 workshop on Data Intensive Computing in Pittsburgh, Pa.

- Professor Kirk Pruhs co-organized the 2009 NSF workshop on the Science of Power Management in Washington, D.C.

- Professor Janyce Wiebe has been named the Program Co-chair for ACL-IJCNLP 2009, the premier conference in Computational Linguistics which is being held in Singapore in August.
Research Funding on the Rise

The research expenditure for the department was $3,619,640 during the period from July 1, 2008, to June 31, 2009, a 12 percent increase over the previous year. Also, during the same period, the research contracts signed with the department (new and continuing grants) totaled $3,580,817. The external grants awarded to the department for new research projects were:

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<td>REEact: A Robust Execution Environment for Fragile Multicore Systems</td>
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2007–2008 Teaching Awards

These awards are given to faculty for achieving the highest student evaluation score for overall teaching effectiveness.

**PART-TIME FACULTY:** Robert Addleman & George Jucha

**Core UG Courses:** Jonathan Misurda

**Upper-level Courses:** John Ramirez & Bruce Childers

**Graduate Courses:** Sangyeun Cho & G. Elisabeta Marai

2007–2008 Grad Student Awards

The department recognizes outstanding graduate students in both teaching and research each year.

**TAULBEE AWARD:** Christine W. Chung

**Runner-Up (TAULBEE AWARD):** Michael C. Lipschultz

**MELLON FELLOWS:** Weijia Li, Qinglan Li, & Michal Valko

**TA MENTOR:** Michael C. Lipschultz

PhD Dissertation Defenses

Between July 2008 and June 2009, eight of our students successfully defended their PhD dissertation and moved on to both academia and industry here and abroad:

- **Subrata Acharya** defended her dissertation entitled “Dynamic Traffic Driven Architectures and Algorithms for Securing Networks.” Subrata was advised by Prof. Taieb Znati.

- **Ali Alanjawi** defended his dissertation entitled “Using Coevolution in Complex Domains.” Ali was advised by Prof. Robert Daley.

- **Mohamed Aly** defended his dissertation entitled “Load Balancing Hotspots in Sensor Storage Systems.” Mohamed was advised by Prof. Panos K. Chrysanthis and Prof. Kirk Pruhs.

- **Christine Chung** defended her dissertation entitled “Evolutionary Solutions and Internet Applications for Algorithmic Game Theory.” Christine was advised by Prof. Kirk Pruhs.

- **Sherif Khattab** defended his dissertation entitled “A Defense Framework Against Denial-of-Service in Computer Networks.” Sherif was advised by Prof. Rami Melhem and Prof. Daniel Mossé.

- **Mihai Rotaru** defended his dissertation entitled “Applications of Discourse Structure for Spoken Dialogue.” Mihai was advised by Prof. Diane J. Litman.

- **Tomáš Šingliar** defended his dissertation entitled “Machine Learning Solutions for Transportation Networks.” Tomáš was advised by Prof. Milos Hauskrecht.

- **Jiang Zheng** defended her dissertation entitled “Towards Automatic and Accurate Buffer Overflow Vulnerability Diagnosis For Commodity Software.” Jiang was advised by Prof. José Carlos Brustoloni.
Graduate Student Briefs

- **Kelli Ireland** was named a 2009 Anita Borg Scholarship finalist. Kelli is a graduate student in the Computer Engineering Graduate Program, which is a joint program between the Department of Computer Science and the Department of Electrical and Computer Engineering.

- **Tonya Groover** was awarded a Google RISE Award for the Technology Leadership Initiative. The award is designed to fund, promote, and support science, technology, engineering, mathematics, and computer science education.

- **Sri Mandayam**, a Women in Computer Science (WiCS) coordinator, **Kelli Ireland** (CoE), and **Tonya Groover** (CS) were selected to attend the CRA-W 2009 Grad Cohort Workshop in March.

Undergraduate News

CS Major Concentrations

The field of computer science is quite broad and diverse, which is reflected in the large and varied number of upper-level elective courses offered by the Computer Science Department at Pitt. In order to help our students better select the appropriate elective courses, the department has recently created several CS Major Concentrations. These concentrations are groups of courses that our faculty believe prepare CS majors at Pitt for various areas within the overall computer science field. Some of these concentrations include: Security, Gaming, Artificial Intelligence, High Performance Systems, and The Business of Software.

Bioinformatics Major

One of the newest majors at the University of Pittsburgh is Bioinformatics, an interdisciplinary major developed jointly by the Departments of Computer Science and Biological Sciences. As the need for computing technology continues to increase in the natural sciences and particularly in the biological sciences, it is becoming ever more important that researchers and technicians in these fields have strong backgrounds in computer science. The bioinformatics major at Pitt gives students strong fundamentals in biology, chemistry, statistics, and computer science. The major also provides students with advanced training via courses in computational biology and software design, and research experiences and seminars in bioinformatics. The Computer Science Department is optimistic that bioinformatics will be successful and a benefit to both the University of Pittsburgh and the science community.

UG Briefs

Here are some interesting and exciting occurrences in the CS Department UG program over the past year:

We once again sent two teams to the ACM East Central North America Regional Programming Competition. Our Pitt Gold team (*Heather Friedberg, Corey Bonnell, and Callen Shaw*) finished 21st and our Pitt Blue team (*Farhannah Sheets, David Goldberg, and Yanli Wang*) finished 51st out of 124 teams. We congratulate all of our competitors and look forward to another strong finish next year.

In order to better prepare our majors for the writing and public speaking requirements of the business community or graduate school, we have modified our Capstone courses (CS 1900 Internship, CS 1950 Directed Study and CS 1680 Project Design and Implementation) to include a weekly lecture period. During this period students take turns presenting project proposals (at the beginning of the term) and results (at the end of the term). They also submit technical reports detailing their work. In addition to the speaking and writing experience, students gain the benefit of seeing the many diverse projects that their classmates have undertaken.

Computer science is a demanding field, and it often requires students to work on projects during off-hours. Starting spring 2009, we have allowed our CS majors 24/7 access to Sennott Square, so they can work in our labs at their convenience. Access is gained through key cards so as to maintain a safe and secure work environment.

The Computer Science Outstanding Undergraduate Student for academic year 2008–2009 is **Nathan Good**. This award is given each year to the student who best embodies the qualities that we believe a computer science student should have. Nathan’s GPA is excellent, both in his CS courses and overall. Nathan has also completed an internship, a directed study research project and the Project Design and Implementation Course, thereby satisfying the Capstone requirement three different ways. Nathan also won the inau-
gural CS Day Video Competition in 2007 and runs his own Web programming company. Congratulations Nathan on a well-deserved honor.

Brian Wongchaowart received an Honorable Mention at the 2009 CRA Outstanding Undergraduate Student Award Competition. At the time of the award, Brian was doing research in the ADMT Lab under the supervision of Dr. Alexandros Labrinidis. Brian is the seventh student from the CS Department to be recognized by CRA since the inception of this award program in 1995.

SciTech 2009

Twice each year—in the spring and the fall—the Carnegie Science Center hosts the SciTech Fair. The fair, which lasted nearly a week in March, is host to hundreds of area middle school and high school students. The students see the fair as a fun event and an escape from their usual classroom routine. Parents, teachers, and leaders of area industries see it as an important opportunity to foster an interest in science and technology, and perhaps inspire a young person to pursue a career as a scientist or technologist. SciTech events feature the best of Pittsburgh’s science and technology, including biotechnology, information technology, robotics, environmental technology, and nanotechnology.

This year, the Department of Computer Science participated in the fair. Dr. John Aronis, Brian Wongchaowart, and Nathan Good planned and created interactive software that would be entertaining to teenagers, but also demonstrated important ideas from computer science. The games were based on the Traveling Salesman Problem, the Eight Queens Problem, and the Towers of Hanoi. Each game was designed to be fun, but to also illustrate an important idea.

The results were amazing! Small groups of students stopped to play the games. Sometimes they would compete with each other, and sometimes they would collaborate. Some students were content to simply play a computer game, but many were curious about the algorithms involved, which provided a great opportunity for us to talk about computer science and what computer scientists do. As an added bonus, most of the software is similar to programs students write in the first two years of a computer science major, so we also talked about what students do in our undergraduate program.

It was a great experience which we hope to repeat in the fall.

Congratulations Class of 2009!

Graduation was held this year on Sunday, April 26, 2009, in the Peterson Events Center. Prior to the ceremony, the Computer Science Department held a celebratory brunch (attendees pictured below) for the graduates and their families at the William Pitt Union. Congratulations to all of the new graduates!
Alumnus Spotlight: Joshua Albrecht
BS 2007 and MS 2008

Joshua Albrecht grew up in Canandaigua, a town in the Finger Lakes Region of upstate New York. His interest in computers started more than a decade ago while he was still in elementary school. After a summer internship with Eastman Kodak in 2003, Josh enrolled at the University of Pittsburgh to pursue his degree. He was especially interested in the University Honors College and what the Computer Science Department had to offer him. The University Honors College awarded Josh an academic scholarship and he earned dual degrees in computer science and mathematics in 2007. Josh decided to continue on to pursue his master's degree working with Dr. Rebecca Hwa and Dr. G. Elisabeta Marai.

As a research assistant for Dr. Hwa, Josh flourished. He earned his MS in computer science in August, 2008. Even after graduating, he continues to work on many projects with his advisors. Research here in the department is a source of great pride and accomplishment for him.

In addition to his love of research, Josh has always had an entrepreneurial streak. He prepared for starting his own company by taking business courses alongside the regular CS and math curricula. As a freshman in 2003, Josh met Matthew Kaniaris and their friendship grew into the partnership that launched their company, Innomi.net. Their first product, BitBlinder, is an open-source platform for online privacy.

BitBlinder is based upon the popular peer-to-peer (P2P) network known as BitTorrent. BitBlinder provides a secure, private P2P environment for its customers for Web browsing.

Josh is committed to free speech on the Internet and the right to be anonymous. He notes that governments and businesses around the world use Internet filtering to restrict access to information. Additionally, advertisers and other Web sites can track users through their IP addresses. BitBlinder uses encryption and distributes network traffic throughout its users to make filtering and tracking practically impossible. Subscribers to BitBlinder can either pay a subscription fee for their bandwidth or participate as a relay in the BitBlinder community, distributing other users’ traffic and improving the overall latency and throughput.

To launch BitBlinder, the Innovation Works AlphaLab Program awarded Josh and Matt start-up funds. AlphaLab provided $25,000 of funding for BitBlinder as well as hands-on business assistance, access to a network of entrepreneurs and expert advisors, and free office space for five months.

BitBlinder went live in May and is currently in beta testing. Interest has been tremendous with more than 30,000 requests for the software and access to the service and more than 1 million hits to the Web site. Josh and Matt have sent nearly 1,000 beta invitations in response to the requests and have successfully helped around 100 users get underway. The goals of the beta phase are to work out issues related to the BitBlinder software, client operating systems, and to get customer feedback.

Josh is enthusiastic about BitBlinder and advises fellow computer science graduates with entrepreneurial dreams to take the requisite business courses, secure start-up funding, and make that dream a reality.

More information about BitBlinder can be found on its homepage: [http://www.bitblinder.com](http://www.bitblinder.com)
Ninth Annual Computer Science Day

The weather was cooperative this year and the ninth annual CS Day was well attended by students and industry representatives on Friday, March 27, 2009. The day was very busy with events being held from 10:00AM until 7:00PM.

CS Bowl
The morning began with a competition featuring students participating in Pitt’s College in High School (CHS) Program. Teams from eight area high schools competed by answering questions testing computer science knowledge. Woodland Hills High School took first place in the competition, followed by Richland Jr./Sr. High School in second place, and Baldwin High School in third. Central Catholic High School, Franklin Regional High School, Plum High School, Trinity High School, and West Allegheny High School also participated. A special thank you to Jackie Batt and the CHS Program for organizing this event.

Marketplace
At noon, guests began to browse the marketplace to visit the 40 high-tech firms that provided computer science career information regarding their companies. The Marketplace also held an electronic scavenger hunt for the second year. Participants who successfully completed the scavenger hunt using RFID technology were eligible to receive prizes.

CS Alumni Panel
The afternoon showcased a panel discussing Interdisciplinary Computer Science Careers, moderated by one of the Industry Board Members, Mark Shozda from Bank of New York Mellon. The panel was made up of four industry representatives: Derek Brown from NCFTA, Jess Nebgen from MEDRAD, Inc., Ian Volkwein from Sims Ops Studios, and a representative from the FBI.

Digital Media, Research, Cartoon & Poster Competition
Other activities included the Digital Media Contest, Research Competition, Cartoon Competition, Business Plan Award, and Poster Competition. The Research Competition Award from Compunetix was shared by Ihsan Ayyub Qazi and Swapna Sundaran.

The Best Graduate Student Poster went to Ihsan Qazi and the runner-up was coauthored by Christine Chung, Shenoda Guirguis, Lory Al Moakar, and Panayiotis Neophytou.

The Best Undergraduate Student Poster was coauthored by Callen Shaw and Jesse Szwedko and the Runner-up Undergraduate Student Poster was the work of Brian Dicks, John Hill, and Chris Sproull. The Peoples’ Choice Award winner was created by Josh Hedges and Tianna Hedges. The cartoon contest was judged by the Computer Science Honor Society, Upsilon Pi Epsilon, and the winners were Heather Friedberg, Theodore DePietro, and Sarah Greenwood.

The Digital Media Award was declared a tie and prizes were given to Roxana Gheorghui and Daniel Oliphant.

Congratulations to all of the winners!

Alumni Social
A social gathering was held at the Pennsylvania Athletic Association following CS Day for alumni, faculty, industry representatives and students. More than 50 guests attended to conclude another successful and exciting CS Day.

Heather Friedberg’s Winning Cartoon
STAY IN TOUCH!

Visit the Pitt CS Alumni Portal
Go to [http://www.cs.pitt.edu/people/alumni](http://www.cs.pitt.edu/people/alumni) to:
- Register for the CS Community
- Update your contact information
- Get alumni event news

This community is only for alumni of the Computer Science Department and is not related to the University's alumni database. We will not publish or share your email address with anyone unless we have your consent.

We'd like to hear from you and so would your classmates!
Please submit information about your new employment, retirement, marriage, honors earned, civic and organizational office, and/or family addition by completing the following and returning it to the address below or via email to wab23@pitt.edu.
Your email address will not be published or shared with anyone unless we have your consent.

Name: ______________________________________ Email Address: ________________________________

What have you been doing since you left Pitt? _______________________________________________________

__________________________________________________________

May we include your news in the CS Newsletter LINKS? Yes No

If you know other alumni who may not be receiving the newsletter, please forward the Alumni Portal Link to them.

Thank you for taking the time to update your information... we look forward to hearing from you!

Contributing to the University?
You can make sure your contribution supports the Computer Science Department directly by designating the department as your primary beneficiary. Thank you for your generosity!