



Northeastern University

College of Computer and Information Science
Newsletters

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Fall 2009

CCIS network

The newsletter for the College of Computer and Information Science at Northeastern University

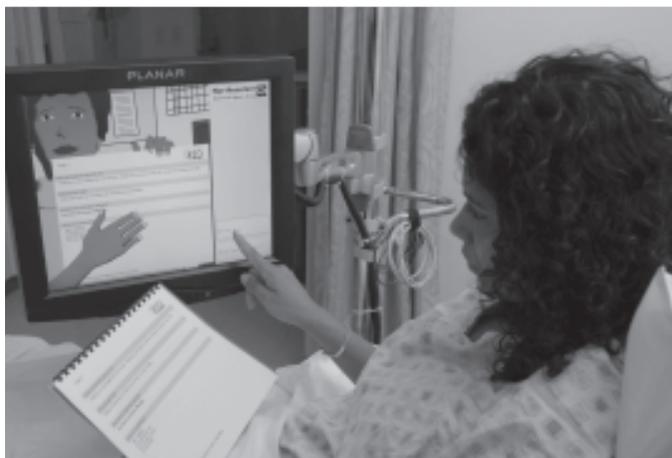
Interdisciplinary Focus Provides New Directions and Opportunities for Students and Faculty

Demand is Strong for College's Education and Research Programs

Even with the economic downturn, more people are employed in information technology than ever before. Demand for professionals remains strong, especially in areas that combine computing with an important application domain.

In areas such as health informatics and information assurance, trained professionals are in short supply. Interdisciplinary graduate programs at the College of Computer and Information Science are preparing students for careers in these fields, and corporations and government agencies are eager to hire graduates. In response to this demand, the college is adding online versions of the health informatics and information assurance programs starting in spring 2010 (see page 4).

Dean Larry Finkelstein notes that in the health informatics program, which is offered jointly with Northeastern's Bouvé College of Health Sciences, "The creativity comes from teaching computing within the context of healthcare. We're teaching concepts but relating them immediately to knowledge in the domain. If you just walked into a hospital, it would take years to figure it out."



The college's interdisciplinary programs and research are making an impact in healthcare and other fields.

To encourage more interest in information security careers, the National Science Foundation has begun awarding scholarships to Northeastern undergraduate and graduate students. Four of the five recipients of the first set of annual scholarships are students in the College of Computer and Information Science, with the fifth coming from College of Engineering (see page 6).

continued on page 2 >>



Northeastern

Inside this Issue

Dean's Message	2	Enhancing Information Security	5	Honoring Mitch Wand	10
New Interdisciplinary Faculty	3	Information Assurance Scholarships	6	Alumni Notes	11
Growing Health Informatics	4	Graduate Boot Camp	7	Mozilla Partnership	11
New Online Programs	4	Co-op Attracts Big Names	8		

Our Part in Success



Northeastern continues to enhance its academic quality and reputation for excellence, and the College of Computer and Information Science is playing a vital role in its success. The college is both contributing to the University's achievement and benefiting from it. Talented students and highly qualified faculty are looking at us with greater regard and adding to our accomplishments.

At a time when many universities have been forced to scale back, Northeastern has been able to hire top faculty from an exceptional pool of candidates. The quality of our new faculty is a testament to the University's reputation. In addition to hiring the new faculty highlighted on page 3, the college is conducting a search for up to three more professors.

As Northeastern grows stronger academically, it is also pursuing new ways to build on its tradition of integrating study and practice. The University is innovating through translational research, or research that can be applied in a practical way to serve societal, national, and global needs.

Bringing together people who can generate translational research, respond rapidly to emerging problems, and work across disciplines is key to Northeastern's success as an institution and impact on the larger world. The same holds true at the college level.

Northeastern recognizes that a university of its stature must also support the high-quality fundamental research that underpins translational research. This makes my task of building a faculty for the future both an art and a challenge. But achieving this balance is essential. It enables our faculty to contribute to both theory and practice through their research. It is equally important for our students, who need to understand the foundations of our discipline and how to apply this knowledge.

Fundamental and translational research are indispensable to one another. For example, our faculty have done significant fundamental research in formal methods. Now, Professor Pete Maniolos is applying this theoretical knowledge to a very practical purpose: revolutionizing the design and implementation of highly secure, robust, and scalable systems that have value in everything from the aerospace industry to public health.

In IT, the ability to develop an organizational structure that supports innovation and rapid deployment is the key to success. The same is true for academic organizations. I hope this newsletter provides a sense of the innovation underway at the college and how it positions us for future growth.

Larry Finkelstein
Dean

INTERDISCIPLINARY FOCUS PROVIDES NEW DIRECTIONS *continued from page 1*

The co-op employment picture for the college's undergraduate and graduate students is also positive. A 100 percent placement rate attests to the students' quality and preparation, as well as the college's rising reputation. Top companies are taking note of students' academic credentials and offering them challenging co-op assignments nationwide (see page 8).

Meanwhile, the college is engaging in hiring of its own. Four new members are joining the faculty this year (see page 3), and the college is conducting a search to add up to three more.

Interdisciplinary education and research, which enable students and faculty to explore new and emerging areas, are helping to fuel opportunity and growth at the college.

Dual degree programs let undergraduates combine study of computer and information science with fields such as math, business, cognitive psychology, the sciences, and the arts. With the addition of dual degree programs in game design and environmental science, the college now offers 19 dual degrees.

Finkelstein says all of the college's undergraduate programs are designed to provide opportunities for exploration, a foundation for future learning, and knowledge that is immediately applicable. Students in the dual degree programs gain the additional benefit of learning about technology in the context of another field.

"Students can explore multiple disciplines, get deep knowledge, work across boundaries, and move in different directions," says Finkelstein.

Undergraduates in a dual degree program are prepared for co-op assignments and careers that require this broader knowledge. Finkelstein notes, for example, that healthcare organizations such as the Dana-Farber Cancer Institute want to hire students who understand both computer science and biology.

Many of the college's professors—including the newest additions to the faculty ranks—are pursuing interdisciplinary research. To name just a few, Associate Professor Guevera Noubir is working with Northeastern College of Engineering colleagues to build sensor networks for monitoring critical infrastructures. Assistant Professor Emanuele Viola and his fellow researchers at the MIT Sloan School of Management and AlphaSimplex Group, LLC, are studying market efficiency—a key economic concept stating that prices fully reflect available information—from a computational viewpoint. And Assistant Professor Timothy Bickmore is collaborating with Boston Medical Center researchers to improve the health of pregnant young African American women by developing a technology to bring tailored health messages into their homes via a Web-based, animated "counselor."

"The world is getting more complex. You have to bring in multiple disciplines to attack problems," says Finkelstein. "You need to know how to work across disciplines. Many successful applications come from computer scientists working in close collaboration with domain experts." ■

Faculty Newcomers Add to Interdisciplinary Expertise

Four new faculty members are strengthening the interdisciplinary focus of education and research at the College of Computer and Information Science.

Joining the college this fall are Distinguished University Professor Albert-László Barabási, who is also affiliated with the Departments of Physics and Biology; Associate Professor David Lazer, whose joint appointment is with the Department of Political Science; and Alan Mislove, an assistant professor of computer and information science. In January, Marsette “Marty” Vona will round out the quartet of newcomers as an assistant professor of computer and information science.

Barabási, who also directs Northeastern’s Center for Complex Network Research, is a pioneer in network science. He uses concepts from mathematics and theoretical physics to explain complex networks—of people, institutions, computers, human cells, and almost anything else. His groundbreaking work can help solve all kinds of problems, from human disease to computer viruses.

Barabási calls network science the “science of the future.” He believes the College of Computer and Information Science is taking a leadership role in expanding knowledge in this field.

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Lazer, previously an associate professor at Harvard’s John F. Kennedy School of Government and director of its Program on Networked Governance, strengthens the college’s expertise in computational social science. Lazer has collaborated with Barabási before and says of his move to Northeastern, “There was a wonderful opportunity for an interdisciplinary nexus, especially in the area of networks.”

Lazer’s research centers on social networks; governance, or how the patterns of institutional relations yield functional or dysfunctional systems; and technology and its use in communication. He says, “I live at the intersection of computer science and social science. There’s a lot of great cutting-edge social science to be done by looking at the digital breadcrumbs we leave behind. I hope to connect the college to a whole new domain to which computer and information science are relevant.”

Mislove, who earned his PhD from Rice University and conducted research at the Max Planck Institute for Software Systems in Germany, also brings expertise in networks. His current research focuses on online social networks. Mislove has found that social networks with very different content have similar underlying



Distinguished University Professor
Albert-László Barabási



Associate Professor David Lazer



Assistant Professor Alan Mislove



Assistant Professor Marsette Vona

properties. He also has identified smaller communities within larger networks with intense interactions.

Like Lazer, Mislove was attracted to the College of Computer and Information Science by the presence of talented faculty in his field. Mislove says, “I felt that Northeastern was moving ahead in emerging areas—in particular, in network science.”

Vona, the final faculty addition, takes an interdisciplinary approach in a different area. He is an experimental roboticist who examines how computation interacts with the physical world. While earning his PhD at MIT, Vona spent two years at NASA’s Jet Propulsion Laboratory in California, where he was involved in creating the science operations software for the *Spirit* and *Opportunity* Mars rovers. He received the NASA Software of the Year Award for this work in 2004.

Vona looks forward to expanding the college’s research and teaching related to robotics, and to working with Northeastern colleagues within and outside computer and information science.

As a group, says Dean Larry Finkelstein of the new faculty, “They significantly move the college forward and advance our reputation.” ■

Making a Difference Through Health Informatics

As healthcare takes center stage in Washington, DC, Northeastern's Master of Science in Health Informatics program enters its next phase of growth under new director and associate clinical professor Dan Feinberg.

Feinberg's background is much like the program he oversees, encompassing business, technology, and healthcare. Before he completed college, Feinberg had founded two electronic publishing companies. He later created two more companies, serving as the chief technology officer for one and chief executive officer for the other. Feinberg then spent a year transforming an Australian company before turning his talents to healthcare.

"I wanted to be more directly involved in making the world a better place," says Feinberg of the change.

Feinberg earned an MBA with a healthcare management focus and formed another company, this time in the healthcare IT and medical device industry. He is also the president of the New England Health Information Management Systems Society for 2009–2010.

Now, Feinberg is building upon the early successes of Northeastern's health informatics graduate program, which is offered in conjunction with Bouvé College of Health Sciences. Faculty who are technology and medical experts at leading healthcare organizations—Partners Healthcare System, Atrius Health, Blue Cross Blue Shield of Massachusetts, and ACS Healthcare Solutions, among others—are preparing students with clinical and/or IT backgrounds to meet the tremendous demand for health informatics professionals. Feinberg wants to give these students more opportunities to specialize within health informatics, in areas such as data mining or public health. Most of all, he wants to increase their numbers. He'll do that in part by introducing an online version of the health informatics program.

"Companies are desperate for people to do the work. We need to train them on a larger scale," says Feinberg. "They'll be able to develop new and better tools and graduate knowing how to use these tools. These people will be hired in a heartbeat."



"Companies are desperate for people to do the work. We need to train them on a larger scale."

—Dan Feinberg

Dan Feinberg, director of the Master of Science in Health Informatics program

Health informatics professionals are able to communicate and function effectively in a healthcare environment because they understand the clinical, technical, and business needs of their organizations. They recognize that their work has a direct impact on the delivery and cost of healthcare.

"Health informatics has some direct savings," says Feinberg. "If you don't do a test again because it's on a computer, you save 10 percent otherwise spent on a duplicate test."

Electronic health records may be getting the most media attention and federal stimulus dollars, but health informatics

has broad applications. Feinberg points to e-prescribing, which enhances patient care and safety by reducing medication errors. With e-prescribing, a doctor would be alerted that a patient is allergic to a drug, making it possible to choose another medication and prevent any harm.

"That's why the program exists and why health informatics exists—because it's not just about getting computers to work. It's not the computer itself but how the computer helps you work better. Computers are a part of making systems as a whole work," says Feinberg. "It's about workflow. It's about change and about people." ■

Online Option Coming for Information Assurance and Health Informatics Programs

The College of Computer and Information Science is launching online versions of its information assurance and health informatics graduate programs in response to the demand for increased numbers of trained professionals. Online courses will begin in January 2010.

Each online program will feature the same course content, high academic standards, and highly qualified faculty as its classroom counterpart. Students also will have the benefit of Northeastern's extensive experience in delivering online education.

The online format will enable working professionals far from Boston to access graduate education preparing them for successful information security and health informatics careers. Boston-area students will gain the flexibility to complete their program online, on campus, or by mixing the two formats.

To learn more about the online Master of Science programs in information assurance and health informatics, visit www.ccs.neu.edu.

New Director Enhances Training to Fight Information Security Threats

Federal Reserve chair Ben Bernanke's recent revelation that he'd been a victim of identity theft attracted national attention. But he's far from alone in having his personal and financial data compromised. Every year, thousands of companies and millions of individuals are victims of cyber attacks, including identity theft, computer viruses, hacker break-ins, and electronic fraud. Themis Papageorge, the new director of Northeastern's Master of Science in Information Assurance program and an associate clinical professor at the College of Computer and Information Science, can cite the statistics: A single person was caught with 130 million stolen credit card numbers. The financial impact of this case alone was more than \$100 million. The median loss from a single instance of identity theft is \$31,000.

"The economic impact, let alone the social impact, is tremendous," says Papageorge, who notes that information security breaches to the U.S. electrical grid and NASA's computer system also have been reported. "The trend has accelerated; we need trained professionals to stop it."

Papageorge joined the College of Computer and Information Science to help prepare these professionals. Most recently a vice president with Guardium, a market leader in real-time database security and monitoring, Papageorge has been involved with information assurance for the past decade. He brings a total of twenty-five years of corporate experience in technology, planning, and process and system redesign to his new position at Northeastern. Papageorge also focused on risk management in earning his PhD at MIT.

"My greatest satisfaction is enabling organizations to bring technology and technological solutions to bear on these very important issues and to train people to do so," says Papageorge. "This was the natural next step for me. It's an excellent

fit because I bring the view of what the major corporations in industry need."

The same qualities that draw graduate students to the program also attracted Papageorge. He lists the program's interdisciplinary nature and faculty, as well as Northeastern's designation as a National Security Agency Center of Excellence in both information assurance education and research, among the appeals of his new position.

Themis Papageorge, director of the Master of Science in Information Assurance program



"Right now, demand for trained professionals is high, and it will get higher. We're addressing the needs of industry as they evolve. Most companies have good IT people, but this is an interdisciplinary activity." —Themis Papageorge

Now, Papageorge is increasing the program's advantages by revising the curriculum, adding courses, and developing a new industry and government partnership that will bring decision-makers to Northeastern each year to discuss cyber threats and the state of the field. He's also getting ready to launch an online version of the master's degree program in January 2010 (see page 4).

Among the new courses already underway is Introduction to Cyberspace Technology and Applications, which prepares students without technology backgrounds to understand and use computers as a professional tool. Other new courses include Security Risk Management and Assessment, which Papageorge is teaching this fall.

Existing courses are getting fresh content. Papageorge explains, "In every course, there are additional topics and points of view."

The information assurance program continues to incorporate relevant knowledge and elective courses from other fields, including the social sciences, law, criminology, and management. Students take courses from both technical and contextual tracks. They also can customize the program to meet their company's needs and their own professional goals.

"Right now, demand for trained professionals is high, and it will get higher. We're addressing the needs of industry as they evolve," says Papageorge. "Most companies have good IT people, but this is an interdisciplinary activity. You have to have the technical knowledge, but you also need to know the context and how to make decisions in that context." ■

New Scholarships Encourage Information Assurance Careers

A four-year Federal Cyber Service grant from the National Science Foundation (NSF) is helping Northeastern attract and prepare talented students from the Colleges of Computer and Information Science and the College of Engineering to become the trained information assurance professionals the nation needs.

The grant makes it possible to award full-tuition, two-year scholarships to as many as three undergraduate and three graduate students in the first year and four of each in the subsequent years. Students in the College of Computer and Information Science as well as those majoring in electrical and computer engineering are eligible for the program.

Scholarship recipients get additional funds for activities, conferences, and other academic pursuits related to information assurance and cyber security. For undergraduates, the extra academic stipend alone amounts to \$4,000 per semester, and graduate students are provided a stipend of \$12,000 over two semesters.

Northeastern's designation as a National Security Agency (NSA) Center of Excellence in both information assurance education and research ensures the scholarship recipients have faculty mentors with expertise in the field and opportunities to participate in research projects that enhance their learning.

"The country has an extreme shortage of 'cyber cops.' There just aren't enough people trained in security; the Department of Homeland Security is looking to fill over 1,000 openings. We are well-positioned to train their human resources," says College of Computer and Information Science Associate Dean Agnes Chan, who is co-principal investigator for the grant, along with Assistant Professor Riccardo Pucella and Professor David Kaeli, of Northeastern's College of Engineering.

In exchange for the generous award package, students must complete an information assurance co-op assignment plus two years of full-time employment after graduation



Pictured from left to right are College of Engineering Professor David Kaeli; College of Computer and Information Science Associate Dean Agnes Chan; students Stefano D'Amico, Ryan Whelan, Paul Foley (seated), Raafia Babalool, and Derek Brodeur; and College of Computer and Information Science Assistant Professor Riccardo Pucella.

"The cyber corps needs people with more than technical skills, those who are also able to see the human and intelligence sides of security." —Associate Dean Agnes Chan

with a federal agency, national laboratory, or other approved organization.

That requirement appeals to students who want to defend the country's cyber infrastructure as information assurance professionals. Chan says, "Some of our students are very interested in giving back to their country. They see this as a good opportunity to work for a government agency."

Students receiving the first set of scholarships include three undergraduates: computer science major Paul Foley, '12; computer science and multimedia studies dual major Stefano D'Amico, '12; and computer engineering junior Ryan Whelan. Also awarded scholarships were graduate students Derek Brodeur, who holds a Bachelor of Science in computer science with a minor in digital forensics from the University of Rhode Island, and Raafia Babalool, who earned her undergraduate degree in psychology with a minor in computer science at the University of

Central Florida. Brodeur and Babalool are now enrolled in the Master of Science in Information Assurance program.

Each met the scholarship program's requirements, including a minimum 3.0 undergraduate grade point average, U.S. citizenship, and eligibility for federal employment and U.S. security clearance. The undergraduates will all be at least middlers enrolled in classes in spring 2010, and the graduate students are pursuing their education full-time. They also have been involved in relevant activities and articulated their interest in information assurance.

Chan describes the students she, Pucella, and Kaeli selected as "very bright," with strong technical skills and grade point averages. But, she says, that's just part of their qualifications. Chan explains, "The cyber corps needs people with more than technical skills, those who are also able to see the human and intelligence sides of security." ■

Graduate Boot Camp Students See Rewards

The Program Design Paradigms course has earned its informal name of Graduate Boot Camp for good reason. Offered for the first time last fall, the mandatory course for students seeking a master's degree in computer science is demanding. But it also provides invaluable preparation for the work world that graduate students won't find elsewhere.

"It teaches students a process of going from a blank piece of paper to a solution and explaining every decision along the way," says Trustee Professor Matthias Felleisen, who is now teaching Graduate Boot Camp for the second time and based its design on a three-course curriculum he developed earlier for undergraduates.

That's a challenging and unfamiliar process for many graduate students. Yet it's imperative that they learn this process—their careers depend on it. Feedback from co-op companies had indicated that the graduate students they employed needed to become stronger programmers and to articulate programming decisions more effectively. The college determined that requiring a course such as Graduate Boot Camp would provide the remedy.

"They learn that programming is not just writing code and getting results; programming is a thought process to solve a problem."

—Associate Dean Agnes Chan

The course ensures all students gain the knowledge they need to design programs well. Students are required to program in pairs and deliver a weekly thirty-minute presentation explaining their code to a panel of teaching assistants, who critique their work.

"By defending their code, they have to think it through carefully," says Associate Dean Agnes Chan, who oversees the college's graduate programs. "They learn that programming is not just writing code and getting results; programming is a thought process to solve a problem."

Trustee Professor Matthias Felleisen developed and teaches the Graduate Boot Camp course.

At first, it wasn't easy for the students, but Felleisen recalls, "About halfway through the course, the mood changed radically. They started to see the point. Now, they tell me how much they learned and how much they've applied it in their co-ops. Very quickly, everyone understood this is how industry works."

Companies employing the students noticed the change as well. And co-op faculty member Melvin Simms, who works with the graduate students, is finding it easier to place them in top positions.

Now that the first group of students has completed Graduate Boot Camp, Felleisen is developing follow-up courses. One will focus on system software programming, the other on larger scale programming; the 1,000 to 2,000 lines of code the students create each week in Graduate Boot Camp may seem substantial, but Felleisen notes that it's relatively little in the day-to-day work of industry.



"It teaches students a process of going from a blank piece of paper to a solution and explaining every decision along the way." —Trustee Professor

Matthias Felleisen

He's also been busy tweaking the details of the original course. He has refined the teaching assistants' preparation, incorporated new content, and increased the emphasis on programming principles.

For students who might think they're alone in bearing an extra load, Felleisen's efforts show he shares the burden. But he doesn't mind, saying, "It's easily twice as much time to teach the course, but the value for students is very, very high. That's the satisfaction you get as a faculty member." ■

Co-op Program Attracts Big Names Beyond Boston

Long known in the Boston area for excellence in cooperative education, Northeastern is also gaining the attention of major companies far and wide. That's creating more opportunities for Northeastern's computer and information science students, who are shining in co-op assignments with such brand-name companies as Amazon.com, Intuit, and IBM, and experiencing life and work in other parts of the country and the world.

Amazon.com: Seattle



In the short time Northeastern's computer and information science students have held co-op positions at Amazon.com, they've made a positive impression. As a result, says co-op faculty member and academic advising coordinator Aileen Yates, this fall Amazon.com decided Northeastern would be one of only two Boston-area schools it would visit to recruit students for employment after graduation.

Co-op students like Drew Atkin, '11, are the reason for the company's interest. Atkin was one of the first students at Amazon.com, and he has returned for a second stint. A dual major in computer science and physics, Atkin has been involved in programming and technology that supports the Amazon.com infrastructure.

"I was looking for something technically engaging, with really hard or interesting problems," Atkin says. "Amazon does things on a much larger scale than most companies. You get to work with great software engineers with a lot of great experience, and you pick up good practices. They've broadened my horizons and given me a different perspective."

Atkin hasn't yet decided on his plans after he completes his degree. The

possibilities he's considered include graduate school and an academic career, or perhaps starting his own software company. He'd also be interested in staying with Amazon.com.

Whatever direction he takes, says Yates, "Drew is an extraordinary student, and having Amazon on his résumé is very impressive."

Intuit: California



"I love having college students on my team," says George Cacioppo, the vice president for engineering and operations for Intuit's Consumer Group in San Diego, California.

When Cacioppo joined Intuit in 2008, he immediately proposed that the company start hiring co-op students. To ensure a strong partnership, he wanted to work with only a single university. He chose Northeastern.

"We were looking for the right mix of talent and commitment. Northeastern jumped out," Cacioppo says.

He hasn't been disappointed. The first Northeastern computer and information science co-op students arrived in January 2009, and this fall the company hired ten, eight in San Diego and another two at Intuit's headquarters in Mountain View.

Helen Finegold, '10, an information science major, was one of the first co-op students at Intuit. She recalls, "George



Helen Finegold

sold me on Intuit and the culture there. He was really passionate about the co-op experience."

At Intuit, Finegold was involved in Adobe Flex coding and projects related to human-computer interaction, including usability testing. She says, "I started with a small project, and then it grew. I had input into what I did and was placed on projects where I could succeed and add value. It was a great experience, and I met great people."

Daniel Bostwick, '12, a computer science major who came to Intuit in July, was immediately asked to take on a large project that needed attention. Susan Scott, the Consumer Group's development manager and Bostwick's supervisor, says, "I look at our college recruit as another brain I can use to get the work done. His second day here, he became the senior guy on the team. He handled it incredibly well."

Bostwick's project has involved updating a data model for Intuit's TurboTax software. The work encompasses more

"We work hard to ensure that our students have a great experience. From our standpoint, the co-op program has been wildly successful." —Jeff Howard, Intuit



Daniel Bostwick (center) with George Cacioppo and Susan Scott of Intuit



Ummul Dahodwala



Brad Osgood in China

than 1,000 forms and 56,000 fields, and Bostwick serves as the technical lead for a team of 15 people.

“I’m not sure what they expected of me, but I just said, ‘Okay, what’s next?’ and they kept throwing it at me. I wanted to see how far and how hard I could push myself in a corporate environment,” Bostwick says. “I want to use co-op to learn about software engineering practices and the corporate environment so I can ultimately pave my own path. The independence of working on projects and the software engineering I’m learning here will help me.”

Another current co-op student, Ummul Dahodwala, MS’10, is working for Intuit in Mountain View. Dahodwala, who holds a Bachelor of Engineering degree in computer engineering from the University of Mumbai, spent a year as a software engineer in India before starting her graduate education in computer science at Northeastern. At Intuit, she is gaining not only software development experience, but also a new perspective on the work world.

“The work culture is totally different. In India, in my experience, you were always told what to do. Everything was the manager’s call,” Dahodwala explains. “Here, you’re encouraged to have an opinion and voice it. It’s been a very

good experience for me. Here, I’m always excited to go to work.”

That’s exactly what Cacioppo and his fellow managers want to hear. As Jeff Howard, Intuit’s engineering manager for electronic filing, says, “We work hard to ensure that our students have a great experience. From our standpoint, the co-op program has been wildly successful.”

IBM: Beijing, China



By going to China, Brad Osgood, ’10, became the first Northeastern student ever to take a co-op position with IBM in that country. He also is a rarity among computer science students; few have undertaken international co-ops anywhere.

“International co-op is about the whole experience. It’s not just the job or being there. It involves a lot of self-exploration, independence, and personal growth,” says senior international co-op counselor Melissa Davies. “It’s not the right opportunity for everyone. We try to determine whether a student is adaptable and mature. Brad seemed to have a personality that would fit.”

Living and working in China definitely called upon Osgood’s ability to adapt,

even though he’d taken a course on modern China and studied Mandarin before heading overseas. Working within IBM’s software development laboratory in Beijing, he discovered, differed greatly from his U.S. co-op experience.

“It mimics U.S. business culture, but it’s a Chinese company in most ways. In China, a lot is left unsaid, and things are both true and untrue,” Osgood explains. “English was for reading documentation and e-mail. It wasn’t spoken very often, and you don’t speak it unless it’s spoken to you.”

Nonetheless, Osgood was captivated by his new environment. Each week, he participated in a cultural exchange program in which he and his Chinese colleagues at IBM talked about each other’s countries and experiences. He traveled throughout China. His Mandarin improved.

Now back in Boston, Osgood speaks enthusiastically about his time in China. He wants to increase his Mandarin fluency and to return to China after graduation. He hopes to both use his language skills and pursue a career in software development there.

“I think I can combine the two. I’m just not sure how yet,” he says. “There’s a lot of opportunity, especially for foreigners and especially for those who speak the language.” ■

Festive Symposium Honors Accomplished Professor

Ever since he arrived at Northeastern in 1985 and before that for eleven years at Indiana University, Mitch Wand has gone about the daily business of being a computer science professor. Along the way, he has produced more than 100 published works, coauthored textbooks, and served on many professional committees and editorial boards. This August, Wand and his work were recognized with a rare event: a symposium in his honor.

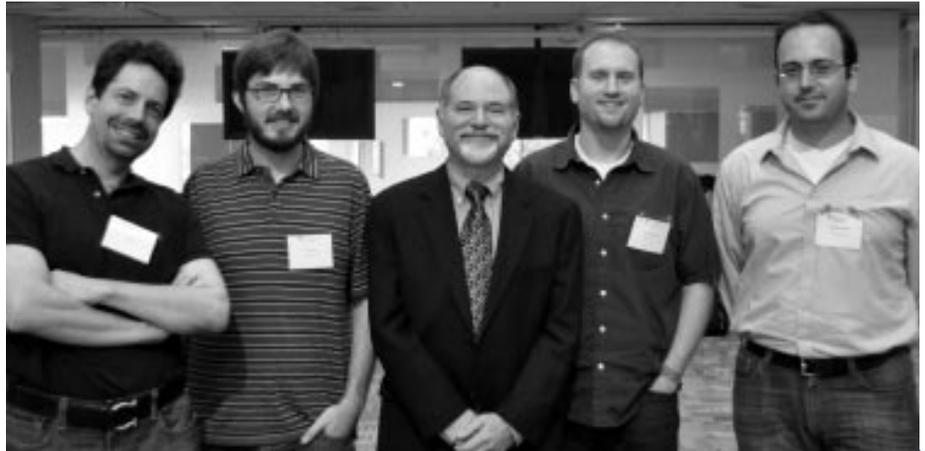
For two days, nearly 100 of his fellow professors, past and present students, and professional colleagues gathered at Northeastern to celebrate Wand's contributions to his field. The Symposium in Honor of Mitchell Wand—affectionately nicknamed “Mitchfest”—featured eighteen presentations on topics related to Wand's work, plus keynote talks by and about him.

“It's a tremendous honor. I go from day to day just trying to do good work. It's a rare opportunity for me to look up and see in one place the impact I've had on other people,” says Wand.

Planned by fellow College of Computer and Information Science professor Olin Shivers, longtime professional colleague Olivier Danvy of the Aarhus University in Denmark, PhD candidate Dave Herman, and alumnus Dino Oliva, PhD '93, with help from the college's staff, the event reflected the high regard for Wand.

“He is the primary reason I'm a professor at Northeastern,” says Shivers. “The programming languages research group is in the top three in the world, and that's what brought me here. People crystallized around Mitch. He's a scholar's scholar.”

Shivers is not the only one attracted to the college by Wand. Dean Larry Finkelstein noted, “Mitch has been the linchpin for the growth of the reputation of our college since his arrival in fall 1985. He



Enjoying Mitchfest are (left to right) Dino Oliva, PhD'93; PhD student Aaron Turon; Professor Mitch Wand; PhD student Dave Herman; and Vassileiros Koutavas, PhD'08.

has been instrumental in helping us to recruit top faculty.”

Herman says of Wand, “He has a certain aesthetic for the way he does research that has influenced me. He has a taste for simplicity that lets you throw out the unnecessary details and focus on the core. Mitch is driven by the love of the subject matter and the love of ideas. That's something I really respect about him.”

Herman's connections brought in Mozilla as a sponsor of the event. Oliva, who chose Northeastern for his graduate work specifically to study with Wand, recruited his current employer, Bloomberg LP, as another sponsor.

“I really enjoyed the conference,” says Oliva. “The quality of the talks was quite high. It really showed the diversity of Mitch's work over the years.”

Shivers explains that Mitchfest grew from academia's concept of a Festschrift. Traditionally, a Festschrift involves publication of original works recognizing a worthy honoree upon a notable birthday or career anniversary. Wand received what

“Mitch has been the linchpin for the growth of the reputation of our college since his arrival in fall 1985. He has been instrumental in helping us to recruit top faculty.”

—Dean Larry Finkelstein

Shivers calls “the ultimate academic honor” to mark his sixtieth birthday.

“I was flattered by the quality of work that people chose to present,” says Wand. “And, of course, it was a lot of fun to see old friends.”

Mitchfest may be over, but the work of honoring Wand continues. Still to come is a series of special issues of the journal *Higher Order and Symbolic Computation*, featuring papers from the symposium. Danvy, as the journal's editor-in-chief, will lead the publication effort.

To view slides, photos, and presentations from the symposium, visit <http://www.ccs.neu.edu/events/wand-symposium>. ■

Alumni Notes

1980s

Robert Silva, MS'81, is vice president of product development at InfraReDx in Burlington, Massachusetts.

Archit (Archie) Amin, '88, is vice president of Deep Foods, Inc., a family owned and operated business with headquarters in New Jersey and additional offices in Illinois and California. He and his wife, Monal, are the parents of three teenage sons.

David DeZan, '88, is the founder and president of E. M. D. Services, Inc., in Wilmington, Massachusetts. David is actively working with the college to develop and launch a new initiative to promote innovation beyond the classroom.

Joanna Kolis, MS'88, is the executive director of the Program Management Office at Hachette Book Group, a leading New York-based trade publisher and a division of Hachette Livre, the world's second-largest publisher.

Uri Eric Gries, '89, is the chief executive officer of Lucid Imagination in San Mateo, California. The company is the first commercial entity exclusively dedicated to Apache Lucene/Solr open source technology.

Brian Wenzinger, '89, a principal at Aronson + Johnson + Ortiz in Philadelphia, recently visited campus with his family.

1990s

Heath Chiavettone, '90, is a principal software engineer and technical lead at Ariba, Inc., in Sunnyvale, California.

Manuel Cuevas, '90, is a project manager at BAE Systems, where he leads multiple cross-divisional project teams involved in research, software development, and systems engineering.

Seasoned technology entrepreneur **Peter Karlson**, '90, founded and recently launched NeuOffice, Inc., a company focused on creating and promoting entrepreneurial communities across the country. His other ventures include Marketing Advocate, Inc. and NeuEon, Inc.

Tricia MacKechnie, '91, is the vice president of IT at The Hartford in Connecticut. She recently completed a triathlon sprint at Mount Snow, Vermont.

James Toga, '92, is vice president of engineering and CTO of Vivox, Inc., in Natick, Massachusetts.

Gregory Moody, '93, is the director of clinical informatics at Millennium, the

Boston-based company of the Takeda Oncology Company.

Dino Oliva, PhD'93, is a software architect in the U.I. Infrastructure Group at Bloomberg, L.P. He recently delivered the keynote at IBM's Programming Languages Day.

Joshua Seadia, '99, is a service specialist at Fidelity Foundation in Burlington, Massachusetts.

Preshanth Nair, MS'99, is a software engineer at The MathWorks. He and his wife recently purchased a new home in Southborough, Massachusetts.

2000s

Daniel Rinehart, '00, is a software architect with Allurent in Cambridge, Massachusetts.

Cassandra Robinson, '05, is a database analyst with Apple Computer in Cupertino, California, and an active member of Northeastern's Northern California Alumni Chapter.

Alumni are important to the college, and we'd like to hear from you. If you have news you'd like to share, please contact director of development Jennifer Wong at je.wong@neu.edu or 617.373.4038. ■

Work with Mozilla Opens New Research Opportunities

The College of Computer and Information Science regularly collaborates with industry, but its relationship with the Mozilla Corporation is providing an unusual benefit: the opportunity to work with an open source company whose software is publicly available in its source form.

“Having this relationship with Mozilla has been exciting. Our research group has access to all of the projects they work on, so it can be that much more of a promising partnership.”

—*Dave Herman, PhD Candidate*

Dave Herman, a PhD candidate whose online posting of a mathematical model of JavaScript provided the impetus for the college's relationship with Mozilla, explains, “Having this relationship with Mozilla has been exciting. Our research group has access to all of the projects they work on, so it can be that much more of a promising partnership. Translational research can be hard to do if you don't have access to all of the challenges a company faces.”

Herman's model of JavaScript, which makes it possible to create dynamic Web pages, had attracted the attention of Brendan Eich, the creator of JavaScript and chief technical officer at Mozilla. Eich was interested in finding better ways to specify JavaScript and wanted to work with academia. He invited Herman to visit Mozilla and to attend meetings of the standards

continued on page 12 >>



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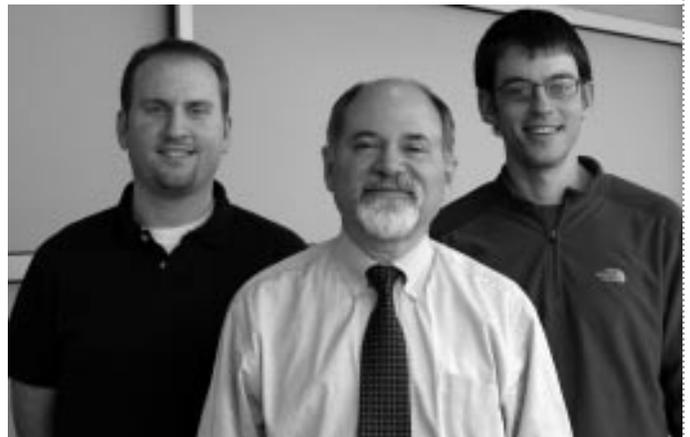
WORK WITH MOZILLA OPENS NEW RESEARCH OPPORTUNITIES *continued from page 11*

committee responsible for specifying JavaScript. Mozilla also made a grant to Northeastern to fund Herman's doctoral research.

This year, Mozilla is providing financial support to a postdoctoral student, Sam Tobin-Hochstadt, whose work in the Scheme programming language is relevant to JavaScript. Tobin-Hochstadt is conducting research to establish robust, checkable boundaries between different pieces of code so they can't interfere with one another, either accidentally or maliciously.

"Sam does excellent work in this area," says Professor Mitch Wand. "There are billions and billions of lines of JavaScript running on desktops around the world. Anything we can do to improve that is a big deal."

Wand sees the college and Mozilla as having many common interests, and he was among the faculty and graduate students who traveled to Mozilla's California headquarters to discuss additional opportunities to collaborate. They joined Dean Larry Finkelstein, who says, "Mozilla is very open to the ideas of academia, and this allows us to interact with developers who are going to utilize some of our ideas and even our code in their core product."



Dave Herman, Professor Mitch Wand, and Sam Tobin-Hochstadt (left to right) have all seen the benefits of working with Mozilla.

If they visit again, they'll find a familiar face. Now that he's finishing his doctoral work, Herman has been hired as a research engineer at Mozilla Labs, where he'll be designing and building new technologies for Web programming. ■