COMPUTING RESEARCH NEWS

A Publication of the Computing Research Association

January 2010 Vol. 22/No. 1

Congress Approves Increases for Science, Computing Research

Final Budgets Still Fall Short of President's Request

By Peter Harsha

Computing research programs at the National Science Foundation and the Department of Energy's Office of Science are among those slated for increases in fiscal year 2010, thanks to appropriations legislation that would keep those agencies on a path to double their budgets over the next six years. Congress approved the last of twelve annual appropriations bills necessary to fund the operations of government on December 18, providing a healthy increase to the NSF budget, a more modest increase to DOE's Office of Science, and a slight increase in real terms for the National Institute of Standards and Technology.

Basic research at the Department of Defense also will see an increase in FY 2010, though the Defense Advanced Research Projects Agency (DARPA) will see a 4.5 percent decrease over concerns raised by Senate appropriators about management issues at the agency.

While these science agencies will see budget increases in FY 2010, in each case the approved increase falls short of the President's requested budget for FY 2010 for that agency. Typically, congressional appropriators use the shortfall between what the President requested and what they appropriate to pay for congressionally directed projects (also known as "earmarks") to provide increases Congress believes the Administration wrongly failed to request for other agencies or programs.

National Science Foundation

Funding for NSF will grow to $6.93 billion in FY 2010, an increase of 6.7 percent over FY 2009[1], but $118 million lower than the President's requested budget for the agency. Included in that increase is an even larger percentage increase for NSF's Computer and Information Science and Engineering (CISE) directorate. CISE will receive $620 million in FY 2010—less than the $633 million requested by the President. but 8.1 percent greater than the FY 2009 budget.

NSF's Office of Cyberinfrastructure (OCI) also fared well in the final appropriation, receiving $215 million in FY 2010. This represents an increase of 7.7 percent over FY 2009, but below the President's requested increase of 10 percent.

NSF's Education and Human Resources directorate received $873 million for FY 2010, an increase of 6 percent over FY 2009, and $15 million more than the President's request.

Department of Energy's Office of Science

On October 28, 2009 Congress finished work on the FY 2010 Energy and Water Appropriations bill (P.L. 111-85) containing funding for DOE's Office of Science. The Office received just over $4.8 billion in core funding, an increase of 3 percent compared to FY 2009, plus an additional $77 million in congressionally directed spending. The appropriation includes funding for the Advanced Scientific Computing Research (ASCR) program, which will receive $394 million in FY 2010, an increase of nearly 7 percent over FY 2009.

National Institute of Standards and Technology

NIST will receive $603 million for its core research efforts in FY 2010, an increase of 9.6 percent compared to FY 2009. Included in that funding is nearly $58 million in congressionally directed programs. Removing that earmarked spending results in a real decrease of 1.0 percent compared to FY 2009—a level below the Administration's requested funding level of $637 million.

Department of Defense

The FY 2010 Defense Appropriations Bill includes funding for all DOD research, including DARPA and the Defense research labs. In the run-up to the final bill,

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National Lab Day

Connecting Teachers with Computer Scientists

By Jan Cuny

Hands-on, discovery-based, lab experiences are known to be an essential part of middle and high school students' education in all STEM disciplines, including computing. We tend to think of "labs" as test tubes and beakers, ramps and levers, or frogs and bugs, but in reality they can be defined much more broadly. A lab can be any place where students can explore, experiment, test, design, and get their hands dirty and their minds engaged. A lab could be a mountaintop to a geologist, a computer link to a distant particle accelerator to a physicist, a factory floor to an industrial engineer, or a laptop to a software engineer. A lab can be physical or virtual; it can be anywhere that authentic lessons in science, technology, engineering, math, *and computer science* can be designed to happen.

The National Research Council's 2006 America's Lab Report concluded that: *"The quality of current lab experiences is poor for most students."* That is certainly true of many students' hands-on experiences of computing, which too often are limited to keyboarding, word processing, and spreadsheets. Some schools do a great job teaching computing, but many more do not. Many of our students are taught computer literacy but not computational thinking, not the fundamentals of computer science. Many of our students never experience the empowerment that comes from being able to adapt and bend computation to their ends; they are users but not creators of technology. Too often they do not understand what they are using, or how it could be used better. As a community, we have the responsibility to change this. National Lab Day gives us the opportunity.

"The quality of current lab experiences is poor for most students."

National Lab Day is an unprecedented, national effort to bring more high-quality, hands-on, discovery-based lab experiences to middle and high school students. It is more than just a day. It's a nationwide movement to support STEM education in our schools. It's teachers working with community volunteers, and communities rallying around teachers to give kids access to well-equipped labs and to the professional scientists, engineers, and mathematicians who can inspire them. Scientists and engineers in computing are certainly included; we are an integral, though often ignored, part of the STEM community. But we can only be integral to Lab Day if we step up to the plate.

National Lab Day focuses on the needs of participating teachers. Teachers are the experts who best know their students and their

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Expanding the Pipeline

CRA-W Showcases Its Programs at the Grace Hopper Celebration of Women in Computing

By Joann J. Ordille

On September 30, the Grace Hopper Celebration of Women in Computing opened at the J.W. Marriott Conference Center in Tucson. The sold-out crowd totaled 1,570 women and men including 520 industry and government professionals, 213 academic faculty and staff, and 678 students. The conference attracted globe-spanning participation with attendees from 22 countries and all continents except Antarctica. You could see leaders from Africa, educators, executives from popular technology companies, students, prominent researchers, presidents of universities, and social change agents in excited conversation. Combining excitement and fun with learning and mentoring is one of the best ways to strengthen the computer science pipeline.

The Computing Research Association Committee on the Status of Women in Computing Research (CRA-W) is a founding sponsor of the Grace Hopper Conference, and has participated in every conference from the very first. This year, CRA-W expanded its participation and leveraged its long history of successful programs to contribute to two important new conference programs: the Robotics Track and the CRA-W Mentoring Workshops. CRA-W also launched a new effort at the conference to help undergraduates build and execute a strategy for applying to graduate school.

CRA-W Board Members participated in a variety of conference leadership positions. CRA-W Board Member, Professor Tracy Camp of the Colorado School of Mines, was this year's Program Chair and will be General Chair in 2010. CRA-W Board Member and Past Co-Chair, Professor Lori Pollock of the University of Delaware, will be Program Co-Chair.

Grace Hopper 2009 included keynotes from leaders of research and industry, the special research track on robotics, a session with technology executives on how to join their ranks, technical papers by graduate students and recent PhDs, a student poster session, special talks on using computer technology to ignite social change, and a variety of sessions on technology, research results, career skills, and expanding participation in the computer science pipeline.

The Robotics Track was inspired, in part, by the success of the Discipline-specific Mentoring Workshops (www.cra-w.org/cdc) sponsored by CRA-W and CDC, the Coalition to Diversify Computing (www.cdc-computing.org/). These workshops bring senior researchers in an area together with beginning researchers from underrepresented groups to help mentor the new researchers into the senior researchers of tomorrow. Funding for this year's Robotics Track was provided by CRA-W and CDC programs. The track was led by CRA-W Board Members Professor Maria Gini of the University of Minnesota and Professor Manuela Veloso of Carnegie Mellon.

The Robotics Track included talks on "Engineering and Self-Organizing Systems," by Professor Radhika Nagpal of Harvard; "Living Better with Robotics," by Professor Cynthia Breazeal of MIT; and "Challenges and Results of Multi-Robot and Multi-Human Systems" by Professor Manuela Veloso. Participants discussed how the life of insects can inspire better robot design, how robots can be made invisible to help people in everyday tasks, and how symbiotic relationships of robots and humans can achieve even better results. The track also included a panel on "Career Paths in Robotics" chaired by Professor Gini and including panelists Dr. Sonia Chernova of MIT, Dr. Ashley Stroupe of JPL, and Dr. Kristen Stubbs of iRobot.

Also new to the conference this year were three CRA-W Career Mentoring Workshops which received an enthusiastic, packed-house reception from conference attendees. The workshops, sponsored by CRA-W and the Henry Luce Foundation, addressed the needs of undergraduates, graduate students and early career researchers, respectively, in advancing to the next stage of their careers. The workshops were organized by Dr. Joann Ordille of Avaya Labs Research.

The undergraduate workshop included sessions that moved from why a student might consider, and even be excited by, a career in computer science, to how to prepare for and apply to graduate school, and to what life is like once there. One student commented that she was inspired by the world of possible jobs and specialties described by Professor Soha Hassoun of Tufts and Dr. Tessa Lau of IBM Almaden Research Center.

Professor Jodi Tims of Baldwin-Wallace College and PhD Candidate Shannon Steinfadt of Kent State caused a rush of sign-ups to another CRA-W program that provided one-on-one advising sessions on applying to graduate school. As one student commented: "There is more to applying to graduate school than meets the eye." In the advising sessions, students learn to position themselves as beginning researchers and to match their interests and talents to academic programs.

The emphasis on positioning a student as a researcher on their graduate school application naturally leads students to be interested in several CRA-W and CDC programs that provide research experience for undergraduates (www.craw.org/UgradResearch). Work by undergraduates in these programs was presented in eight posters during the conference. The posters covered such wide-ranging topics as the computation of RNA structures, reduction of energy consumption, rapid prototyping, and social network privacy.

In the final undergraduate session, Professor Eleni Stroulia (University of Alberta), Professor Andrea Danyluk (Williams College), and PhD Candidate Ramya Raghavendra (UC Santa Barbara), both entertained and informed with stories of overcoming the hurdles and reaping the rewards of graduate school.

The undergraduate workshop expanded on the CRA-W and CDC Distinguished Lecture Series (www.cra-w.org/dls) in which distinguished lecturers visit colleges, universities, and regional conferences in North America to provide a panel discussion on applying to and succeeding in graduate school.

The three graduate school workshops sometimes attracted senior undergraduate students too. Professor Yvonne Coady of the University of Victoria helped new graduate students hone their graduate school survival skills. Professor Susanne Hambrusch (Purdue University) suggested ways to start technical conversations with conference attendees, and may even have helped prepare some for a future pitch to venture capitalists. Professor Lori Clarke (University of Massachusetts, Amherst), addressed how to write and publish papers while maintaining the ethical standards of the profession.

The graduate workshop provided a sampler of the types of programs included each year in CRA-W's Grad Cohort for Women (www.cra-w.org/gradcohort). The Grad Cohort is a two-day program that provides career-building sessions and creates a community for sustaining students through their graduate work. The Cohort is open to first- and second-year graduate students, and is generously funded by Google and Microsoft.

The workshop for early career researchers also attracted advanced graduate students who were curious about what lies ahead. The sessions provided techniques for building one's research program and preparing for promotion in the initial five years after graduation.

Dr. Cecilia Aragon (Lawrence Berkeley National Laboratory) and Professor Justine Cassell (Northwestern University) explained

Expanding the Pipeline
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CRA Announces Outstanding Undergraduate Researcher Award Winners

The Computing Research Association honors the recipients of its 2010 Outstanding Undergraduate Awards, sponsored this year by Mitsubishi Electric Research Labs (MERL). Microsoft Research and MERL sponsor the awards in alternate years.

Winner, Female Award

Justine Sherry is a senior at **University of Washington** with a double major in Computer Science and International Studies.

A longstanding impediment to the study of the Internet is that it does not explicitly expose information about its topology, paths or performance. Utilizing the IP timestamp option (an obscure and little-used aspect of the IP specification) Justine developed several techniques to measure unknown aspects of the Internet. She contributed critical timestamp-based algorithms to the Reverse Traceroute project, which discovers routing paths from a distant host back to a local source, improving both its accuracy and coverage. Having become probably the world's greatest expert on the IP timestamp option she then turned to developing solutions to two other Internet measurement problems using IP timestamps: router alias resolution and measuring the one-way latency of backbone links.

In addition to performing valuable research, Justine served last year as vice chair of the student chapter of ACM at her university, where she worked to engage other undergraduate students in research by revamping graduate student poster sessions and introducing the undergraduate research information sessions at the University of Washington. She is currently the chair of the student ACM-W women's chapter.

Runner Up, Female Award

Lucy Vasserman is a Senior at **Pomona College** majoring in Computer Science.

Lucy's research has focused on creating a mood classifier for text—a system that identifies the prevailing emotion conveyed by a given section of text as anger, happiness, sadness, etc. This required creating a computer learning system that could deal with sparse and noisy training data. Following that, she has made significant progress in the particularly challenging task of detecting sarcasm.

In addition to her research, Lucy taught a summer course in robotics at Pomona for local high school students. While she received support from the CS department, she initiated and created the entire program independently.

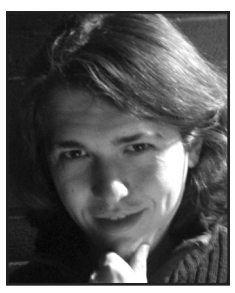
Runner Up, Female Award

Xuexin (Alice) Zhu is a Senior at **Harvey Mudd College** majoring in Computer Science.

A central problem in pen-based interfaces is how to transition smoothly between drawing and editing. Beginning In her sophomore year, Alice proposed, built and tested a novel pen-based interface technique and has continued to work on the system. In 2009, she won first place in the ACM student research competition for this work.

In addition to doing high-quality research, Alice is a superior student maintaining the best GPA of any CS major in her class while doing extensive work as a TA. She has won many prestigious awards in computer science, including an Anita Borg Scholarship and a Microsoft Scholarship.

Winner, Male Award



Elyot Grant is a Senior at the **University of Waterloo** majoring in Mathematics and Computer Science.

Working under an undergraduate research award, Elyot was presented with a list of well-known open problems and rapidly proceeded to solve several of them. The most important relates to Kuratowski's theorem on closures in topological spaces and how it relates to formal languages. In particular, he discovered a clever and subtle proof that there is a clopen partition between two words if, and only if, the words do not commute. In the short time since then, Elyot's ideas on the topological separation of words have already been taken up by researchers in Europe, which shows that these ideas are important and in the mainstream of theoretical computer science.

After completing the work above, Elyot joined a separate research project in the area of Combinatorics and Optimization, and produced interesting results on approximation algorithms for NP-hard covering problems. In addition to possessing mathematical skills, Elyot is an expert programmer and has had a number of programming jobs while in college.

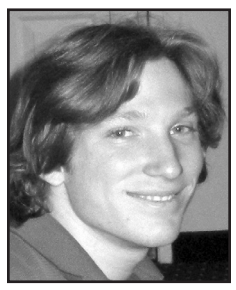
Winner, Male Award

Richard Matthew McCutchen is a Junior at the **University of Maryland** majoring in Computer Science and Mathematics.

Matt has a long history of research going back to high school. His high school work on the "popular matching" problem (e.g., matching a set of people to jobs trying to satisfy their preferences) has already been cited by several other researchers. At Maryland, Matt has worked on streaming algorithms for clustering and developed a new algorithm for handling outliers. Matt also has worked on various projects in the area of programming languages.

Aside from research, Matt has maintained a near-perfect GPA and has had great success at programming contests. He has qualified for the International Olympiad of Informatics three times, winning two gold medals and one silver medal.

Runner Up, Male Award

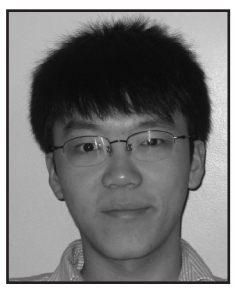


Zachary Abel is a senior at **Harvard University** majoring in Mathematics and Computer Science.

Working with an MIT professor, Zachary attacked the problem of whether hinged dissections always exist—that is, whether a single connected, hinged assembly can always fold between arbitrary configurations. Hinged dissections have been studied for more than 100 years, and many believed that they do not always exist However, Zachary proved that they do in fact always exist.

Based on the strength of this work, Zachary was invited to participate in a yearly collaborative Computational Geometry Workshop at which he made significant contributions in both 2008 and 2009. In addition to all this, Zachary has maintained a near-perfect GPA.

Runner Up, Male Award



Di Wang is a Senior at **Cornell University** majoring in Computer Science.

While maintaining a perfect GPA, Di has solved an open problem in theoretical Computer Science with applications to computer vision, and begun research on practical application of his ideas to image processing.

Di's work focuses on the NP-hard problem of Quadratic Unconstrained Binary Optimization (QUBO), which captures the essence of a variety of vision problems. Prior work by Prof. Endre Boros has identified a family of lower bounds of the optimal value, denoted by C2,C3,C4,..., and C2 can be computed using network flow. Two questions are of great interest about these bounds: 1) Can our understanding about C2 be generalized to C3,C4,..., and 2) Can we identify partial optimal assignment from the computation of these lower bounds. For the particular bound C3, Di's work answers both questions in the affirmative.

Finalists, Female Award

Andreea Bodnari, Worcester Polytechnic Institute; **Svetlana Lockwood,** Washington State University; **Kyle Rector,** Oregon State University; **Rita Sodt,** University of Washington; **Olga Zverovich,** Harvard University.

Finalists, Male Award

Aleksandr Arkhipov, MIT; **Paul Caravelli,** Georgetown University; **George Chen,** UC Berkeley; **Andrew Owens,** Cornell University; **Volodymyr Kuleshov,** McGill University; **Tom Morgan,** MIT; **Peng Shi,** Duke University; **John Silberholz,** University of Maryland; and **Edgar Solomonik,** University of Illinois, Urbana-Champaign.

Honorable Mentions, Female

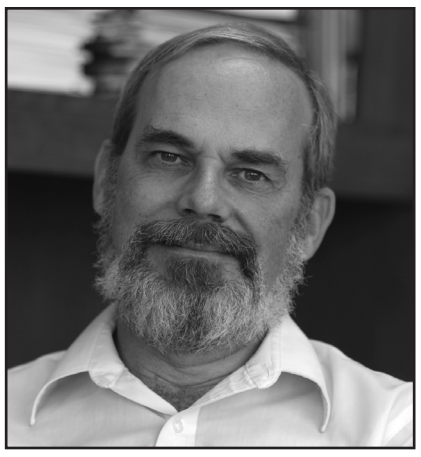
Jacqueline Addesa, Virginia Tech; **Christina Brandt,** Cornell University; **Heather Buletti,** Rensselaer Polytechnic Institute; **Jeannette Chang,** University of Southern California; **Jennifer Chen,** Princeton University; **Nina Chen**, New York University; **Milka Doktorova,** Mount Holyoke College; **Shelley Gao,** University of Victoria; **Allison Hoch,** University of Maryland; **Beenish Jamil,** George Mason University; **Kateryna Kuksenok,** Oberlin College; **Rachel Lathbury,** University of Virginia; **Ainsley Lawson,** University Toronto; **JaMia Moore,** University of Arkansas at Little Rock; **Jamila Salari,** University of British Columbia; **Corietta Teshera-Sterne,** Mount Holyoke College; and **Manasi Vartak,** Worcester Polytechnic Institute.

Undergraduate Award Winners Continued on Page 4

Musings from the Chair

Are We Fully Training Our Graduates?

By Eric Grimson, CRA Board Chair



Many institutions are about to head into recruiting season, during which we carefully scour applications, statements of research interest, letters of reference, and sample publications, looking to identify that great candidate who is going to boost our institution's productivity and reputation for the next 40 years.

For our own students hitting the market, we all spend time honing their research skills, helping them craft their job talk, and providing advice on how to get through the rounds of interviews with senior faculty if they are headed onto the academic market, or with professional recruiters if they are headed to industry. Many of us think of those research skills as critical, and separately we hope that the job talk will be polished enough to give a hiring institution some confidence that our student will develop into a solid teacher.

While we often send our students out with great research credentials, what we don't do as well, however, is to provide training and experiential opportunities for developing the "softer" skills: leadership, interpersonal mediation, teamwork, prioritizing and managing multiple time demands, and communication skills. Of course, some of our best students have these skills: natural teachers, leaders, and facilitators. But perhaps one of the reasons there are so few computer scientists as CEOs of major companies or presidents of universities (there are exceptions of course!) is because we as educators don't sufficiently refine or encourage the non-technical skills that are essential to success in leadership roles. And while not every newly hired faculty member will aspire to academic leadership, even average young faculty members can benefit from skills that will improve their ability to run their group, teach their students, and communicate their ideas.

This is not to imply that our community fails to pay attention to this issue. Many institutions have tackled the problem, providing seminars on developing these skills or leading discussion groups with graduating students on ways to manage research groups. But I suspect that more attention to this topic would enhance the ability of our graduates to lead future institutions.

Two examples from my own institution illustrate possible approaches, though of course there are many other options and many other institutions also have developed solutions. Like many institutions, we regularly survey our alumni and alumnae, seeking insights into what skills have served them well in their careers and how well we helped develop those skills. Several years ago, we found that communication was deemed essential by our alumni/alumnae, but we were not doing a particularly good job in instilling those skills. In response, we changed our requirements for all of our undergraduates, installing a set of communications-intensive courses that all students must take, at least one per year.

Many departments opted to augment existing courses, for example, by providing instruction and feedback on report writing in laboratory- or project-intensive courses. We opted, however, for a different perspective—we created a course explicitly about communication, tackling topics such as: how does one form a model of the audience and use that to guide oral communication; how does one send email without annoying the recipient; how does one create and deliver an elevator pitch; how does one respond to challenging questions; how does one conduct a negotiation; and so on. More formally, the outcomes of the course state that upon completion students will have learned how to: critically evaluate technical presentations; architect technical presentations; present technical material to different audiences at different levels of detail; give and receive constructive feedback; and communicate more effectively in a professional setting.

While students in initial versions of the course questioned its value, claiming that such "soft skills" were of little value, current students get the point—they see the impact of these skills in lining up summer internships or jobs upon graduation, and in fostering professional growth.

While communication skills can always benefit from refinement, there are other soft skills that are equally important, especially for young faculty members or industrial researchers. Examples of issues that confront a young faculty member include: "What do you do when confronted with an apparently unmotivated student? How do you deal with interpersonal conflicts that could jeopardize your research? How does your modus operandi help or limit you in different situations? How would you communicate successfully with that key donor who thinks very differently from you?" (Quoted from the MIT Faculty Newsletter, Vol. XVIII No. 5, May/June 2006.) To address these challenges, one of my colleagues created a course to provide training for junior faculty—a course that has helped many to better run their groups, communicate with their peers, and train their students to refine their own leadership skills.

The point of these examples (and of course many other institutions have incorporated similar efforts) is to illustrate a broader issue. As research institutions, we understandably focus on training our students to succeed within what we perceive to be the constraints of a research career. But we should not ignore the non-scientific and non-technical, but equally important, aspects of a research leader—someone who can communicate with a wide range of audiences, mediate conflicts, and manage groups, as well as articulating and executing exciting new research directions. And if we do this, perhaps in a few years we will no longer lament the lack of corporate and policy leadership with a sound computational background.

Eric Grimson *is the Bernard Gordon Professor of Medical Engineering and head of the Electrical Engineering and Computer Science Department at MIT.* ∎

Undergraduate Award Winners from Page 3

Honorable Mentions, Male

Ali Assaf, McGill University; **Stephen Bach,** Georgetown University; **Brandon Blakeley,** University of Texas at Austin; **Gabriel Charette,** McGill University; **Jesse Cohen,** Harvard University; **Yi Ding,** University of Massachusetts, Amherst; **Daniel Eisenberg,** Carnegie Mellon University; **Adam Ernst,** Princeton University; **Ethan Fast,** University of Virginia; **William Hamilton,** Texas A&M University; **Robert Hendry,** Hobart and William Smith Colleges; **Jonathan Jenkins,** Lafayette College; **Sam Kerr,** Purdue University; **Eric Kimbrel,** University of Washington; **Boyan Li,** University of Wisconsin, Madison; **Cedric Yen Yu Lin,** University of British Columbia; **Christopher Louie,** UC San Diego; **Barry Lumpkin,** Arizona State University; **Gabriel Martinez,** Virginia Tech; **Sajid Omar Mehmood,** Princeton University; **David S. Noble, Jr.,** University of Virginia; **Oleg Ovchinnikov,** University of Tennessee; **Jordan Rhee,** UC San Diego; **Garett Ridge,** University of Louisville; **Daniel Ritchie,** UC Berkeley; **Alejandra Vega,** University of Texas at El Paso; and **John Wright,** University of Texas at Austin.

This year's selection committee included ***Richard Waters*** *(Mitsubishi Electric Research Labs), Chair;* ***Michelle Craig*** *(University of Toronto);* ***Ann Gates*** *(University of Texas at El Paso);* ***Eric Grimson*** *(MIT); and* ***Hank Korth*** *(Lehigh University).* ∎

Discovery and Innovation in Health IT

By Susan L. Graham and Erwin P. Gianchandani

On October 29-30, 2009, ninety-seven people gathered at the Parc 55 Hotel in San Francisco, CA, for the "Discovery and Innovation in Health IT" workshop (see: www.cra.org/ccc/healthit.php). This invitation-only event, co-sponsored by several federal agencies and non-profit organizations, sought—through a series of plenary and breakout sessions—to explore and define fundamental research challenges and opportunities in using information technology to improve health and healthcare.

In co-sponsoring the workshop, the National Science Foundation (NSF), Office of the National Coordinator for Health Information Technology (ONC), National Institute of Standards and Technology (NIST), National Library of Medicine (NLM), Agency for Healthcare Research and Quality (AHRQ), Computing Community Consortium (CCC), and American Medical Informatics Association (AMIA) asked leading computer scientists, medical practitioners, systems engineers, and social scientists spanning academia, industry, and government to identify mutual interests in health IT, as they relate to near- and long-term challenges and solutions; and to define a range of "model" proof-of-concept, integrative systems that might serve as motivating and unifying forces to drive fundamental research in health IT and accelerate the translation of research outcomes into products and services.

The workshop was structured as a series of four half-day sessions. The first three sessions were comprised of two plenary talks followed by small-group (about 10 people per group) breakout discussions in which participants defined particular research challenges, multiple lines of attack, and possible test-beds or demonstration systems. At the conclusion of each session, the groups delivered short presentations summarizing their conversations. (Videos of the plenary talks and report-outs will be available at www.cra.org/ccc/healthit.php shortly.) Workshop organizers selected the group participants for the first two sessions, opting to assemble people with diverse backgrounds within each group, while participants self-selected the groups for the third session.

The groups were asked to approach their discussions by considering the "perspectives" of patients and caregivers during the first session; "processes" such as prevention, prediction, diagnosis, intervention, rehabilitation, and monitoring during the second session; and their own research interests during the third session. The fourth half-day session provided an opportunity for workshop participants to synthesize the research opportunities defined throughout the earlier parts of the meeting and frame a call-to-action for the future.

The workshop was comprised of individuals carefully selected to represent the wide variety of interests, expertise areas, needs, and constituencies within the healthcare arena. Their backgrounds spanned robotics, imaging, mobility and sensing, decision support systems, electronic health records, privacy and security, genomics, data mining and analysis, social and behavioral science, and human-computer interaction.

These diverse research interests were apparent during the workshop's plenary talks. William Stead, M.D., and Latanya Sweeney, Ph.D., led off the meeting. Stead, the Chief Strategy and Information Officer as well as a Professor of Medicine at Vanderbilt University, summarized the results and recommendations of a National Research Council report on "Computational Technology for Effective Healthcare: Immediate Steps and Strategic Directions" that he co-edited earlier this year. Stead illustrated key research challenges, including patient-centered cognitive support, modeling, automation, data sharing and collaboration, data management at scale, and automated capture of patient-doctor interactions. Sweeney, Distinguished Career Professor of Computer Science, Technology, and Policy at Carnegie Mellon University's School of Computer Science, and a member of the Federal Health Information Technology Policy Committee, described research problems for computer science and information technology in the context of a national health information infrastructure. In particular, she articulated steps to data consolidation, analytics, and privacy/confidentiality.

William Rouse, Ph.D., Professor of Industrial & Systems Engineering at Georgia Tech, and Dietrich Stephan, Ph.D., the co-founder and Chief Science Officer at the personalized genomics company Navigenics, addressed the workshop at the start of the second session. Rouse called healthcare a "complex adaptive system" and charted a systems-based approach focused on information management and the creation of incentives and challenges that would motivate stakeholders to provide quality, affordable care. Stephan placed his work at Navigenics, "the first fully integrated entity to make 'personalized medicine' a reality," in the context of a future in which the latest knowledge is applied to prevent, delay onset, or cure disease. He described embedding one's genome into the electronic medical record, with role-based access to the genomic data.

On the second morning of the workshop, Richard Bucholz, M.D., Professor and Director of Neurosurgery at the Saint Louis University School of Medicine, and Craig Feied, M.D., Chief Strategy Officer for Microsoft Research's Health Solutions Group, provided "out-of-the-box" ideas to stimulate participants' creativity. Bucholz presented his view of a future medical delivery system in which interoperable devices would unobtrusively, inexpensively, and efficiently collect, store, display, and exchange information through Web-based communication standards and protocols, facilitating improved process flows for patients, providers, and caregivers. Feied described "five forces" that would alter the healthcare landscape: truly definitive tests; systems biology approaches to unraveling the complexity of biological interactions; improved imaging techniques; evidence-based medicine; and true data liquidity.

Later in the day, Eric Horvitz, M.D./Ph.D., a Principal Researcher at Microsoft Research and a co-founder of Microsoft's Healthcare Solutions group, gave a short presentation to lead off the final session. Horvitz demonstrated the promise of predictive modeling, including learning models from the large amounts of data being generated, to inform decision-making in healthcare. He described a new advisory tool that helps inform clinicians' decisions on whether to discharge a patient from the emergency room on the basis of the probability of that patient "bouncing back," i.e., being readmitted to the hospital with a new diagnosis within a certain time window (days or weeks) in the future.

While the workshop covered a wide variety of topics, several themes ultimately emerged:

- Both technical and non-technical factors are causing healthcare to undergo major changes. Many aspects of healthcare are shifting to the home, and family members are taking on an increasing role as caregivers. Individuals are taking on a greater role in managing their own health. Professional caregivers are offered the promise of increased benefit from IT, but the reality of inefficiencies and barriers make their jobs more difficult. The business of healthcare delivery is becoming increasingly complex.
- The emerging technologies that can be used to improve health and healthcare are rich and diverse. Massive amounts of data about individuals, about the biology of disease and wellness, and about treatments and outcomes are becoming available in electronic form. Increasingly powerful techniques for data analysis are emerging. Sophisticated imaging techniques, sensing and monitoring technologies, and communication infrastructures are providing access to specialized information in real-time. Robotic and speech technologies are enhancing human capabilities. Understanding of human behavior, awareness, incentives, and cognition is advancing.
- Both integration and specialization will play important roles. Health information, be it about an individual, a disease, or a therapy, and be it longitudinal or immediate, needs to combine data from multiple sources, multiple scales, and multiple representations. It must have high integrity, it must be comprehensive, it must be integrated over time, and it must be robust in the face of uncertainty and incompleteness. Access to that information must be contextual and use-driven. It must be easily and quickly understood. It must protect privacy, while not hiding what is needed for the situation.

The evolution of healthcare and the advances in information technology, broadly construed, create the need and also the opportunity for both long-term and short-term research. During the final session, the participants discussed some of the factors (apart from the obvious need for funding) that would facilitate research progress. The needs include the availability of publicly available de-identified data sets, open research infrastructures, for instance, for comprehensive simulations, mechanisms for the migration of results to deployment, lowering of legal barriers to research, and appropriate forums to report the results of this multi-disciplinary research. A major challenge is to circumvent the cultural differences in research styles and research evaluation and to enable federal agencies with health IT-related interests to strengthen their ability to support meaningful collaboration and to lower the barriers for researchers to work together.

Susan Graham, *Ph.D., (graham@cs.berkeley.edu) is Pehong Chen Distinguished Professor Emerita and Professor in the Graduate School in the Department of Electrical Engineering and Computer Science at the University of California, Berkeley, and was co-chair of the workshop organizing committee.*

Erwin Gianchandani, *Ph.D., is an American Association for the Advancement of Science (AAAS) Science & Technology Policy Fellow in the Directorate for Computer & Information Science & Engineering at the National Science Foundation, and helped with planning of the workshop.* ∎

Connecting Teachers from Page 1

classrooms. Whether it's additional lab equipment, personal mentoring from a scientist, tech support, help with a lesson plan, or just an extra set of hands for a class project, teachers know what they need to improve their students' hands-on learning experiences, but often they do not know how, or do not have the time, to access the extra support or that needed resource. Teachers will set the Lab Day agenda, organizing and coordinating their own set of local volunteers. They will begin by describing proposed projects on the National Lab Day site. Volunteers will respond with offers of time, expertise, and resources. Later both groups will use the site to find resources, schedule meetings and events, keep track of funds raised, and stay in touch.

Volunteers will engage in activities to strengthen laboratory experiences in their local schools or in outreach to other high-need schools. They might, for example, install software or identify useful web resources, fix or find equipment, implement hands-on projects, start a fundraising effort to buy needed supplies, help with science fairs, tutor a student, chaperone field trips, provide internship opportunities, donate materials, help with lesson plans, or be an advisor for an after-school program.The hope is that for many of these volunteers, this will be just the first step—or the next step—in an ongoing involvement with their local schools and teachers

More than 200 professional organizations—including CRA, ACM, and IEEE-USA—have joined this effort, along with the major teacher organizations—including the Computer Science Teachers Association (CSTA). It's not enough, though, to have these endorsements. As individuals in the computing research community, we have the responsibility to get involved, and we have a big incentive: education in computing is in much worse shape than in any of the other STEM disciplines.

Many college-bound high school students do not have the opportunity to take even a single rigorous, academic computer science course. Perhaps as a result, HERI data show that the percentage of incoming college students intending to major in computer science declined again in 2008, to a 25-year low. The CS/10K Project (see http://www.csedweek.org/wp-content/uploads/2009/12/ACM-Ed-Week-CS10K.pdf) expects to change this in the long term, but there are things that you can do right now using National Lab Day as your entrée.

Find out whether your local high school is participating in Lab Day. If not, encourage them to do so. If they are participating, what do they need? (Make sure that you follow the teachers' lead!) It could be help with a new computer lab: What should they buy? How can they get it installed? What software do they need? What will they need in terms of tech support? It could be that teachers want help introducing new activities or software. Can you introduce them to CS Unplugged? How about Scratch or Alice? Can you get them started in robotics? Can you help them with cell phone apps? Perhaps the teachers are interested in curriculum redesign. Can you point them to resources and expertise? Can you advise on lesson plans that highlight computational thinking and problem-solving? Can you help with specific activities in your own area of expertise? Can you be on call as they wrestle with new material? Often teachers need experts who can convey the range of application and promise of computing. Can you show their kids what's new and exciting? Can you help the kids understand the link between computation and their real-world interests? Can you provide an internship or research experience for a student? Can you let them job shadow? Can you help them develop a science fair project?

Don't limit yourselves to computing classes. Computational thinking is everywhere; it's in K-8 as well as high school. Science teachers often want help in introducing technology into their classrooms. Help them arrange activities using that technology, but choose activities that build computational thinking skills. Don't limit yourself to classrooms either. Lots of what gets taught gets taught outside of school. Consider working with providers of informal education as well.

If you are a faculty member, encourage your students to get involved. K-12 service learning experiences teach valuable skills to the college students who participate as well as the students they serve. This can be as simple as having the college students field questions during a lab time. If you work for a company, get your company to encourage and support the participation of its employees.

Don't consider this to be a one-shot volunteer effort. Consider it to be the beginning of an ongoing relationship between you and your local teacher, school, or organization. As you become more aware of the constraints of the school environment and the teachers become more confident of you as a resource, your partnership will grow and have an increasing impact.

Start now by registering at the National Lab Day website (www.nationallabday.org). ∎

Jan Cuny *(mail2jec at gmail dot com) is Program Director of the National Science Foundation's Broadening Participation in Computing program.*

Expanding the Pipeline from Page 2

how expanding both your research and your contacts are important to success. While it is natural for academic researchers to form close working relationships with members of other institutions, it is also important for members of industrial and government research labs to stay connected with the external research community.

Professor Emerita Carla Schlatter Ellis (Duke University), and Professor Danyluk (Williams College) helped participants identify ways to balance the demands in their personal and professional lives. Dr. Dilma da Silva (IBM T.J. Watson Research Center) and Professor Nancy Amato (Texas A&M) guided participants in preparing for promotion, both tenure in academic institutions and more senior positions in research labs.

The early career workshop provided a small subset of three Career Mentoring Workshops (CMW) (www.cra-w.org/mentorWrkshp) held periodically by CRA-W, often in conjunction with major conferences. The CMW-R addresses the needs of those in, or aspiring to, research faculty positions. The CMW-E serves those in undergraduate education. The CMW-L Workshop addresses the needs of those in industrial or government research labs.

CRA-W, with sponsorship from AT&T Research Labs, also hosted a luncheon for those interested in industrial and government research labs. This annual luncheon provides a unique opportunity for lab members to meet, address common concerns, and recommend programs to both CRA-W and the Grace Hopper Conference.

Ms. Elizabeth Kierstead, an undergraduate from Columbia, perhaps summed it up best when she said:

"Grace Hopper was an incredible experience for me, as it was a great way to connect with female computer science professionals further along in their careers, and to explore the array of options open to me as an undergraduate computer science major. I met a few women doing award-winning research in parallel computing, and people that had worked for decades at the likes of HP and Lockheed Martin, along with many young women just a few years older than me who were already pursuing PhDs, and I have begun to think a lot more seriously about what I would like to do when I graduate because of the conference. It was also just incredibly reassuring to find such a vast network of intelligent women working or studying in a computer science related field."

It is likely that all the participants have similar stories of inspiration, learning and new resolve, and that collectively strengthens the computer science pipeline for all of us. ∎

Dr. Joann J. Ordille *is a Consulting Member of the Technical Staff at Avaya Labs Research.*

Congress Approves Increases from Page 1

there was some significant concern in the science community about the levels included for DARPA in both the House and Senate versions of the bill, but particularly for the Senate levels. Both the House and Senate included significant cuts to the President's request for DARPA—the House trimmed $200 million from the request, the Senate about $500 million. In the Senate's case, appropriations staffers indicated they did not feel that the agency, given its recent history of under-spending its appropriation—a behavior linked to the agency's previous leadership—warranted an increase in FY 2010, and instead used that money to fund increases elsewhere in their bill. CRA, along with many other groups in the science advocacy community, reacted strongly to this reduction. Under new leadership, the agency appears to be making a serious effort to reverse many of the policies that generated the concerns that the university community and Congress shared, and has proposed a number of new efforts designed to re-engage DARPA with university researchers, we argued. We did not want to see this new approach derailed or hamstrung by the proposed reduction, and we joined with other members of the community to weigh in with Congress in an attempt to mitigate the reduction. That effort proved only partially successful, as the final bill funds DARPA at a $246 million reduction from the requested level for FY 2010.

Overall, defense basic research (6.1 research, in DOD parlance), will increase $1.8 billion in FY 2010, an increase of 10.1 percent over FY 2009.

The final resolution of the FY 2010 appropriations process was delayed considerably as debate in both the House and Senate over comprehensive health care reform legislation consumed nearly all the available legislative "bandwidth" throughout the fall. This same bandwidth constraint also affected the movement of a number of other research-related pieces of legislation. In May, the House passed the Networking and Information Technology Research and Development Act (H.R. 2020), a bill designed to reauthorize much of the existing federal Networking and IT R&D program, and enact some of the recommendations of the President's Council of Advisors for Science and Technology, stemming from their review of the NITRD program.[2] However, the bill has yet to be considered in the Senate, primarily because of time constraints. In November, the House Science and Technology Committee passed the Cybersecurity Enhancement Act of 2009 (H.R. 4061)[3], which reauthorizes much of the federal cyber security research program. However, that bill has yet to make it to the floor of the House for a vote and faces a very uncertain future in the Senate.

For a full breakdown of all the final spending numbers, and continuing updates on the progress of bills of interest to the computing research community, see *CRA's Computing Research Policy Blog* at http://www.cra.org/blog.

End Notes

[1]Each reference to FY 2009 budgets omits the substantial increases that year provided by the American *Recovery and Reinvestment Act,* which provided a one-time, though quite significant, funding influx to these science agencies. Comparisons are to the non-ARRA, baseline FY 09 funding.

[2]For more detail on H.R. 2020, see http://www.cra.org/govaffairs/blog/archives/000735.html

[3]For more detail on H.R. 4061, see http://www.cra.org/govaffairs/blog/archives/000748.html

NSF-Sponsored Academic Workshop for Underrepresented Ethnic Minorities and People with Disabilities at the Level of Assistant Professor, Associate Professor, and Senior Doctoral Student

Friday, March 5, 2010 to Sunday, March 7, 2010
Hotel ZaZa in Houston, Texas
http://www.hotelzazahouston.com/

Deadline for Participant Applications - Friday, January 15, 2010

http://apply2.cse.tamu.edu/AcademicCareerWorkshop/

The Coalition to Diversify Computing (CDC), a joint organization of the Association of Computing Machinery (ACM), the Computing Research Association (CRA), and the IEEE Computer Society (IEEE-CS), and the Center on Minorities and People with Disabilities in IT (CMD-IT) are organizing the third annual Academic Workshop for Underrepresented Ethnic Minorities and People with Disabilities with funding from NSF Broadening Participation in Computing program. The BPC Demonstration grant provides funding for participant travel, lodging, and meeting logistics.

The goal of the workshop is to provide unique, tailored experiences for underrepresented ethnic minorities and people with disabilities at the **assistant-** and **associate-level faculty** and **senior doctoral students** about the academic career ladder. It is well known that mentoring activities are critical for successful promotions in the professoriate. Such activities are especially needed in the field of computing, where the number in the targeted groups at a given institution is usually very small. The workshop will include panels of diverse senior faculty talking about the tenure and promotion process, launching a research program, professionalism, and a detailed session on proposal writing. The workshop organizers include Valerie Taylor (Texas A&M University), Bryant York (Portland State University), Illya Hicks (Rice University), Domingo Rodriguez (University of Puerto Rico in Mayaguez), and Richard Ladner (University of Washington).

We invite candidates to complete an on-line application at the following URL: http://apply2.cse.tamu.edu/AcademicCareerWorkshop/ by **Friday, January 15, 2010.** Participants will be notified by Monday, January 25, 2010. Funding will be provided for all participants. Questions about the program can be sent to Valerie Taylor, taylor@cse.tamu.edu.

Transitions, Awards, and Honors

CRA is pleased to welcome five new members to its Board of Directors. **Sebastian Thrun,** Professor of Computer Science & Electrical Engineering and Director of the Stanford AI Lab, was appointed to complete the term of Peter Lee who resigned from the board when he assumed a position at DARPA. **Robert Schreiber**, Assistant Director of the Exascale Computing Lab at Hewlett Packard Labs, has been appointed SIAM's representative. **Carla Brodley,** Professor of Computer Science at Tufts University and co-chair of CRA-Women, was appointed AAAI's representative in July. **Alva Couch,** Associate Professor of Computer Science at Tufts University, became the USENIX representative in July. Effective January 1, 2010, **Jane Prey,** Senior Research Program Manager at Microsoft Research, became one of two IEEE-CS representatives on the board.

CRA appreciates the contributions of members who have completed their service on the Board. **Marie desJardins,** University of Maryland, has represented AAAI since 2006. **Peter Honeyman,** University of Michigan, completed his term (2008-09) as the USENIX representative. Long-term SIAM representative **Bobby Schnabel** (Indiana University), who joined the board in 1999, continues to be active as a member of the Government Affairs and Snowbird 2010 committees. **George Cybenko** (Dartmouth College) who has represented IEEE-CS since 2005, is currently a member of CRA's Government Affairs and Distinguished Service Awards committees.

Among Computer Society members recently elevated to Fellow by IEEE were CCC Council members **David Kaeli** (Northeastern University) and **Robin Murphy** (Texas A&M University). Also honored was CRA Board member **Margaret Martonosi** of Princeton University. Our congratulations to these honorees and all other members of the CS community who were honored by IEEE (see: http://www.ieee.org/web/membership/fellows/Societies/COMP.html).

Stephen Seidman, Dean of the College of Science at Texas State University, has been named President of the Computing Sciences Accreditation Board (CSAB) for 2009-11.

Francine Berman, Vice President for Research at Rensselaer Polytechnic Institute, received the inaugural Ken Kennedy Award from the IEEE Computer Society and the Association for Computing Machinery at the SCO9 Conference in November. Dr. Berman received the award for her leadership in building national-scale cyberinfrastructure. ▮

CRA-W Grad Cohort for Women Conference

April 23-24, 2010
Bellevue, WA

Application Deadline: February 1, 2010

http://www.cra-w.org/gradcohort

Professional Opportunities

CRN Advertising Policy

See http://www.cra.org/main/cra.jobshow.html

Bowdoin College
Computer Science Department
Tenure-Track Position

The Computer Science Department at Bowdoin College invites applications for a tenure-track position at the rank of Assistant Professor to begin in Fall 2010. A Ph.D. in computer science is required (advanced ABD will be considered). Preference will be given to candidates whose research interests include software — especially systems — and complement the Department's current research areas of theory, algorithms, and artificial intelligence.

The successful candidate will be expected to share with all the members of the department in the teaching of introductory and mid-level courses, and to teach upper-level courses in their area of research. The regular teaching load is two courses per semester. Department members are strongly committed to providing research opportunities for undergraduate students and the successful candidate will be expected to guide independent projects and to actively encourage student involvement in their research.

The Computer Science Department shares a science building with the Mathematics and Physics Departments. Departmental lab facilities include an iMac lab for introductory courses, a lab with high-end Mac Pro machines for intermediate and advanced courses, and a robotics lab featuring 16 Sony Aibos, 4 Aldebaran Naos, and 2 Pioneer DXs. Further information about the college and the department is available at http://www.bowdoin.edu and questions can be e-mailed to Stephen Majercik, the chair of the department, at smajerci@bowdoin.edu.

Bowdoin is now accepting electronic submissions. Please visit https://careers.bowdoin.edu to submit a cover letter, a curriculum vitae, a statement of research plans, a statement on teaching philosophy, and contact information for three references who will provide letters of recommendation. Review of applications will begin December 15, 2009 and will continue until the position is filled.

Founded in 1794, Bowdoin is one of the oldest and finest coeducational, residential liberal arts colleges in the country. Bowdoin's reputation rests on the excellence of its faculty and students, its intimate size, strong sense of community, genuine socioeconomic diversity, and treasured links with the people, history, and natural beauty of Maine. Bowdoin's diverse student body comprises 29% students of color, 3% International students and approximately 15% first generation college students. With some 185 FTE faculty, Bowdoin has a 9:1 student-to-faculty ratio, and 69% of all Bowdoin classes have fewer than 20 students. This academic year Bowdoin enrolled slightly over 1,700 students from 49 states and 26 foreign countries. Bowdoin is located in Brunswick, a vibrant community on the Maine coast two hours from Boston.

Bowdoin College is committed to equality and diversity and is an equal opportunity employer. We encourage inquiries from candidates who will enrich and contribute to the cultural, socio-economic, and ethnic diversity of our college. Bowdoin College does not discriminate on the basis of age, race, creed, color, religion, marital status, gender, sexual orientation, veteran status, national origin, or disability status in employment, or in our education programs.

Bowdoin College recognizes that recruiting and retaining faculty may involve considerations of spouses and domestic partners. To that end, where possible, the College will attempt to accommodate and respond creatively to the needs of spouses and partners of members of the faculty.

Bucknell University
Department of Computer Science
Assistant Professor

Applications are invited for a tenure track entry-level (up to four years of full-time teaching experience with a recent Ph.D.) assistant professor position in computer science beginning mid-August 2010. Outstanding candidates in all areas will be considered. We are particularly interested in candidates whose research area is in AI, data mining, bioinformatics, or databases. Candidates must have completed their Ph.D. requirements in computer science or a closely related field before the beginning of employment at Bucknell. A strong commitment to excellence in teaching and scholarship is required. The successful candidate must be able to participate in the teaching of required core courses and be able to develop elective courses in the candidate's area of expertise.

Bucknell is a highly selective private university emphasizing quality undergraduate education in engineering and in liberal arts and sciences. The B.S. programs in computer science are ABET accredited. The computing environment is Linux-based. More information about the department can be found at:

http://www.bucknell.edu/ComputerScience/

Applications will be considered as received and recruiting will continue until the position is filled. Candidates are asked to submit a cover letter, CV, graduate transcript, a statement of teaching philosophy and research interests, and the contact information for three references. Please submit your application to

http://jobs.bucknell.edu/

by searching for the "Computer Science Faculty Position".

Please direct any questions to Professor Xiannong Meng of the Computer Science Department at xmeng@bucknell.edu.

Bucknell University values a diverse college community and is committed to excellence through diversity in its faculty, staff and students. An Equal Opportunity/Affirmative Action Employer, Bucknell University especially welcomes applications from women and minority candidates.

California Institute of Technology
Divisions of EAS and HSS
Tenure-Track Position

The faculty of the Division of Engineering and Applied Science and the Division of the Humanities and Social Sciences of the California Institute of Technology invite applications for a tenure track position in computer science and economics. Examples of research areas of interest include multi-agent systems, game theory, mechanism design, and distributed systems, although the quality of the work is more important than the area. We are seeking highly qualified candidates who are committed to a career in research and teaching.

The term of initial appointment is normally four years, if untenured, and is contingent upon completion of the Ph.D. For a list of documents required and full instructions on how to apply on-line, please visit:

http://www.eas.caltech.edu/positions/cs-econ/index.html

Questions about the applications process may be directed to: search@cs.caltech.edu.

Caltech is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

College of William and Mary
Computer Science Department
Faculty Position Assistant Professor

We invite applications for a tenure-track assistant professor position in Computer Science for Fall 2010. We are interested in individuals with research expertise in all areas of computer science. Applicants must hold a Ph.D. in computer science or a related field at the time of appointment, must have a strong research record, and should have an interest in teaching.

The College of William and Mary consistently ranked in the elite group of the Best National Universities Doctoral by U.S. News and World Report has committed to a multi-year effort to strengthen its computer science research program.

The department currently consists of fourteen faculty members who support B.S., M.S., and Ph.D. programs. More information about the department and university can be obtained at:

http://www.cs.wm.edu

Applicants should submit a current resume, research and teaching statements, the names of at least three references, and supporting documents they consider most relevant. We prefer that the application materials be submitted as PDF attachments in email to 09search@CS.WM.EDU. If necessary, hard copy may be submitted to:

Faculty Search Committee
Department of Computer Science
The College of William & Mary
P.O. Box 8795
Williamsburg, VA 23187-8795

Review of applications will begin December 15 and continue until the position is filled. The College is an EEO/AA employer.

Columbia University
Department of Computer Science
Faculty Position

The Department of Computer Science at Columbia University in New York City invites applications for tenured or tenure-track faculty positions. Appointments at all levels, including assistant professor, associate professor and full professor, will be considered. Priority themes for the department include Computer Systems, Software, Artificial Intelligence, Theory and Computational Biology. Candidates who work in specific technical areas including, but not limited to, Computer Graphics, Human-Computer Interaction, and Simulation and Animation, with research programs that can significantly impact the above priority themes are particularly welcome to apply. Candidates doing research at the interface of computer sciences and the life sciences and the physical sciences are also encouraged to apply.

Candidates must have a Ph.D degree, or DES, and are expected to establish a strong research program and excel in teaching both undergraduate and graduate courses. Positions at Assistant Professor rank require demonstrated potential for scholarly success and teaching contributions. Positions at the Associate Professor rank require candidates to have a demonstrated record of scholarly and teaching achievement and have a national reputation in the field of their specialization. At the Professor level, candidates are expected to be scholars and teachers who are widely recognized internationally for their distinction in their chosen field. The Department is especially interested in qualified candidates who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the academic community.

Our department of 34 tenure-track faculty and 1 lecturer attracts excellent Ph.D. students, virtually all of whom are fully supported by research grants. The department has active ties with major industry partners including Adobe, Autodesk, Disney, Dreamworks, Nvidia, Sony, Weta and also to the nearby research laboratories of AT&T, Google, IBM (T.J. Watson), NEC, Siemens, Telcordia Technologies and Verizon. Columbia University is one of the leading research universities in the United States, and New York City is one of the cultural, financial, and communications capitals of the world. Columbia's tree-lined campus is located in Morningside Heights on the Upper West Side.

Applicants should apply online at: https://academicjobs.columbia.edu/applicants/Central?quickFind=52306 and should submit electronically the following: curriculum-vitae including a publication list, a statement of research interests and plans, a statement of teaching interests, names with contact information of three references, and up to four pre/reprints. Applicants can consult www.cs.columbia.edu for more information about the department.

Professional Opportunities
Continued on Page 10

Professional Opportunities

Professional Opportunities

The position will close no sooner than February 9, 2010, and will remain open until filled. Columbia University is an Equal Opportunity/Affirmative Action employer.

Cornell University

Department of Computer Science

Faculty Positions

Multiple faculty positions are available at Cornell's Department of Computer Science. Candidates are invited to apply at all levels including tenured, tenure-track, or lecturer.

We are interested in applications from any area of computer science, including artificial intelligence, computational biology, databases, game design, graphics, machine learning, networking, programming languages, robotics, security, scientific computing, systems, and theory of computation.

To ensure full consideration, applications should be received by December 15, 2009, but will be accepted until all positions are filled.

Applicants should submit a curriculum vitae, brief statements of research and teaching interests through the web at http://www.cs.cornell.edu/apply and arrange to have at least three references uploaded on the Web.

Cornell University is an Affirmative Action/Equal Opportunity Employer and Educator.

D. E. Shaw & Co., L.P.

New York, NY & Cupertino, CA

Software Developer (full-time & internship)

The D. E. Shaw group is looking for top-notch, innovative software developers to help it expand its tech venture and proprietary trading activities. We're a global investment and technology development firm with approximately US $29 billion in aggregate investment capital and a decidedly different approach to doing business. The application of advanced technology is an integral part of virtually everything we do, from developing computationally intensive strategies for trading in securities markets around the globe to designing a supercomputer intended to fundamentally transform the process of drug discovery. Developers at the firm work on a variety of interesting technical projects including real-time data analysis, distributed system development, and the creation of tools for mathematical modeling. They also enjoy access to some of the most advanced computing resources in the world. If you're interested in applying your intellect to challenging problems of software architecture and engineering in a stimulating, fast-paced environment, then we'd love to see your resume.

You can learn more about us and apply online at:

Full time: https://www.deshaw.com/recruit/jobs/Ad/CRA/Prog

Internship: https://www.deshaw.com/recruit/jobs/Ad/CRA/ProgIntern<https://www.deshaw.com/recruit/jobs/Ad/CRA/ProgIntern

Members of the D. E. Shaw group do not discriminate in employment matters on the basis of race, color, religion, gender, pregnancy, national origin, age, military service eligibility, veteran status, sexual orientation, marital status, disability, or any other protected class.

D. E. Shaw Research

Research on Algorithms and Architectures for Computational Biochemistry

Extraordinarily gifted computer scientists, systems architects, electrical engineers, and systems software professionals are sought to join a rapidly growing New York-based research group pursuing an ambitious, long-term project aimed at achieving major scientific advances in the field of biochemistry and fundamentally transforming the process of drug discovery.

Among the group's current research activities is a project aimed at developing a massively parallel special-purpose supercomputer and innovative mathematical and computational techniques to direct unprecedented computational power toward the solution of key scientific and technical problems in the fields of molecular simulation and molecular design. Successful candidates will be working closely with a number of the world's leading computational chemists and biologists, and will have the opportunity to make fundamental contributions within the fields of biology, chemistry, and medicine.

Serious candidates will have an exceptionally distinguished history of academic and/or industrial accomplishment in computer science, electrical engineering, applied mathematics, or a related area. Particularly relevant areas of expertise might include parallel computation, high-speed interconnection networks, scientific computing, numerical analysis, optimization, the analysis of algorithms, operating systems, digital systems simulation, reconfigurable computing, and ASIC design, but specific knowledge of any of these areas is less critical than exceptional intellectual ability and a demonstrated track record of achievement.

Candidates will primarily be considered for opportunities in New York City and Silicon Valley. We are prepared to reward exceptionally well-qualified individuals with above-market compensation.

Please send your curriculum vitae (including list of publications, thesis topic, and advisor, if applicable) to cra-cs@career.DEShawResearch.com.

EOE

D. E. Shaw Research

Early Career Scientists and Engineers: Computational Biochemistry

Extraordinarily gifted early career scientists and engineers sought to join a rapidly growing New York-based research group pursuing an ambitious, long-term project aimed at achieving major scientific advances in the field of biochemistry and fundamentally transforming the process of drug discovery. Successful candidates will work closely with a number of the world's leading biologists, chemists, and computer scientists, and will have the opportunity not only to participate in an exciting entrepreneurial venture with considerable economic potential, but to make groundbreaking contributions within the fields of biology, chemistry, and medicine.

D. E. Shaw Research is seeking scientists and engineers with zero to five years of experience who have degrees in chemistry, biology, physics, computer science, engineering, and mathematics from top-tier universities. Serious consideration will be given to candidates with extraordinary records of achievement in the natural sciences and/or scientific programming, exceptional quantitative abilities, and superb communication skills.

The group's current research activities are aimed at the discovery and development of innovative scientific techniques to direct unprecedented computational power toward the solution of key problems in the fields of biomolecular simulation and design. This research effort is being financed by the D. E. Shaw group, a global investment and technology development firm with more than US $30 billion in aggregate investment capital. The project was initiated by the firm's founder, Dr. David E. Shaw, and operates under his direct scientific leadership.

We are prepared to offer above-market compensation to candidates of truly exceptional ability. Interested applicants should send a resume to cra-sa@career.DEShawResearch.com

EOE

Duke University

Department of Computer Science

Tenure-Track Faculty Positions

The Department of Computer Science at Duke University invites applications and nominations for tenure-track faculty positions at an assistant professor level, to begin August 2010. We are interested in strong candidates in all active research areas of computer science, both core and interdisciplinary areas, including algorithms, artificial intelligence, computational economics, computer architecture, computer vision, database systems, distributed systems, machine learning, networking, security, and theory.

The department is committed to increasing the diversity of its faculty, and we strongly encourage applications from women and minority candidates.

A successful candidate must have a solid disciplinary foundation and demonstrate promise of outstanding scholarship in every respect, including research and teaching. Please refer to www.cs.duke.edu for information about the department and to www.provost.duke.edu/faculty/ for information about the advantages that Duke offers to faculty.

Applications should be submitted online at www.cs.duke.edu/facsearch. A Ph.D. in computer science or related area is required. To guarantee full consideration, applications and letters of reference should be received by January 3, 2010.

Durham, Chapel Hill, and the Research Triangle of North Carolina are vibrant, diverse, and thriving communities, frequently ranked among the best places in the country to live and work. Duke and the many other universities in the area offer a wealth of education and employment opportunities for spouses and families.

Duke University is an affirmative action, equal opportunity employer.

Eidgenössische Technische Hochschule Zürich

Swiss Federal Institute of Technology Zurich

Research Scientist for IT Education

The Department of Computer Science (www.inf.ethz.ch) is seeking to appoint for November 1, 2010, or by agreement, a Research Scientist for IT Education

ETH Zurich regards a high-quality and scientifically grounded IT education as a matter of importance for students in all subjects. The main focus is on imparting

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ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Assistant Professorships (Tenure Track) in Computer Science

The Department of Computer Science (www.inf.ethz.ch) at ETH Zurich invites applications for assistant professorships (Tenure Track) in the areas of:

- Software Engineering
- Computer Graphics
- Computational Intelligence
- Human Computer Interaction

Applicants should have internationally recognized expertise in their field and pursue research at the forefront of Computer Science. The successful candidate should establish and lead a strong research program. He or she will be expected to supervise Ph.D. students and teach both undergraduate level courses (in German or English) and graduate level courses (in English).

The Department offers a stimulating and well-supported research and teaching environment. Collaboration in research and teaching is expected both within the Department and with other groups of the ETH domain and related institutions.

Assistant professorships have been established to promote the careers of younger scientists. The initial appointment is for four years with the possibility of renewal for an additional two-year period and promotion to a permanent position.

Please submit your curriculum vitae, a list of publications, names of at least three senior referees, and statements on future research and teaching activities **to the President of ETH Zurich, Prof. Dr. Ralph Eichler, ETH Zurich, Raemistrasse 101, 8092 Zurich, Switzerland, (or via e-mail to faculty-recruiting@sl.ethz.ch) no later than March 15, 2010.** With a view toward increasing the number of female professors, ETH Zurich specifically encourages qualified female candidates to apply.

Professional Opportunities

knowledge and skills that enable students to make the most of IT as a powerful tool for completing tasks and meeting challenges in their respective subject area, but with a special emphasis on methods, concepts and principles which extend beyond short-lived trends.

In this regard, the Department of Computer Science is seeking someone with a sound education in IT, including a doctorate, on the one hand, and who can demonstrate a high level of expertise in at least one scientific area of application such as biology or environmental sciences on the other. Particular interest in teaching at university level, as well as willingness to take on an above-average teaching load are indispensable requirements for this post. A very good knowledge of the German language is essential.

Interested candidates are requested to submit their electronic documents (in pdf format), including a CV and list of publications, online via www.jobs.ethz.ch. Documents should reach the Head of Department no later than February 15th, 2010: ETH Zurich, Professor Jürg Gutknecht, Department of Computer Science, Clausiusstrasse 59, 8092 Zurich, Switzerland.

For further information, please contact Professor Jürg Gutknecht by e-mail at gutknecht@inf.ethz.ch (do not enclose any application documents).

Florida International University (FIU)

School of Computing and Information Sciences

Director Position

Position number 45871: Florida International University (FIU) invites applications for the position of Director of School of Computing and Information Sciences (SCIS, www.cis.fiu.edu) in the College of Engineering and Computing to begin on July 1, 2010.

Candidates must have a doctorate in Computer Science or a closely related field, a reputation for academic and research excellence necessary for appointment as a tenured professor, demonstrated leadership skills, management or supervisory experience, and a strong interest in working with students and the community. Reporting to the Dean of the College of Engineering and Computing, the Director is responsible for promoting excellence in interdisciplinary research and teaching, mentoring faculty, building research teams, administration of School's budgetary and personnel operations, and collaborating with the community and industry.

With a student enrollment of over 39,000, FIU has achieved Carnegie Research University status (with high research activity) and is one of the 25 largest universities in the nation. SCIS is the 6th largest computer science program in the nation and is a major school in the College of Engineering and Computing at FIU. SCIS has 32 faculty members who support its offerings of BS (ABET accredited), MS, and PhD programs in Computer Science, BS/BA in IT, and MS in Telecommunications and Networking. The School serves approximately 1,150 undergraduates, 170 masters, and 90 doctoral students, and provides service courses to many students in various Engineering, Business, and Arts & Sciences departments. In 2008-09, the SCIS received external funding in excess of $4.2M. The School's IT staff operates and maintains research and instructional computing infrastructure and 25 laboratories, including a 10GB network backbone, virtualization-capable data center, multimedia classrooms, and open graduate and undergraduate labs, and IT hands-on teaching labs.

The School's faculty is involved in research areas including databases (data mining, visualization, knowledge discovery, GIS), software systems (high performance computing and networking, large scale modeling simulation, parallel and distributed systems, and adaptive, autonomic, pervasive, and grid computing), software engineering (architecture, design, verification, testing, component technology, and verification), machine learning, telecommunications and networking, security, health informatics, Bioinformatics, algorithms and programming languages.

One of the School's signature University/Industry partnership projects is the Latin American Grid (LA Grid, pronounced "lah grid," http://www.latinamericangrid.org). Co-founded by IBM, and with 12 academic and industry partners sharing over 1,500 systems in an experimental grid, LA Grid brings together computer scientists, domain experts, and industry experts to produce the next generation of leaders of the IT industry by synergistically combining research, education and workforce development activities. It explores "society critical" areas such as disaster mitigation, healthcare, and bioinformatics.

FIU offers a competitive salary and benefits package, and an excellent work environment.

Application review continues until the position is filled. A letter of application, CV, statements of administrative, teaching, and research philosophies, and a list of three references should be submitted to:

http://www.fiujobs.org

Applications are especially encouraged from members of under-represented minorities, women and persons with disabilities. FIU is an equal opportunity/ equal access/ affirmative action employer and institution.

www.fiu.edu/index.htm

FX Palo Alto Laboratory, Inc.

Research Scientist

FX Palo Alto Laboratory, Inc. (FXPAL) provides multimedia and collaboration technology research for Fuji Xerox Co., Ltd., a joint venture between Xerox Corporation of America and FujiFilm of Japan.

We have an immediate opening for a Research Scientist eager to embrace new challenges in cloud computing and distributed applications. Applications include social networks, large scale data mining, document management, media processing, 3D mixed reality worlds, and distributed collaboration. The preferred applicants will have extensive experience with scalable internet systems, database management systems, distributed programming tools, or computer networks.

Candidates should be interested in working on practical applications in a collaborative setting and be able to perform leading edge original research. This position requires a Ph.D. in Computer Science or related field, strong programming skills, and an excellent publication record.

For more information about FXPAL, please visit our website at www.fxpal.com.

To apply send resume to fxpalresumes@fxpal.com. Please reference job code CRN-5

George Mason University

Center for Secure Information Systems

Postdoctoral Position in Cyber Security

The Center for Secure Information Systems at GMU, established in 1990 in Fairfax, VA, is seeking highly qualified candidates for a postdoctoral position in cyber security. We are considering researchers in the early stage of their career with an academic focus and a strong publication record in one of the following areas: operating systems security, virtualization security, network security, malicious code analysis, software vulnerability analysis, or programming language security. Information about the Center is available from http://csis.gmu.edu/.

The successful candidate will have a strong theoretical foundation in computer science with an applied systems perspective. In particular, we are seeking candidates with a strong software systems background with an emphasis on building secure systems to solve hard theoretical and applied problems. A record of software releases and open source projects is desirable. Publications in top-tier conferences are sought.

Strong references and a PhD in Computer Science or a related field is required or should be expected soon.

Interested candidates should submit their CV, a research statement, and at least three names and contact information of references to Dr. Anup Ghosh at aghosh1@gmu.edu via email with subject PostDoc.

The George Washington University

Department of Computer Science

Three Faculty Positions

The Department of Computer Science at The George Washington University is seeking applicants for three faculty positions. The first is (A) a tenured senior position in security, at the rank of Associate or Full Professor. The second position is (B) a tenure-track position in the area systems security, and the third is (C) a tenure-track position in the area of Artificial Intelligence with a focus on Robotics. Position B and C will be at the rank of Assistant or Associate Professor. The rank for all positions will depend on experience. Successful candidates may start as early as Fall 2010.

Basic Qualifications: All applicants must have a Ph.D degree in Computer Science or a closely related field. (A) Applicants to the tenured senior position in security must currently have well-funded research programs, must be a recognized scholar in the research community, and must be prepared to take on a leading research role within the department and in the field. (B and C) ABD candidates may apply for the Assistant Professor rank, but they must complete their Ph.D degree by August 15, 2010. Applicants for the Assistant Professor rank must demonstrate a potential for developing an advanced research program and for attracting significant research funding. Applicants for the Associate Professor rank must have well-established and well-funded research programs. All applicants must have demonstrated teaching excellence or potential at both undergraduate and graduate levels

The George Washington University is the largest academic institution in the nation's capital with close access to many Federal funding agencies and research laboratories. The University offers comprehensive programs of undergraduate and graduate liberal arts studies as well as degrees in engineering, law, medicine, public health, education, business and international affairs. A private institution, GW prides itself on excellent research, quality education, and low student-teacher ratio. The exceptional location affords the GW community unique cultural and intellectual opportunities. In the high-tech sector, the Washington, DC Metropolitan area is one of the largest IT areas in the nation, putting us in the center of activities such as security and biotechnology.

Professional Opportunities
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Professional Opportunities

The Department of Computer Science offers an accredited Bachelor of Science program, a Bachelor of Arts program, and Master's and Ph.D degrees. The Department has 18 faculty members, numerous affiliated and adjunct faculty members, and over 425 students. The Department has educational and research programs in security, networks, graphics, biomedical applications, search and data mining, human computer interaction, and machine intelligence, with funding from various agencies; a NSA-designated Center of Academic Excellence and Center of Academic Excellence-Research in security, with funding from NSF, DOD, and other agencies; and NIH-funded collaborations with the medical school in the biomedical areas. For further information please refer to http://www.cs.gwu.edu.

Review of applications will begin on December 1, 2009, and will continue through the Spring 2010 semester, until the position is filled. Application Procedure: To be considered, applicants must send a letter containing (i) a brief statement that clearly indicates the position and rank of interest, (ii) a curriculum vitae, (iii) a statement of research and teaching interests, and (vi) complete contact information for at least three references. These and other relevant supporting materials should be sent to:

Chair, Faculty Search Committee
Department of Computer Science
PHIL 703
The George Washington University
Washington D.C. 20052

Electronic submissions are preferred, and can be sent to cssearch@gwu.edu. Only complete applications will be considered. Inquiries about applying will be accorded the utmost discretion. For complete instructions on the application process, please visit the department website www.cs.gwu.edu.

The George Washington University is an equal opportunity/affirmative action employer.

The Graduate Center, CUNY

Computer Science - Simulation or Visualization

Associate, Full or Distinguished Professor of Computer Science

The Ph.D. Program in Computer Science at the Graduate School of the City University of New York is seeking to fill a position at the level of Associate Professor or higher to begin Fall 2010; a particularly strong candidate will be nominated as a Distinguished Professor. Duties involve mentoring Ph.D- level students, conducting research, and teaching doctoral-level courses. This is one of a number newly created positions at the university as part of its commitment to improved cyberinfrastucture.

The successful candidate will have a doctorate in Computer Science or closely related field. The candidate must have a record of significant research published in peer-reviewed journals and an established ongoing program of grant-supported research in either simulation methodology or in computer visualization. In addition, the successful candidate will be an effective teacher and academic mentor; he/she may also be expected to provide academic leadership in the cyberinfrastructure initiative.

The review of applications will begin on November 30, 2009, and continues until the position is filled. To apply please send a letter of applications that includes (a) a current CV; (b) a statement of research interests (including a description of current and planned research funding); and (c) the names of three people who will write letters of recommendation;

by mail to:
Chair of Computer Science Search Committee
Ph.D. Program in Computer Science
CUNY Graduate Center
365 Fifth Avenue
New York, NY 10016
or email to: compsci@gc.cuny.edu

If you have questions about the position, you may email them to above address.

The Graduate Center is centrally located in midtown Manhattan, across the street from the Empire State Building, on Fifth Avenue between 34th and 35th Streets, near public transportation to Westchester, Long Island, New Jersey and Connecticut. It is a college of The City University of New York, the nation's largest public urban university with 31 doctoral programs. Visit our website for further information about our program: http://cs.gc.cuny.edu

EQUAL EMPLOYMENT OPPORTUNITY

The City University of New York is an Equal Opportunity Employer which complies with all applicable laws and regulations, and encourages inclusive excellence in its employment practices.

IMDEA Networks

Call for Researchers

IMDEA Networks is an independent, non-profit research institute whose multinational team is engaged in cutting-edge fundamental science in all areas of networking. As a growing, English-speaking institute located in Madrid, Spain, IMDEA Networks offers a unique opportunity for scientists to develop their pioneering ideas and to shape the future of networking over the coming years.

We are looking for excellent researchers at all levels of their professional career, ranging from those who have recently achieved their Ph.D. (Staff and Post-Doc Researchers) to tenured Senior Researchers and very distinguished Chief Researchers.

Successful candidates should have:

- Ph.D. in Electrical Engineering or Computer Science
- High level of English (please note: Spanish is not required)
- Research experience in the field of networking
- Significant scientific record backed by high impact international publications
- Ability to undertake academic research at the highest level
- Substantial experience in leading research groups (in the case of applicants for Chief and Senior Researcher positions).

Apply now through our online form at www.networks.imdea.org

Indiana University-Purdue University Indianapolis

Department of Computer & Information Science

Tenure-Track Faculty Positions

The Department of Computer and Information Science invites applications for two tenure track faculty positions at all levels, beginning August 2010.

Applicants must hold a Ph.D. in Computer Science or closely related field at time of appointment, and are expected to develop a high-quality funded research program and be committed to excellence in teaching undergraduates and graduate students. Applications are accepted from candidates in all areas of computer science, though we are especially interested in candidates with expertise in web technology, algorithms in high performance computing, biocomputing, databases, visual analytics, and network security.

The application must consist of a letter of interest, curriculum vitae, and a statement of research direction and teaching interests. Applicants should also arrange for three letters of recommendation to be mailed directly to the Committee.

The department is committed to achieving excellence through diversity. Applications and nominations of women, persons of color, applicants with disabilities, and members of other under-represented groups are desired.

Send all materials to:
Faculty Search Committee
Department of Computer and Information Science
IUPUI
723 W. Michigan Street, SL 280
Indianapolis, IN 46202-5132

E-mail applications may be sent to wittlief@cs.iupui.edu. Consideration of applications will begin on February 1, 2010 and will continue until the positions are filled.

IUPUI is an EEO/AA Employer, M/F/D. For further information about the department, please visit www.cs.iupui.edu.

John Jay College of Criminal Justice, of the City University of New York

Department of Mathematics and Computer Science

Assistant Professor

We invite applications for a tenure-track position at the Assistant Professor level to begin in Fall 2010. In addition to teaching undergraduate mathematics and computer science courses, the successful candidate will teach and mentor student research in the Department's M.S. program in Forensic Computing. Candidates are expected to bring enthusiasm and demonstrated commitment to teaching and to develop and maintain and active research and publication agenda. Successful candidates will be expected to coordinate the college's introductory statistics for social science majors. The position requires the faculty member to develop an active research program that endeavors to secure external funding. Candidates with a strong background and interest in applications of computer science to problems in Statistical Machine Learning, Disk Forensics, Network Security, and Systems Security are of particular interest. The position requires a Ph.D. in Mathematics or Computer Science. Applicants should submit their cover letter, CV, research and teaching statements, and names of 3 references electronically to Prof. Spiros Bakiras, at sbakiras@jjay.cuny.edu. Review of applications will begin December 1st and will continue until the position is filled.

John Jay College is a senior college of the City University of New York (CUNY), and offers bachelor's and master's degrees and participates in the doctoral programs of the Graduate School of CUNY. The College is the

Professional Opportunities

largest Hispanic serving four-year college in the northeastern US.

For more information about this position including responsibilities, salary and applying, please visit our website: www.jjay.cuny.edu/jobs

The City University of New York
An Equal Employment Opportunity/ Affirmative Action/Immigration Reform and Control Act/Americans with Disabilities Act Employer.

Johns Hopkins University

Biomedical Engineering and Computer Science

Postdoctoral Researcher, Data Mining and Data Management Bioinformatics

Candidates are sought for multiple funded positions to create an international repository for protein chip data (NSF DataNet Conservancy), to develop innovative data mining tools (NIH Roadmap Center for Networks and Pathways), and to design and synthesize artificial chromosomes. Technically excellence and database experience override previous work in computational biology.

Email CVs with names of at least 3 references to joel.bader@jhu.edu.

The Johns Hopkins University

Department of Computer Science

Tenure-Track Faculty Positions

The Department of Computer Science at The Johns Hopkins University is seeking applications for tenure-track faculty positions at the Assistant Professor level, as well as applications for a focused search at the Associate or Full Professor level.

At the Assistant Professor level all areas will be considered, but candidates with research agendas in computational genomics, computer systems, and health-related applications will receive special attention. At the Associate or Full Professor level we are seeking outstanding applicants in the security area. All applicants must have a Ph.D. in computer science or a related field and are expected to show evidence of an ability to establish a strong, independent, multidisciplinary, internationally recognized research program.

Commitment to quality teaching at the undergraduate and graduate levels will be required of all candidates considered. The department webpage at http://www.cs.jhu.edu provides information about the department, including links to research laboratories and centers.

Applicants should apply using the online application which can be accessed from http://www.cs.jhu.edu/apply (for full consideration, by January 4 2010). Questions should be directed to fsearch@cs.jhu.edu. The Department is committed to building a diverse educational environment; women and minorities are strongly encouraged to apply. The Johns Hopkins University is an EEO/AA employer.

Faculty Search
Department of Computer Science
Room 224 New, Engineering Building
Johns Hopkins University
Baltimore, MD 21218-2694
Fax: 410-516-6134
Phone: 410-516-8775
fsearch@cs.jhu.edu
http://www.cs.jhu.edu/apply

Knox College

Department of Computer Science

Assistant Professor of Computer Science

The Department of Computer Science at Knox College invites applications for an anticipated tenure-track position at the Assistant Professor level to begin Sept. 1, 2010. We seek candidates with the potential for excellence in teaching and research in a liberal arts institution. While all areas of specialization will be considered, the following areas would be particularly complementary to the current faculty: database management systems, modeling and simulation, human-computer interaction, and artificial intelligence. A PhD in Computer Science is preferred, although candidates that are ABD will be considered.

The Department offers a major and a minor in Computer Science. Departmental computing facilities include student laboratories, a student independent research laboratory, a quad-processor Intel Xeon server running Red Hat Linux, a departmental Macintosh laboratory with virtualization software that permits running Windows or Linux, a 192 core parallel processing graphics system, and access to the College's other Windows and Macintosh laboratories. The campus is completely wireless.

Knox is a highly selective independent liberal arts college with students from 48 states and 41 countries. The college is consistently ranked as one of the "Best Values" among national liberal arts colleges in the U.S. News & World Report survey of quality and price in higher education. Small classes, a strong advising system, and an emphasis on independent research foster close student/faculty interaction. Please visit us at www.knox.edu for more information about the College, and at cs.knox.edu for information on the department and our facilities.

To apply, please send us a curriculum vitae, a letter detailing your research interests and teaching philosophy, and copies of current letters of recommendation from three references, one of which must address your teaching. Electronic submissions are preferred. Send your application to:

John F. Dooley, Chair
Department of Computer Science
Knox College, Box K-138
2 East South Street
Galesburg, IL 61401-4999
(e-mail: cs-search@knox.edu)

Review of applications will begin as soon as they are complete and will continue until the position is filled.

Knox College is an affirmative action, equal opportunity employer. In keeping with its 171-year commitment to equal rights, the College particularly welcomes applications from individuals in underrepresented groups.

Lake Forest College, Lake Forest, IL

Computer Science

Assistant Professor

The Department of Mathematics and Computer Science invites applications for a two-year position at the assistant professor level, beginning Fall 2010. The position requires a Ph.D. in computer science or evidence that all Ph.D. requirements will be completed by Fall 2010. Successful applicants will be able to teach computer science courses across our curriculum-introductory courses and upper-level electives. It is possible that this will be converted into a tenure-track position in the future.

A highly selective liberal arts college located in a suburb of Chicago, Lake Forest College enrolls approximately 1,400 students from over 45 states and 65 countries. At Lake Forest College, the quality of a faculty member's teaching is the most important criterion for evaluation. The college also expects peer-reviewed publication or creative works and active participation in the college community. Lake Forest College embraces diversity and encourages applications from women and members of other historically underrepresented groups.

Applicants should send letter of application, CV, and documentation of teaching experience to:

Prof. Craig Knuckles
Chair, Dept. of Mathematics & Computer Science
Lake Forest College
555 N. Sheridan Road
Lake Forest, IL 60045

Applicants must also arrange to have three letters of reference sent separately. For full consideration, applications should arrive by Jan 31, 2010.

Max Planck Institute for Software Systems (MPI-SWS)

Tenure-track Openings

Applications are invited for tenure-track and tenured faculty positions in all areas related to the design, analysis and engineering of software systems, including programming languages, formal methods, security, distributed, networked and embedded systems, databases and information systems, and human-computer interaction. A doctoral degree in computer science or related areas and an outstanding research record are required. Successful candidates are expected to build a team and pursue a highly visible research agenda, both independently and in collaboration with other groups. Senior candidates must have demonstrated leadership abilities and recognized international stature.

MPI-SWS, founded in 2005, is part of a network of eighty Max Planck Institutes, Germany's premier basic research facilities. MPIs have an established record of world-class, foundational research in the fields of medicine, biology, chemistry, physics, technology and humanities. Since 1948, MPI researchers have won 17 Nobel prizes. MPI-SWS aspires to meet the highest standards of excellence and international recognition with its research in software systems.

To this end, the institute offers a unique environment that combines the best aspects of a university department and a research laboratory:

a) Faculty receive generous base funding to build and lead a team of graduate students and post-docs. They have full academic freedom and publish their research results freely.

b) Faculty have the opportunity to supervise doctoral theses, teach graduate and undergraduate courses, and have the flexibility to incorporate teaching into their research agenda.

Professional Opportunities
Continued on Page 14

Professional Opportunities

c) Faculty are provided with outstanding technical and administrative support facilities as well as internationally competitive compensation packages.

Funds have been committed to grow the institute to a strength of 17 tenured and tenure-track faculty, and about 100 doctoral and post-doctoral positions. Additional growth through outside funding is expected. We maintain an open, international and diverse work environment and seek applications from outstanding researchers regardless of national origin or citizenship. The working language is English; knowledge of the German language is not required for a successful career at the institute.

The institute is located in Kaiserslautern and Saarbruecken, in the tri-border area of Germany, France and Luxembourg. The area offers a high standard of living, beautiful surroundings and easy access to major metropolitan areas in the center of Europe, as well as a stimulating, competitive and collaborative work environment. In immediate proximity are the MPI for Informatics, Saarland University, the Technical University of Kaiserslautern, the German Center for Artificial Intelligence (DFKI), and the Fraunhofer Institutes for Experimental Software Engineering and for Industrial Mathematics.

Qualified candidates should apply online at:

http://www.mpi-sws.org/application

The review of applications will begin on January 4, 2010, and applicants are strongly encouraged to apply by that date; however, applications will continue to be accepted through January 2010.

The institute is committed to increasing the representation of minorities, women and individuals with physical disabilities in Computer Science. We particularly encourage such individuals to apply.

National Science Foundation, Arlington, VA

Division of Computing and Communication Foundations

Director

Bring your management experience and passion for innovation to NSF and help us in our mission to support science and engineering research. NSF's Directorate for Computer and Information Science and Engineering (CISE) seeks candidates for the Director, Division of Computing and Communication Foundations (CCF). CISE promotes basic research and education in the computer and information sciences and engineering, and helps maintain the nation's preeminence in these fields. New developments in these areas of science and technology affect every facet of modern life, including sustainability, security, entertainment, health and education. Information about the Directorate's activities may be found at http://www.nsf.gov/home/cise/.

Appointment to this Senior Executive Service position may be on a career basis, or a 2 to 3 year limited term basis, with a salary range of $153,200 to $171,882. Alternatively, the positions may be filled under Intergovernmental Personnel Act (IPA) assignment provisions. Announcement S20100017, with position requirements and application procedures, are located on the NSF Home Page at http://www.nsf.gov/about/career_opps/vacancies/executive.jsp or can be obtained by contacting the Executive Personnel Staff, 703-292-4367 (Hearing impaired individuals may call TDD 703-292-8044). Applications must be received by January 29, 2010.

In addition to these vacancies, the CISE Directorate is continuously searching for a diverse group of candidates interested in joining the Directorate as Program Directors on Intergovernmental Personnel Act (IPA) assignments. Initial assignments under the IPA provisions may be made for a period of up to two years, with a possible extension for up to an additional two-year period. Qualification requirements for these positions include a Ph.D. or equivalent professional experience in computer and information science and engineering fields. For more information, we encourage interested parties to contact us at (703) 292-8900 or at dcrawfor@nsf.gov.

NSF is an Equal Opportunity Employer.

Naval Postgraduate School

Computer Science Department

Assistant Professor(s)

It's hard to beat the location and atmosphere of the U.S. Naval Postgraduate School. We are in Monterey, California, a scenic, uncongested Pacific coast city one hour's drive south of Silicon Valley. We are an all graduate M.S. and Ph.D. program with top-notch U.S. and international military students and rich research opportunities in both the defense and civilian sectors. The Computer Science Department currently has tenure-track openings at the Assistant Professor level in both information security (2 positions) and artificial intelligence/machine learning/robotics/natural language processing (1 position). Faculty teach graduate classes, supervise M.S. and Ph.D. theses, and conduct cutting-edge scientific research. The typical work load is 50% teaching and 50% research. The School has a strong commitment to research excellence, hosting about $100M externally-funded research annually.

Candidates must hold a Ph.D. in Computer Science or a closely related field, and must be U.S. citizens, permanent residents, or in the process of becoming a permanent resident. Electronically send a cover letter, curriculum vitae (including a Web link to all supporting documents), research statement, and a statement of teaching philosophy to the CS Search Committee at CSSRCH@nps.edu. Questions about the application process should be directed to: Associate Professor Craig Martell, cmartell@nps.edu, (831) 656-2110.

The Naval Postgraduate School is an Equal Opportunity Employer.

NEC Laboratories America, Inc.

Department of Information Analysis

Research Staff Member

NEC Laboratories America, Inc., (www.nec-labs.com) is a vibrant industrial research center renowned for technical excellence and high-impact innovations. It is headquartered at Princeton, NJ and has a second location at Cupertino, CA, the heart of Silicon Valley.

The Information Analysis Department at Cupertino, CA, is seeking outstanding researchers with background in machine learning and computer vision, to work on large-scale image and video tagging/recognition/search. We expect the candidates to be strong in conducting cutting-edge research, but also passionate about turning research into high-impact products and services.

For details about this position, please visit:

http://www.nec-labs.com/careers/careers-c6.php

Northeastern University

College of Computer & Information Science & Department of Mathematics

Joint Position in Mathematics and Computer Science

The College of Computer & Information Science and the Department of Mathematics at Northeastern University announce a joint position at the Associate or Full Professor level. A PhD in Computer Science, Mathematics, or a related field is required.

Northeastern University, located on the Avenue of the Arts in Boston's historic Back Bay, is home to 20,000 students and to the nation's premier cooperative education program. The past two decades have witnessed a dramatic increase in Northeastern's international reputation for research and innovative educational programs. A heightened focus on interdisciplinary research and scholarship is driving a faculty hiring initiative at Northeastern, which will advance its position amongst the nation's top research universities.

The Mathematics Department currently sponsors research programs in many areas of pure and applied mathematics, including algebra, combinatorics, analysis, and mathematical physics, and its top researchers are internationally recognized by the Mathematics community as evidenced by NSF grants, publications, and international invitations.

The College of Computer & Information Science maintains a strong research program with significant funding from major federal research agencies and private industry, and is driven by the broad interdisciplinary themes of Software Reliability, Information Assurance, Network Science, and Health Informatics. Major research groups exist in algorithms and theory, network security, formal methods, programming languages, information retrieval, and human-computer interaction.

The ideal candidate would be exceptionally accomplished in research and will bridge the strong research groups in both programs.

Applicants should submit a letter of interest, curriculum vitae, and the contact information of at least five references. To apply, visit http://www.ccs.neu.edu and click on the Faculty Positions button near the bottom of the webpage.

Screening of applications begins November 15, 2009 and will continue until the position is filled.

For questions about the search, please e-mail hiring@ccs.neu.edu.

Equal Employment Opportunity

Northeastern University is an Equal Opportunity, Affirmative Action Educational Institution and Employer, Title IX University. Northeastern University particularly welcomes applications from minorities, women and persons with disabilities. Northeastern University is an E-Verify Employer.

Professional Opportunities

University of Cincinnati

OPEN FACULTY POSITION: ASSISTANT PROFESSOR OF COMPUTER SCIENCE

The University of Cincinnati's College of Engineering and Applied Sciences invites applications for a junior tenure-track faculty position in the Department of Computer Science. The position starts in the Autumn quarter of 2010. Candidates should have strong commitment to advancing research and education in computer science. Candidates in all areas of computer science will be considered, but preference will be given to those in software engineering and databases.

Qualifications for this position include a doctoral degree in computer science or a closely related field, the ability to develop and sustain an externally funded academic research program, commitment to quality teaching at graduate and undergraduate levels, and interpersonal skills to motivate and engage students.

The CS Department offers BS and MS degrees in Computer Science and a Ph.D. in Computer Science and Engineering. The Department has well equipped research and teaching laboratories, a mandatory co-op program for the BSCS, and a strong and motivated student body.

The University, having completed a major building campaign, has one of the finest urban settings in American higher education. The University of Cincinnati is a state supported, comprehensive Research 1 institution with an endowment that is 22nd largest among public institutions in the nation, a research program that is funded at a level of more than $370 million annually, and student enrollment of about 37,000.

Applicants must apply through www.jobsatuc.com **(Position # 28UC3197)** and include a cover letter, curriculum vitae, and contact information of three references. The position will remain open until filled. Additional information is available at http://www.cs.uc.edu/about-cs/job-openings.

The University of Cincinnati is an affirmative action/equal opportunity employer. Qualified women, minorities, veterans, and individuals with disabilities are encouraged to apply. The University of Cincinnati buildings are a smoke-free environment

UNIVERSITY OF Cincinnati

Oakland University

Software Engineering/Information Technology

Faculty Position

The Department of Computer Science and Engineering seeks applicants for a tenure-track appointment at the rank of Assistant Professor to start in January 2010. Applicants must have completed a Ph.D. in Software Engineering or Computer Science. Candidates must show exceptional promise in both research and teaching. Desired areas of interest include project management, information systems analysis and design, software quality assurance, maintenance & evolution, CMMI, as well as evidence of successful teaching in software engineering/IT courses are highly desired.

Applications should be submitted by January 15, 2010 but will be accepted until the position is filled. Applicants should send a letter of intent, a statement of research and teaching interests, resume, and the names of three references to: Search Committee, Department of Computer Science and Engineering, Oakland University, Rochester, MI 48309-4478. E-mail: csesearch@secs.oakland.edu

Oakland University, a public institute with over 19,000 students, is located in Michigan's Automation Alley. The CSE Department currently has an enrollment of approximately 40 doctoral, 150 graduate and 315 undergraduate students. Our undergraduate program in Computer Science is accredited by CAC/ABET.

For more information on the CSE Department, please visit: www.cse.secs.oakland.edu

Oakland University is an equal opportunity employer.

The Ohio State University

Department of Computer Science and Engineering

Two Tenure-Track Positions

The Department of Computer Science and Engineering (CSE), The Ohio State University, invites applications for two tenure-track positions at the Assistant Professor level. The positions are open to all CSE areas (artificial intelligence, graphics and animation, networking, software engineering and programming languages, systems, and theory) with priority consideration given to candidates in database systems and software engineering & programming languages.

Applicants should hold or be completing a Ph.D. in CSE or a closely related field, and have a commitment to and demonstrated record of excellence in research as well as a commitment to excellence in teaching.

To apply, please submit your application via the online database. The link can be found at:

http://www.cse.ohio-state.edu/department/positions.shtml

Review of applications will begin in January and will continue until the positions are filled.

The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, or individuals with disabilities are encouraged to apply.

The Pennsylvania State University

College of Information Sciences and Technology

Assistant Professor of IST

The College of Information Sciences and Technology at The Pennsylvania State University, http://www.ist.psu.edu, has an opening for an assistant professor. The complete position announcement with all qualifications and application instructions is available at:

https://apps.ist.psu.edu/recruit/apply/

Review of applications will begin in November 2009.

Penn State is committed to affirmative action, equal opportunity and the diversity of its workforce.

Polytechnic Institute of NYU (NYU-Poly)

Computer Science and Engineering Department

Faculty Positions

The Computer Science and Engineering Department of the Polytechnic Institute of NYU (NYU-Poly) invites applications for two faculty positions in the areas listed below. We seek faculty at all levels with an exceptional record in research, teaching, and professional accomplishments. The rank of initial appointment will be commensurate with experience and accomplishments.

(1) Position in cyber security: NYU-Poly has significant existing strength in cyber security. It is an NSA Center of Excellence in Information Assurance Education as well as a Center of Excellence in Information Assurance Research, and has received three rounds of funding in the Scholarship for Service (SFS) Program. It has a large number of PhD and MS students active in research in cyber security. Over a dozen security courses are offered regularly and an MS in cyber security with an optional on-line component is also available. Current research focuses on trusted hardware and software systems, digital forensics, multimedia security, biometrics, and application and network security. The ideal candidate for this position would help us expand in some of these areas as well as into new areas.

(2) Position in data and knowledge management, web search and information retrieval, computer games, or social networks and online communities: The department has existing research efforts in relevant areas such as web search, content distribution and distributed systems, machine learning, and games and computer interfaces. Our faculty is also involved in the recently founded Games for Learning Institute (see http://g4li.nyu.edu/), which engages faculty from several schools at NYU. We are looking for a faculty member that would significantly strengthen or complement our current efforts. Areas of particular interest are (i) mining, search, and analysis of the web and of social networks and online worlds, (ii) principles and architectures of computer games, (iii) data engineering and mining with applications in security, electronic commerce, or the web, or (iv) research that combines several of these themes in innovative ways.

The Polytechnic Institute of NYU (formerly known as Brooklyn Poly) and New York University are in advanced stages of merger proceedings, with the goal of us becoming a school of NYU. The successful candidate will have excellent opportunities to initiate interdisciplinary research and educational collaborations with the diverse institutes and departments within NYU. The Computer Science and Engineering Department (CSE) of NYU-Poly has a strong faculty with a vibrant research program and strong course offerings, with existing strengths including security, networks and distributed systems, algorithms, and web search technology. Our PhD program is one of a handful of programs ranked by US News and World Report with fewer than 15 research faculty. We are located in Downtown Brooklyn and a 5-minute subway ride from Lower Manhattan.

Review of applications will begin in January 2010 and will continue until the position is filled. Applicants should send their curriculum vitae, statement of research and teaching interests, and the names and addresses of three referees, as a PDF attachment, to cssearch@poly.edu.

NYU-Poly is an Equal Opportunity Employer.

Purdue University

Department of Computer Science

Faculty Positions in High-Performance Computing

The Department of Computer Science at Purdue University invites applications for tenure track faculty positions in the area of computational science and engineering, and high-performance computing and systems, beginning August 2010. We are looking for candidates with a demonstrable research record in these areas and a commitment to multidisciplinary research. Up to three positions at the Assistant Professor rank are available. A joint appointment with another department within the College of Science or the College of Engineering is likely for candidates with interdisciplinary research interests.

Purdue faculty have had a pioneering role in computational science and engineering research and education, and are currently involved in several large-scale computing projects: e.g., the CSCAPES Institute funded by the Department of Energy, and the PRISM project funded by the National Nuclear Safety Administration. The Computing Research Institute facilitates collaborations in high-performance computing by bringing computational scientists and domain scientists together. Interdisciplinary graduate programs in Computational Science and Engineering, and Computational Life Sciences help train graduate students across departmental boundaries.

The Department of Computer Science offers a stimulating and nurturing academic environment. Forty-four faculty members direct research programs in areas including bioinformatics, computational science and engineering, databases, machine learning, networking, programming languages, security, software engineering, systems, theory, and visualization.The department has implemented a strategic plan for future growth and has recently moved into the Lawson building. Further information about the department is available at http://www.cs.purdue.edu.

All applicants should hold a PhD in computer science or a closely related discipline, be committed to excellence in teaching, and have demonstrated potential for excellence in research. Salary and benefits are highly competitive. Applicants should apply online at:

https://hiring.science.purdue.edu

Review of applications will begin on October 1, 2009, and will continue until the positions are filled. Purdue University is an Equal Opportunity/Equal Access/Affirmative Action employer fully committed to achieving a diverse workforce.

Purdue University

School of ECE

Computer Engineering Faculty Position in Human-Centered Computing

The School of Electrical and Computer Engineering at Purdue University invites applications for a faculty position at any level in human-centered computing, including but not limited to visualization, visual analytics, human computer interaction (HCI), and graphics.

The Computer Engineering Area of the school (http://engineering.purdue.edu/ECE/Research/Areas/CompEng) has nineteen faculty members who have active research programs in areas including AI, architecture, compilers, computer vision, distributed systems, embedded systems, graphics, haptics, HCI, machine learning, multimedia systems, networking, networking applications, NLP, OS, robotics, software engineering, and visualization. Eligible candidates are required to have a PhD in computer science/engineering or a related field and a significant demonstrated research record commensurate with the level of

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Professional Opportunities

the position applied for. Applications should consist of a cover letter, a CV, a research statement, names and contact information for at least three references, and URLs for three to five online papers. Applications should be submitted to https://engineering.purdue.edu/Engr/AboutUs/Employment/Applications. Review of applications will begin on 1 December 2009. Inquiries may be sent to ece-hcc-search@ecn.purdue.edu. Applications will be considered as they are received, but for full consideration should arrive by 1 January 2010.

Purdue University is an equal opportunity, equal access, affirmative action employer fully committed to achieving a diverse workforce.

Saarland University

Computer Science Department

Several Junior Research Groups (W1/W2)

Saarland University is seeking to establish several Junior Research Groups (W1/W2) within the Cluster of Excellence "Multimodal Computing and Interaction" which was established by the German Research Foundation (DFG) within the framework of the German Excellence Initiative.

The term "multimodal" describes the different types of digital information such as text, speech, images, video, graphics, and high-dimensional data, and the way it is perceived and communicated, particularly through vision, hearing, and human expression. The challenge is now to organize, understand, and search this multimodal information in a robust, efficient and intelligent way, and to create dependable systems that allow natural and intuitive multimodal interaction. We are looking for highly motivated young researchers with a background in the research areas of the cluster, including algorithmic foundations, secure and autonomous networked systems, open science web, information processing in the life sciences, visual computing, large-scale virtual environments, synthetic virtual characters, text and speech processing and multimodal dialog systems. Additional information on the Cluster of Excellence is available on http://www.mmci.uni-saarland.de. Group leaders will receive junior faculty status at Saarland University, including the right to supervise Bachelor, Master and PhD students. Positions are limited to five years.

Applicants for W1 positions (phase I of the program) must have completed an outstanding PhD. Upon successful evaluation after two years, W1 group leaders are eligible for promotion to W2. Direct applicants for W2 positions (phase II of the program) must have completed a postdoc stay and must have demonstrated outstanding research potential and the ability to successfully lead their own research group. Junior research groups are equipped with a budget of 80k to 100k Euros per year to cover research personnel and other costs.

Saarland University has leading departments in computer science and computational linguistics, with more than 200 PhD students working on topics related to the cluster (see http://www.informatik-saarland.de for additional information). The German Excellence Initiative recently awarded multi-million grants to the Cluster of Excellence "Multimodal Computing and Interaction" as well as to the "Saarbrücken Graduate School of Computer Science". An important factor to this success were the close ties to the Max Planck Institute for Informatics, the German Research Center for Artificial Intelligence (DFKI), and the Max Planck Institute for Software Systems which are co-located on the same campus.

Candidates should submit their application (curriculum vitae, photograph, list of publications, short research plan, copies of degree certificates, copies of the five most important publications, list of five references) to the coordinator of the cluster, Prof. Hans-Peter Seidel, MPI for Computer Science, Campus E1 4, 66123 Saarbrücken, Germany. Please, also send your application as a single PDF file to applications@mmci.uni-saarland.de.

The review of applications will begin on January 15, 2010, and applicants are strongly encouraged to submit applications by that date; however, applications will continue to be accepted until January 31, 2010. Final decisions will be made following a candidate symposium that will be held during March 8 - 12, 2010.

Saarland University is an equal opportunity employer. In accordance with its policy of increasing the proportion of women in this type of employment, the University actively encourages applications from women. For candidates with equal qualification, preference will be given to people with physical disabilities.

Simon Fraser University

School of Computing Science

Assistant Professor

The School of Computing Science at Simon Fraser University invites applications for a tenure-track position at the Assistant Professor level for its Software Systems program at the Surrey campus in the Metropolitan Vancouver area. A Ph.D. in Computing Science or related area is required, with a strong commitment to excellence in research and teaching. Applicants with a strong background in systems or software engineering are invited. Candidates with expertise in embedded software systems are particularly welcome.

Simon Fraser University is consistently one of the top-ranked universities in Canada. The School of Computing Science currently has more than 200 Ph.D. and M.Sc. students, more than 900 undergraduate majors, and 55 faculty members, across two campuses. The Surrey campus of SFU is located in an award-winning architectural complex in the centre of Surrey.

All qualified candidates are encouraged to apply, however Canadian citizens and permanent residents will be given priority. Simon Fraser University is committed to employment equity and encourages applications from all qualified women and men, including visible minorities, aboriginal people, and persons with disabilities. Under the authority of the University Act, personal information that is required by the University for academic appointment competitions will be collected. For further details see:

www.sfu.ca/vpacademic/Faculty_Openings/Collection_Notice.html

Review of applications will commence in January 2010, however applications will be accepted until February 15, 2010. For additional information see www.cs.sfu.ca. The position is subject to final budgetary approval.

To apply, provide curriculum vitae, evidence of research productivity, and the names and email addresses of three referees at: www.cs.sfu.ca/JobOpp

Faculty Search (Surrey campus)
School of Computing Science
8888 University Drive
Simon Fraser University
Burnaby, British Columbia, Canada,
V5A 1S6
faculty-search@cs.sfu.ca

Southern Methodist University

Department of Computer Science and Engineering

Faculty Position in Computer Engineering, Position number 50679

The Department of Computer Science and Engineering in the Lyle School of Engineering at Southern Methodist University invites applications for a faculty position in computer engineering beginning Fall 2010. Individuals with experience and research interests in all areas of computer engineering are encouraged to apply. Priority will be given to individuals with expertise in computer architecture, embedded systems, and related areas. Candidates at all ranks will be considered. The successful candidates must have or expect to have a Ph.D. in Computer Engineering or a closely related area by date of hire. Successful applicants will demonstrate a deep commitment to research activity in computer engineering and a strong potential for excellence in teaching.

The Dallas/Fort Worth area, one of the top three high-tech industrial centers in the country, has the largest concentration of telecommunications corporations in the US, providing abundant opportunities for industrial research cooperation and consulting. Dallas/Fort Worth is a multifaceted business and high-tech community, offering exceptional museums, diverse cultural attractions, and a vibrant economy.

The CSE Department resides within the Lyle School of Engineering and offers BS, MS, and Ph.D. degrees in Computer Engineering and Computer Science, as well as the MS in Security Engineering and Software Engineering. The department currently has 15 faculty members with research concentrations in security engineering, VLSI and digital systems, computer arithmetic, bioinformatics, software engineering, data mining and database systems, network and telecommunication software systems, and related areas. Additional information may be found at: www.lyle.smu.edu/cse.

Interested individuals should send a complete resume and names of three references, including a one-page statement of research interests and accomplishments to:

csesearch@lyle.smu.edu
or
CSE Faculty Search
Department of Computer Science and Engineering
SMU
Dallas, TX 75275-0122

The committee will begin its review of the applications on or about February 1, 2010. To ensure full consideration, applications must be time and date stamped before February 1, 2010. However, the committee will continue to accept applications until the position is filled. Hiring is contingent upon the satisfactory completion of a background check.

SMU will not discriminate on the basis of race, color, religion, national origin, sex, age, disability, or veteran status. SMU is committed to nondiscrimination on the basis of sexual orientation.

Stony Brook University

Department of Computer Science

Assistant Professor (Multiple Positions)

Stony Brook University's Department of Computer Science invites applicants for tenure-track faculty positions for Fall 2010. Highly qualified junior candidates in areas related to intelligent computing, particularly in natural language processing, data mining, machine learning, artificial intelligence, computer vision, and intelligent user interfaces are encouraged to apply. Applicants should hold a Ph.D. in Computer Science or a closely related discipline.

The Department currently has over 40 faculty members and is expected to recruit additional members in the next few years. There are five main research areas in the department: computer systems, visual computing, logic programming/database, concurrency/verification, and algorithms. Detailed information on the research activities of these groups can be found in the department home page: www.cs.sunysb.edu. The Department is in a stage of significant expansion, including a new Computer Science building, along with a new Center of Excellence in Wireless and Information Technology (CEWIT) building. The Department is also associated with the New York Center

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for Computational Sciences (NYCCS) and the New York Blue supercomputer.

Home to many highly ranked graduate research programs, Stony Brook University is located 60 miles from New York City on Long Island's scenic North Shore. Our 1,100-acre campus is home to 24,000 undergraduate, graduate, and doctoral students and more than 13,500 faculty and staff, including those employed at Stony Brook University Medical Center, Suffolk County's only academic medical center. Stony Brook University is a member of the prestigious Association of American Universities and co-manager of nearby Brookhaven National Laboratory (BNL), a multidisciplinary research laboratory supporting world class scientific programs utilizing state-of-the-art facilities such as the Relativistic Heavy Ion Collider, the National Synchrotron Light Source, the Center for Functional Nanomaterials, and the NewYorkBlue IBM BG/L+P supercomputer, owned by Stony Brook and managed by BNL. Stony Brook is a partner in managing the Laboratory for the Department of Energy, and is the largest institutional scientific user of BNL facilities. As such, many opportunities exist for collaborative research, and in some cases, joint appointments can be arranged.

Applicants should apply online at: https://hiring.cs.stonybrook.edu. Review of applications will begin immediately and will continue until the position is filled. For a full position description or application procedures, visit www.stonybrook.edu/jobs (Ref. #F-6062-09-10).

Equal opportunity/affirmative action employer

TCS Innovation Labs — (TRDDC)

Software and Systems R&D

Members of Research Staff

TCS Innovation Labs (TRDDC) (Pune, India)invites applications from exceptional and highly motivated MS/MTech/PhD candidates with research aptitude in all areas of Computer Science.

Specific areas of interest include algorithms; formal methods; model-driven software development; program and requirements analysis; software testing; distributed/operating systems and networks; data privacy and security; databases and data warehouses; statistical data analysis and data mining; machine learning; information extraction and retrieval; decision support systems; among others.

The Lab is one of India's premier R&D centers in Computer Science and is part of Tata Consultancy Services Ltd, the largest Indian IT company. R&D work here leads to creation of intellectual assets that address some of the most challenging problems faced by the IT industry and, more generally, by the computing science research community. You can collaborate with academia, start-ups, industrial partners, TCS clients, and end-users; publish R&D results in top-tier conferences/journals; and instantiate their findings to create novel products and services. The Lab offers a friendly and informal research environment. You can also pursue a PhD while working.

If you have a top-flight academic record and a passion for R&D, come join us! Write to us at: trddc@tcs.com with 'Opportunities' as the subject. For details view: http://www.tcs-trddc.com

Texas A&M University

Department of Computer Science and Engineering

Post-Doctoral Position, Computational Science

Postdoctoral positions are available in the Department of Computer Science and Engineering at Texas A&M University in the area of computational science as part of the Institute for Applied Mathematics and Computational Science (IAMCS). Texas A&M is an equal opportunity employer. Applicants must have clearly demonstrated experience and skills in computational science. Familiarity with high performance computing, parallel methods, and performance analysis is a definite plus.

Responsibilities include research in the area of computational science, interaction with colleagues and agency scientists, and preparing technical papers.

Please send a letter of interest and your CV, and ask three evaluators to send letters of reference, by email, to

Ms. Kathy Waskom (k-waskom@tamu.edu), (979) 845-3535

Attention: Computational Science Post-Doc

See the IAMCS web page http://iamcs.tamu.edu for more information. The position is currently available.

Texas A&M University

Department of Computer Science and Engineering

Tenure-Track Assistant Professor

Applications are invited for tenure-track positions, starting fall 2010, in the Department of Computer Science and Engineering of the Dwight Look College of Engineering at Texas A&M University. As part of a long-term plan to increase the size and improve quality, the department is expanding with an assistant professor position in the area of security, with the goal of having the faculty member take advantage of some unique opportunities made available through the Multi-program Research and Education Facility (MREF) at TAMU. MREF allows for faculty to conduct top secret or confidential research in a secure facility. Hence, preference will be given to faculty candidates who will be able to obtain federal security clearance within the first two years. Top candidates in other areas at all professor levels (Assistant, Associate, and Full) will also be considered. Candidates must have a Ph.D. degree and will be expected to teach, perform research, and supervise graduate students.

Texas A&M University CS faculty applicants should apply online at:

https://apply2.cse.tamu.edu/gts/applicant/faculty/

For questions about the positions, contact: search@cse.tamu.edu. Applications are welcome from dual career couples.

Texas A&M University is an equal opportunity/affirmative action employer and actively seeks candidacy of women and minorities.

Toyota Technological Institute at Chicago (TTI-C)

Computer Science

Faculty Positions at All Levels

Toyota Technological Institute at Chicago (TTI-C) is a philanthropically endowed degree-granting institute for computer science located on the University of Chicago campus. The Institute is expected to soon reach a steady-state of 12 traditional faculty (tenure and tenure track), and 12 limited term faculty. Applications are being accepted in all areas, but we are particularly interested in:

Theoretical computer science
Speech processing
Machine learning
Computational linguistics
Computer vision
Scientific computing
Programming languages

Positions are available at all ranks, and we have a large number of limited term positions currently available.

For all positions we require a Ph.D. Degree or Ph.D. candidacy, with the degree conferred prior to date of hire. Submit your application electronically at:

http://ttic.uchicago.edu/facapp/

Toyota Technological Institute at Chicago is an Equal Opportunity Employer

Tufts University

Computer Science Department

Faculty Search 2010 in Graphics and/or Visualization (all ranks)

The Department of Computer Science at Tufts University invites applications for a faculty appointment in Graphics and/or Visualization to begin in September 2010. We are particularly interested in candidates who will link to existing research strengths in the department.

We invite applications at all ranks. Senior applicants should have an internationally renowned research program and a strong track record of outside funding. Junior applicants must hold a Ph.D. in Computer Science or closely related field at time of appointment, and are expected to develop a high-quality funded research program. At all levels, we seek outstanding candidates with a strong commitment to undergraduate and graduate teaching and mentoring.

Tufts is among the smallest universities to have been nationally ranked as a "Research Class 1" University. Located in Boston, it has a dynamically growing Computer Science Department. We are part of the Tufts Engineering school which has recently entered an exciting growth phase with a focus on interdisciplinary research. The Tufts Center for Scientific Visualization provides a unique opportunity for collaboration on graphics and visualization within the school. Tufts faculty have many opportunities for cross school interdisciplinary collaborations and benefit from the rich intellectual life of the Boston area.

We request that applications include the following materials (a) a curriculum vitae, (b) a statement describing current and planned research, (c) a statement of teaching philosophy, (d) names and affiliations of three to five potential references and (e) a sample of scholarly work. All these should be submitted online though. Letters of recommendation will be solicited only with the candidate's explicit approval.

Review of applications will begin January 5, 2010 and will continue until the position is filled.

For more information about the department, the position please visit:

http://www.cs.tufts.edu

To apply for the position go to:

https://academicjobsonline.org/ajo/TuftsCS/ComputerScience/256

Inquiries should be emailed to cssearch@cs.tufts.edu.

Tufts University is an Affirmative Action/Equal Opportunity employer. We are committed to increasing the diversity of our faculty. Members of underrepresented groups are strongly encouraged to apply.

Tufts University

Tufts Medical Center & Computer Science Department

Postdoctoral Fellowship in Machine Learning

A postdoctoral position is available for an outstanding individual capable of taking a leading role in research on machine learning, algorithms for information extraction, social network analysis and information retrieval. This project is joint with the Tufts Medical Center and Computer Science Department. The fellow will work directly with the Tufts machine learning group (http://www.cs.tufts.edu/research/ml/) headed by Profs. Carla Brodley and Roni Khardon and researchers in Evidence Based Medicine and Biostatistics at the Medical School. The initial period for the fellowship is 1.5 to 2 years. A Ph.D. in Computer Science in the area of machine learning is required.

Professional Opportunities
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Professional Opportunities

The ideal candidate is expert in both information extraction and algorithms for social network analysis.

The start date is negotiable, but applicants who can start in the next few months are preferred. Applications should be submitted online at AcademicJobsOnline.org and should include a curriculum vitae, a brief summary of research, and three letters of recommendation. To apply for the position go to:

https://academicjobsonline.org/ajo/TuftsCS/ComputerScience/257

All applications received before 12/15/09 will be considered.

Tufts University is an Affirmative Action/Equal Opportunity employer. We are committed to increasing the diversity of our faculty. Members of underrepresented groups are strongly encouraged to apply.

University of Arkansas — Fayetteville

College of Engineering

Computer Engineering - Assistant Professor

The University of Arkansas – Fayetteville, a leader in engineering education and research, is seeking applications for tenure track faculty positions at the Assistant Professor rank. The College of Engineering offers ten ABET accredited degrees and Ph.D. programs through its seven departments. The college has 1,775 undergraduate, 750 graduate students and supports 33 endowed faculty chairs/professorships. During the past year, the research expenditures of the college totaled $23.7 million.

- Successful candidates are expected to be placed in Biological and Agricultural, Chemical, Civil, Computer Science and Computer Engineering, Electrical, Industrial or Mechanical Engineering and will be specialists in one or more of the following areas:
- Sustainable, renewable and alternative energy sources, and distributed power generation
- Biomolecular materials and processes Sustainable/alternative construction materials for transportation systems
- Pervasive computing, parallel and distributed architectures, cloud computing, agile and adaptive systems, security models

Applicants must hold a Ph.D. and be capable of developing independent and collaborative research and teaching programs. A demonstrated research record and potential are required in addition to a competitive record of publications. Women and candidates from underrepresented minority groups are strongly encouraged to apply.

Please submit an electronic copy of your curriculum vitae and a one page cover letter using the Online Form. Review of applications will begin on December 1, 2009 and will continue until the positions are filled.

For additional information, you may contact:

University of Arkansas
College of Engineering
Kathy Jones–Assistant to the Dean
Bell Engineering Center, room 4183
Fayetteville, AR 72701

The University of Arkansas is an equal opportunity, affirmative action institution. All applicants are subject to public disclosure under the Arkansas Freedom of Information Act and persons hired must have proof of legal authority to work in the United States.

University of California, Merced

School of Engineering

Tenured and Tenure-Track Professorships in EECS

Applications are invited for tenured and tenure-track faculty positions in Electrical Engineering and Computer Science to begin July 1, 2010. We seek exceptionally qualified candidates in all areas of Electrical Engineering and Computer Science. A Ph.D. in Electrical Engineering or Computer Science or a related field and demonstrated excellence in research are required.

For more information:
http://eecs.ucmerced.edu
AA/EOE

University of Delaware

Department of Computer and Information Sciences

Two Faculty Positions

Applications are invited for tenure-track faculty positions in two new programs to begin Fall 2010:

- Software Engineering Faculty Position (#4759)
- Bioinformatics & Computational Biology Faculty Position (#4807)

We are introducing an MS program in Software Engineering. The new faculty member will have the opportunity to play a major role in this as well as our undergraduate and PhD programs. More information is available at:

http://www.cis.udel.edu/SEposition

Additionally, we have recently established the Center for Bioinformatics & Computational Biology and are establishing a new graduate degree program in the discipline. The Center has affiliated faculty from over 10 departments across four colleges. More information is available at:

http://bioinformatics.udel.edu/facultysearch

The University of Delaware is an Equal Opportunity Employer which encourages applications from Minority Group Members and Women.

University of Kentucky

Computer Science Department

Assistant Professor

The University of Kentucky Computer Science Department invites applications for a tenure-track position beginning August 15, 2010 at the assistant professor level in vision/graphics. Candidates must have a PhD in Computer Science. Specific information about the position and the application process is available at http://www.cs.uky.edu/employment/positions.php.

The University of Kentucky Computer Science Doctoral Program recently ranked in the top 20% of such programs (30 out of 157) in a nationwide analysis. The rankings – produced by Academic Analytics – are based on the Faculty Scholarly Productivity Index(tm), a measure of actual faculty publication, citation, and funding rates. Among doctoral programs at public universities, UKCS was ranked 16th.

The University of Kentucky is an equal opportunity employer and encourages applications from minorities and women.

University of Massachusetts Boston

Department of Computer Science - www.cs.umb.edu

Assistant Professor

The Computer Science Department at the University of Massachusetts Boston invites applications for Fall 2010 for one full-time tenure-track Assistant Professor position in Network Security. We are most interested in a network researcher who wants to teach in, and develop curriculum for, a new and growing Information Technology major with an emphasis in System Administration. We offer a BS in Computer Science, a BS in Information Technology, an MS with an emphasis on software engineering, and a Ph.D. in computer science. Current faculty interests include bioinformatics, computer and human vision, data mining, databases, information technology, networks, software engineering, system modeling, and theoretical computer science.

Evidence of significant research potential and a PhD in computer science or a related area are required. We offer a competitive salary and a generous start-up package. Send cover letter, curriculum vitae, statements about research and teaching, and the names and email addresses of three references to:

search@cs.umb.edu.

Our campus overlooks Boston harbor; our faculty and students enjoy professional life in a center of academia and the software industry. For more information, visit us at http://www.cs.umb.edu.

Review of applications has begun and will continue until the position is filled. UMass Boston is an affirmative action, equal opportunity Title IX employer.

University of North Texas

Department of Computer Science and Engineering

Faculty Position

Applications and nominations are invited for an Assistant Professor position in the Department of Computer Science and Engineering at the University of North Texas. Applicant must hold an earned doctoral degree (or must receive the degree prior to the appointment date) in Computer Engineering, Computer Science, or a closely related field. Applicant's record must include an indication of quality research such as high quality publications. The preferred research areas include but are not limited to Digital design, Hardware/software co-design, and CAD. Duties include teach at the graduate and/or undergraduate levels in areas of disciplinary expertise and in other CSE areas, conduct research and supervise graduate students. Review of applications will begin on January 4, 2010 and will continue until the search is closed.

For additional information and to apply please visit: https://facultyjobs.unt.edu/applicants/Central?quickFind=50584 and submit a letter of application, curriculum vitae along with three letters of recommendation.

More information about the department can be found at:

http://www.cse.unt.edu/

UNT is an AA/ADA/EOE

University of Ontario Institute of Technology (UOIT)

Digital Technologies for Collaborative Knowledge Discovery

Canada Research Chair

The University of Ontario Institute of Technology (UOIT) invites applications for a Tier 1 Canada Research Chair in Digital Technologies appointment. The chair is expected to provide visionary and transformative leadership in developing digital technologies for the discovery, construction, visualization, cataloguing, and dissemination of knowledge. This leadership will be directed to applying advances in digital technologies to research and teaching in all faculties of the university and more broadly to the local, national and international communities. The chair should have strong technical expertise in a field such as computer science, information technology or software engineering, as well as in areas such as communication, education, social science or law.

Applications will be accepted until February 1, 2010 or until a suitable

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candidate is found. For detailed information on UOIT, the chair position and the application process, please visit www.uoit.ca/09-71.

UOIT is an equal opportunity employer and welcomes applications from qualified women and men, including members of visible minorities, Aboriginal Peoples and persons with disabilities.

University of Pittsburgh

School of Information Sciences

Tenure-Stream Faculty Position

The School of Information Sciences (http://www.ischool.pitt.edu) at the University of Pittsburgh is seeking candidates for a tenure-stream faculty position at the Assistant Professor level in the Telecommunications and Networking Program starting in the fall term of 2010. Applicants must have a strong commitment to and record in research and scholarly activities. Research interests of the applicants should be in one or more of the following areas:

Networking aspects of cloud computing, data centers, and storage networks

Network management or security related to emerging network computing applications (e.g., social computing)

Network Protocols

Large scale automated network management and anomaly/fault diagnosis

Networked and mobile applications

The faculty member in this area is expected to contribute to undergraduate and graduate education with teaching interests and practical expertise in computer networks, network management, and application development.

Candidates with (or expecting) a Ph.D. in Computer Science or closely related field are encouraged to apply. Electronic applications should be sent to telesearch@sis.pitt.edu. Applications should include a cover letter, curriculum vitae, and the names, addresses (with e-mail), and telephone numbers of three references. For full consideration, applications must be received by January 31, 2010.

Dr. Martin B. Weiss, Associate Professor
Chair, Search Committee
School of Information Sciences
University of Pittsburgh
720A IS Building
135 N. Bellefield Avenue
Pittsburgh, PA 15260

Successful candidates will demonstrate a strong interest and current awareness of the technological and cultural context in which their knowledge contributes to issues of contemporary society. The iSchool at Pitt is a top-ranked information school and emphasizes the synthesis of people, information and technology. The iSchool offers opportunities for research, instruction, and service spanning the diverse needs and interests of an information-intensive, multi-cultural, and increasingly digital society. Degree programs offered in the school include the BSIS, MST, MSIS, MLIS, and Ph.D. programs. Further information regarding the School and this position can be found at:

www.ischool.pitt.edu/news/facultyopenings.php

The University of Pittsburgh is an Equal Opportunity, Affirmative Action employer and strongly encourages women and candidates from under-represented minorities to apply.

University of Rochester

Department of Computer Science

Assistant to Full Professor of Computer Science

The UR Department of Computer Science seeks applicants for a tenure-track position for 2010. Candidates in computer vision, machine learning, networks, security, or algorithms are of particular interest, but strong applicants from all areas of computer science are welcome. Candidates must have a PhD in computer science or related discipline. Senior candidates should have an extraordinary record of scholarship, leadership, and funding.

The Department of Computer Science is one of the best small, research-oriented departments in the nation, with an unusually collaborative culture and strong ties to cognitive science, linguistics, and electrical and computer engineering. Over the past decade, a third of its PhD graduates have won tenure-track faculty positions, and its alumni include leaders at major research laboratories such as Google, Microsoft, and IBM.

The University of Rochester is a private, Tier I research institution located in western New York State. The University of Rochester consistently ranks among the top 30 institutions, both public and private, in federal funding for research and development. Half of its undergraduates go on to post-graduate or professional education. The university includes the Eastman School of Music, a premiere music conservatory, and the University of Rochester Medical Center, a major medical school, research center, and hospital system. The Rochester area features a wealth of cultural and recreational opportunities, excellent public and private schools, and a low cost of living.

Candidates should apply online at http://www.cs.rochester.edu/recruit. Review of applications will begin on Dec. 1, 2009, and continue until all interview openings are filled. The University of Rochester has a strong commitment to diversity and actively encourages applications from candidates from groups underrepresented in higher education. The University is an Equal Opportunity Employer.

The University of Texas at Arlington

College of Engineering

Associate/Full Professor Position

The College of Engineering at the University of Texas at Arlington (UTA) invites applications for a senior faculty position at the Associate/Full Professor (tenured) level. The candidate must have outstanding academic qualifications and stature, demonstrated excellence in teaching, a nationally competitive externally funded research program and national and international recognition. Outstanding candidates in all engineering disciplines will be considered. Preferred research areas include but not limited to nano-scale materials, sensors, devices and systems, micro- and nano-fabrication, computer engineering, computational materials and application of these fields to human health, energy, environment/sustainability and security. The position is interdisciplinary and the candidate must demonstrate leadership to interface with faculty in both the sciences and engineering. The compensation package is competitive and will be commensurate with qualifications. Exceptional candidates will also be considered for an endowed chair position.

The UTA College of Engineering provides the most comprehensive engineering program in North Texas and one of the most comprehensive in the nation with eight baccalaureate programs, twelve master's and ten doctoral. The college has over 3,700 students and seven academic departments. The college has state-of-the-art facilities at the Nanofab Research and Teaching Facility (www.nanofab.uta.edu), the Characterization Center for Materials and Biology (http://ccmb.uta.edu) and an institute dedicated to research in robotics and automation (www.arri.uta.edu). The college is in the midst of a major expansion program with the recent or near completion of three new engineering construction projects including the Engineering Research Building, the Civil Engineering Laboratory Building, and the Engineering Laboratory Building. Over the last five years, faculty size has been increased from 100 to over 160, and research expenditures have increased from $12M to over $40M annually.

The University is located in the center of the Dallas/Fort Worth Metroplex (the nation's fourth largest metropolitan area with a population of over 6 million) which has the largest concentration of high-tech industry in the State of Texas and second in the nation after silicon valley. The college fosters a collaborative and collegial culture with strong interdisciplinary research teams and ties to the region's extensive number of high technology companies.

Applications including a curriculum vitae, cover letter, and the names of five references will be accepted through online submission at:

www.uta.edu/engineering/distinguishedfacultysearch

Inquiries about the position may be directed to:

Professor E.I. Meletis, Chair Search Committee (meletis@uta.edu or 817-272-2398).

Review of applications will begin immediately and continue until the position is filled. This is a security sensitive position, and a criminal background check will be conducted on finalists. The University of Texas at Arlington is an Equal Opportunity & Affirmative Action Employer.

University of Texas-Pan American

Computer Science Department

Assistant Professor Faculty Positions

The Department of Computer Science (CS) at the University of Texas-Pan American (UTPA) seeks applications for two tenure-track Assistant Professor positions in Computer Engineering (F09/10-18). All candidates must have a potential/proven record in teaching and active research. The positions require a Ph.D. in computer science, computer engineering or a closely related area. . Highest priority will be given to candidates who can support the software track of the Computer Engineering program with expertise in software engineering and databases.

The program is administered jointly by the CS Department and the Electrical Engineering (EE) department leading to BS degree in Computer Engineering. The department also offers the BSCS (ABET/CAC Accredited) and BS undergraduate degrees, MS in Computer Science and MS in Information Technology. http://cs.panam.edu

UTPA is situated in the lower Rio Grande valley of south Texas, a strategic location at the center of social and economic change. With a population of over one million, the Rio Grande Valley is one of the fastest growing regions in the country. The region has a very affordable cost-of-living. UTPA is a leading educator of Hispanic/Latino students, with enrollment of 18,400.

The positions start Fall 2010. Salaries are competitive. Please send: (1) a cover letter noting your specialization, (2) vitae, (3) statements of teaching and research interests, and (4) names and contact information of at least three references to:

Dean's Office
Computer Engineering Search
College of Science and Engineering
The University of Texas-Pan American
1201 W. University Drive
Edinburg, Texas 78541-2999
Email: COSEDeansoffice@utpa.edu

Review of materials will begin immediately and continue until the position is filled.

NOTE: UTPA is an Equal Opportunity/Affirmative Action employer. Women, racial/ethnic minorities and persons with disabilities are encouraged to apply. This position is security-sensitive as defined by the Texas Education Code §51.215(c) and Texas Government Code §411.094(a)(2). Texas law requires faculty members whose primary language is not English to demonstrate proficiency in English as determined by a satisfactory grade on the International Test of English as a Foreign Language (TOEFL).

University of Toronto

UTSC: Computer & Mathematical Sciences

Assistant Professor -Computer Science -0900922

Job Field: Tenure Stream

Faculty / Division: University of Toronto Scarborough

Campus: Scarborough

Posting Date: 3010ctl09

Closing Date: 17/Jan/10

The Department of Computer and Mathematical Sciences, University of Toronto Scarborough (UTSC), and the Graduate Department of Computer Science, University of Toronto, invite applications for a tenure-stream appointment at the rank of Assistant Professor, to begin July 1, 2010.

We are interested in candidates with research expertise in Computer Systems, including Operating Systems, Networks, Distributed Systems, Database Systems, Computer Architecture, Programming Languages, and Software Engineering.

The University of Toronto is an international leader in computer science research and education, and the Department of Computer and Mathematical Sciences enjoys strong ties to other units within the University. The successful candidate for this position will be expected to participate actively in the Graduate Department of Computer Science at the University of Toronto, as well as to contribute to the enrichment of computer science academic programs at the University's Scarborough campus.

Candidates should have, or be about to receive, a Ph.D. in computer science or a related field. They must demonstrate an ability to pursue innovative research at the highest level,

Professional Opportunities Continued on Page 20

Professional Opportunities

and a commitment to undergraduate and graduate teaching. Evidence of excellence in teaching and research is necessary. Salary will be commensurate with qualifications and experience.

Application materials, including curriculum vitae, research statement, teaching statement, and three to five letters of recommendation, should be submitted online at www.mathjobs.org, preferably well before our deadline of January 17, 2010.

PLEASE NOTE THAT WE ARE ONLY ACCEPTING APPLICATIONS AT: www.mathjob.org

For more information about the Department of Computer & Mathematical Sciences @ UTSC, please visit our home page www.utsc.utoronto.ca/~csms.

University of Toronto

UTSC: Computer & Mathematical Sciences

Lecturer -Computer Science -0900916

Job Field: Teaching Stream

Faculty / Division: University of Toronto Scarborough

Campus: Scarborough

Posting Date: 30/0ctl09

Closing Date: 01/Mar/10

The Department of Computer and Mathematical Sciences, University of Toronto Scarborough (UTSC), invites applications for a full-time position in Computer Science at the rank of Lecturer, to begin July 1, 2010.

Responsibilities include lecturing, conducting tutorials, grading, and curriculum development in a variety of undergraduate courses.

We are especially interested in candidates who will help advance our curriculum in the areas of computer systems, computer architecture, and software engineering.

Candidates should have a post-graduate degree, preferably a PhD, in Computer Science or a related field, and must demonstrate potential for excellence in teaching at the undergraduate level. Appointments at the rank of Lecturer may be renewed annually to a maximum of five years. In the fifth year of service, Lecturers shall be reviewed and a recommendation made with respect to promotion to the rank of Senior Lecturer.

Salary will be commensurate with qualifications and experience.

Application materials, including curriculum vitae, a statement of career goals and teaching philosophy, evidence of teaching excellence, and a minimum of three reference letters should be submitted online at: www.mathjobs.org, preferably well before our deadline of March 1, 2010.

PLEASE NOTE THAT WE ARE ONLY ACCEPTING APPLICATIONS AT: www.mathjobs.org

For more information about the Department of Computer & Mathematical Sciences @ UTSC, please visit our home at: www.utsc.utoronto.ca/~csms

University of Toronto Scarborough

Department of Computer and Mathematical Sciences

Mendelzon Visiting Assistant Professor Computer Science Limited-term

The Department of Computer and Mathematical Sciences, University of Toronto Scarborough invites applications for a non-tenure-stream, two-year appointment as the Mendelzon Visiting Assistant Professor, to begin July 1, 2010.

We will consider applicants in all areas of computer science, but are especially interested in applicants who will help advance our curriculum in computer systems and software engineering.

The University of Toronto is an international leader in computer science research and education, and the Department of Computer and Mathematical Sciences enjoys strong ties to other units within the University.

The successful candidate for this position will be encouraged to engage in collaborative research with other computer science faculty at the university, as well as to contribute to the enrichment of computer science academic programs at the University's Scarborough campus.

Candidates should have, or be about to receive, a Ph.D. in computer science or a related field. They must demonstrate an ability to pursue innovative research, and a commitment to undergraduate teaching.

Application materials, including curriculum vitae, research statement, teaching statement, and three to five letters of recommendation, should be submitted online at www.mathjobs.org, preferably well before our deadline of January 17, 2010.

The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from visible minority group members, women, Aboriginal persons, persons with disabilities, members of sexual minority groups, and others who may contribute to the further diversification of ideas. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

The Mendelzon Visiting Assistant Professorship is a position created in memory of Alberto Mendelzon, FRSC, distinguished computer scientist, and former chair of the Department of Computer and Mathematical Sciences, University of Toronto Scarborough.

PLEASE NOTE THAT WE ARE ONLY ACCEPTING APPLICATIONS AT: www.mathjobs.org

For more information about the Department of Computer & Mathematical Sciences @ UTSC, please visit our home page: www.utsc.utoronto.ca/~csms

University of Utah

Computer Science Department

Tenure-Track or Tenured Faculty Position for the Jay Lepreau Professorship

The University of Utah's School of Computing is seeking to hire an outstanding tenure-track or tenured senior faculty member in systems, with a particular emphasis on operating systems, testbeds, or networks. This professorship is named in honor of Jay Lepreau, a professor of Computer Science at Utah. Candidates for this position should have an established record of leadership and an interest in large-scale systems research. To assist in discharging research and leadership obligations, successful applicants for this position will have a reduced teaching load and an endowment providing funding into perpetuity.

This professorship provides an opportunity to work closely with the Flux Research Group, which Jay founded and led. This well-established group of research staff and students is more than a dozen years old and draws on decades-long history of strong systems research at Utah. Its past and ongoing projects span a range of systems topics including operating systems, networking, security, programming languages, compilers, software engineering, and testbeds. The group has been a part of research initiatives sponsored by NSF, DARPA and several major companies. One of the group's ongoing and best-known projects is Emulab, a network testbed with global impact. The Emulab software runs testbeds at dozens of sites, and the installation at Utah, in operation for eight years, is used by thousands of researchers at hundreds of institutions worldwide.

Applicants should have earned a Ph.D. in Computer Science or a closely related field. The University of Utah is located in Salt Lake City, the hub of a large metropolitan area with excellent cultural facilities and unsurpassed opportunities for outdoor recreation only a few minutes' drive away. Additional information about the school can be found at www.cs.utah.edu. Please send curriculum vitae, a research goals statement, a teaching goals statement, and names and addresses of at least four references to:

Faculty Recruiting Committee
c/o Mr. Chris Coleman
coleman@cs.utah.edu
Via email in PDF format

Applications will be evaluated as received until the position is filled. Applicants are encouraged to apply at their earliest convenience.

The University of Utah is an Equal Opportunity, Affirmative Action Employer and encourages nominations and applications from women and minorities, and provides reasonable accommodation to the known disabilities of applicants and employees.

The University of Utah values candidates who have experience working in settings with students from diverse backgrounds, and possess a strong commitment to improving access to higher education for historically underrepresented students

University of Utah

School of Computing

Faculty Positions in Digital Media

The School of Computing at the University of Utah seeks multiple hires in the field of Digital Media.

We seek two outstanding faculty members in digital media (computer graphics, animation, computer games, computational photography, or other related area). One tenured position at the rank of associate or full professor and one tenure track position at the rank of assistant professor. Since the 1960s when pioneering graphics research became a core focus at Utah, there has been a vibrant congenial community supporting this activity. Being one of the oldest and most successful graphics programs in the nation, Utah and its alums have played a prominent role in the birth and explosive development of computer graphics. Our program includes large, multi-investigator efforts addressing large-scale problems of significant impact, as well as a number of individual investigator research activities. Currently, computer graphics research has strong programs in scientific visualization, physical simulation for computer animation, geometry processing, modeling/manufacturing, and perception. We wish to build upon these successful areas with dynamic researchers seeking to develop a strong synergistic program in digital media with strong collaboration with faculty in the College of Fine Arts.

These new hires will work with Digital Media faculty in the Film Studies Division in the College of Fine Arts and Digital Media Faculty in the School of Computing in the College of Engineering. These positions are part of the Utah Science, Technology and Research Initiative (USTAR) which was funded by the Utah State Legislature to attract focused teams of outstanding researchers who have the potential of helping build major research programs and creating new technology that can ultimately lead to commercial products and/or new industries for Utah. For more information about USTAR, visit: http://ustar.utah.gov/

The School of Computing offers a specialized M.S. and Ph.D. Computing Degree graduate track in Computer Graphics and Visualization and has an Entertainment Arts and Engineering program at the undergraduate level that spans art and computer science. Applicants should have earned a Ph.D. in Computer Science or a closely related field.

The University of Utah is located in Salt Lake City, the hub of a large metropolitan area with excellent cultural offerings and unsurpassed opportunities for outdoor recreation only a few minutes' drive away. Additional information about the School of Computing can be found at www.cs.utah.edu.

Please send curriculum vitae, a research goals statement, a teaching goals statement, and names and addresses of at least four references via email in PDF format to:

USTAR Faculty Recruiting Committee
c/o Mr. Chris Coleman
coleman@cs.utah.edu

The University of Utah is an Equal Opportunity, Affirmative Action Employer and encourages nominations and applications from women and minorities, and provides reasonable accommodation to the known disabilities of applicants and employees.

The University of Utah values candidates who have experience working in settings with students from diverse backgrounds, and possess a strong commitment to improving access to higher education for historically underrepresented students. The University of Utah is sensitive and responsive to 'two-body problems' and has a positive history of assisting with opportunities in the Salt Lake City area.

University of Washington

Computer Science & Engineering

Tenure-Track, Research, and Teaching Faculty, Ref. #AA2439

The University of Washington's Department of Computer Science & Engineering has one or more open positions in a wide variety of technical areas in both Computer Science and Computer Engineering, and at all professional levels. A moderate teaching load allows time for quality research and close involvement with students. Our space in the Paul G. Allen Center for Computer Science & Engineering provides opportunities for new projects and initiatives. The Seattle area is particularly attractive given the presence of significant industrial research laboratories as well as a vibrant technology- driven entrepreneurial

Professional Opportunities

community that further enhances the intellectual atmosphere. Information about the department can be found on the web at http://www.cs.washington.edu.

We welcome applicants in all research areas in Computer Science and Computer Engineering including both core and inter-disciplinary areas. Areas of interest include (but are not limited to) security, computer engineering, and systems. We expect candidates to have a strong commitment both to research and to teaching. The department is primarily seeking individuals at the tenure-track Assistant Professor rank; however, under unusual circumstances and commensurate with the qualifications of the individual, appointments may be made at the rank of Associate Professor or Professor. We may also be seeking non-tenured research faculty at Assistant, Associate and Professor levels, postdoctoral researchers (Research Associates) and part-time and full-time annual lecturers and Sr. Lecturers. Applicants for both tenure-track and research positions must have earned a doctorate by the date of appointment; those applying for lecturer positions must have earned at least a Master's degree. Research Associates, Lecturers and Sr. Lecturers will be hired on an annual or multi-annual appointment. All University of Washington faculty engage in teaching, research and service.

Please apply online at http://www.cs.washington.edu/news/jobs.html with a letter of application, a complete curriculum vitae, statement of research and teaching interests, and the names of four references. Applications received by February 1, 2010 will be given priority consideration. Open positions are contingent on funding.

The University of Washington was awarded an Alfred P. Sloan Award for Faculty Career Flexibility in 2006. In addition, the University of Washington is a recipient of a National Science Foundation ADVANCE Institutional Transformation Award to increase the participation of women in academic science and engineering careers. We are building a culturally diverse faculty and encourage applications from women and minority candidates. The University of Washington is an affirmative action, equal opportunity employer.

University of Washington

Computer Science & Engineering and Electrical Engineering

Tenure-Track and Research Faculty, Ref. AA2440

The University of Washington's Department of Computer Science & Engineering and Department of Electrical Engineering have jointly formed a new UW Experimental Computer Engineering Lab (ExCEL). In support of this effort, the College of Engineering has committed to hiring several new faculty over the forthcoming years. All positions will be dual appointments in both departments (with precise percentages as appropriate for the candidate). This year, we have one open position, and encourage exceptional candidates in computer engineering, at tenure-track Assistant Professor, Associate Professor, or Professor, or Research Assistant Professor, Research Associate Professor, or Research Professor to apply.

A moderate teaching and service load allows time for quality research and close involvement with students. The CSE and EE departments are co-located on campus, enabling cross department collaborations and initiatives. The Seattle area is particularly attractive given the presence of significant industrial research laboratories, a vibrant technology-driven entrepreneurial community, and spectacular natural beauty. Information about ExCEL can be found at http://www.excel.washington.edu.

We welcome applications in all computer engineering areas including but not exclusively: atomic-scale devices & nanotechnology, implantable and biologically-interfaced devices, synthetic molecular engineering, VLSI systems and CAD, embedded systems, sensor systems, parallel computing, network systems, and technology for the developing world. We expect candidates to have a strong commitment both to research and teaching. ExCEL is seeking individuals at all career levels, with appointments commensurate with the candidate's qualifications and experience. Applicants for both tenure-track and research positions must have earned a PhD by the date of appointment.

Please apply online at <http://www.excel.washington.edu/jobs.html> with a letter of application, a complete curriculum vitae, statement of research and teaching interests, and the names of at least four references. Applications received by February 1st, 2010 will be given priority consideration. Open positions are contingent on funding.

The University of Washington was awarded an Alfred P. Sloan Award for Faculty Career Flexibility in 2006. In addition, the University of Washington is a recipient of a National Science Foundation ADVANCE Institutional Transformation Award to increase the participation of woman in academic science and engineering careers. We are building a culturally diverse faculty and encourage applications from women and minority candidates. The University of Washington is an affirmative action, equal opportunity employer.

University of Washington Tacoma

Institute of Technology

Director of the Institute of Technology (Associate or Full Professor)

The University of Washington Tacoma (UWT) is accepting applications and nominations for a full-time, 12 month position as Director of the Institute of Technology, beginning July 1, 2010. The successful candidate will have experience in academic leadership, possess a capacity for strategic planning and assessment, and the skills needed to build and engage community partnerships, particularly with industry and community colleges in the region.

Ideal candidates should have a commitment to developing emerging and interdisciplinary programs. Successful candidates will also possess expertise in teaching and research appropriate to their rank.

An earned Ph.D. in Computing, Information, Engineering or related fields is required. Candidates must be eligible for appointment at the rank of Associate or Full Professor.

Salary and benefits are competitive and commensurate with credentials. Applicants should submit a cover letter discussing the applicant's fit with the qualifications and responsibilities outlined above, highlighting their leadership, research, service and teaching. Applicants must also provide a curriculum vitae, and names and contact information for five references. Submit materials electronically to academic@u.washington.edu.

Screening of applicants will begin January 3rd, and will continue until the position is filled. Questions should be addressed to Search Committee Chair, Dr. Rich Furman at rcfurman@u.washington.edu or by phone at (253) 692-4848. For the complete position description, please visit our website:

http://www.tacoma.washington.edu/academic_affairs/job_opportunities.html

The University of Washington is building a culturally diverse faculty and strongly encourages racial and ethnic minorities, women, and persons with disabilities to apply. University of Washington Tacoma faculty engage in teaching, research, and service.

The position is contingent upon funding.

University of Waterloo

Department of Management Sciences

Faculty Positions in Human-Computer Interaction

The Department of Management Sciences at the University of Waterloo invites applications for full-time faculty appointments in Information Systems at any level to start any time in 2010. Applicants should hold a PhD, or be near completion of their doctorate, and have demonstrated research and teaching potential in industrial/systems engineering, computer science or related fields. An undergraduate degree in engineering will be an asset. Examples of courses that could be taught by the successful candidate include Human-Computer Interaction, Digital Computation, Algorithms and Data Structures, Database Systems, Information Systems Analysis and Design, Principles of Software Engineering and Decision Support Systems.

For the complete advertisement and application instructions, please see:

http://www.mansci.uwaterloo.ca

University of Wisconsin-Madison

Computer Sciences Department

Assistant Professor, Associate Professor, or Professor of Computer Sciences

The Computer Sciences Department at the University of Wisconsin-Madison has an opening for a tenure-track Assistant Professor in any area of Computer Sciences, or a tenured Associate or Full Professor with a specialization in programming languages/software engineering/verification. In addition to programming languages/software engineering we are especially interested in candidates in HCI, theory, natural language processing, and robotics, but our search is not limited to these areas.

Applicants must have a Ph.D. in Computer Sciences or in a closely related field prior to the start of the appointment. Candidates for a tenured appointment must have a record of distinguished teaching and scholarly research. Candidates for a tenure-track appointment must show potential for developing outstanding and highly visible scholarly research as well as excellence in undergraduate and graduate teaching.

Applicants should submit a curriculum vitae, a statement of research objectives

Professional Opportunities
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Professional Opportunities

and sample publications, and arrange to have at least three letters of reference sent directly to the department. Electronic submission of all application materials is preferred (see http://www.cs.wisc.edu/recruiting for details).

Applicants are encouraged to submit their applications along with supporting material as soon as possible, but no later than January 15, 2010 to ensure full consideration.

The University is an Equal Opportunity/Affirmative Action employer and encourages women and minorities to apply. Unless confidentiality is requested in writing, information regarding the applicants must be released upon request. Finalists cannot be guaranteed confidentiality. A criminal background check may be conducted prior to hiring.

For further information, send mail to recruiting@cs.wisc.edu.

University of Wyoming

Department of Computer Science

Assistant Professor

The Computer Science Department at the University of Wyoming seeks applicants for a tenure-track faculty position at the assistant professor level to start Fall 2010. The Computer Science Department is one of six departments in the College of Engineering and Applied Science. The department offers B.S., M.S., and Ph.D. degrees in Computer Science. The University has a strong and growing Computational Science Program supported by several departments and colleges. The successful candidate is expected to collaborate with one or more of these departments and has an opportunity for collaboration with the National Center for Atmospheric Research (NCAR), located in Boulder, Colorado, approximately two hours distance from campus. UW and NCAR are formulating an agreement to host NCAR's new supercomputer center in Wyoming, which will provide exceptional opportunities for this position.

UW is a thriving research University located in Laramie, Wyoming (pop. 28,000), 130 miles northwest of Denver. Laramie is a picturesque and friendly town offering a reasonable cost of living and easy access to outdoor activities in the Rocky Mountain region. Additional information on the Department, College, University, and Laramie is available at: http://www.cs.uwyo.edu/, http://www.eng.uwyo.edu/, http://www.uwyo.edu/, and http://www.laramie.org.

Required qualifications: Candidates must have a Ph.D. in Computer Science or a closely related field. Responsibilities of the position include establishment of a vigorous research program, teaching at the undergraduate and graduate levels, advising, and service to the University. Preference will be given to candidates with research and teaching interest in computer systems, especially high performance computing, parallel computation and architectures, and/or data mining.

Applications must include: (a) a curriculum vitae, (b) a statement of teaching interests, (c) a statement of research interests, and (d) at least three references. All applications on file by January 15, 2010, will receive full consideration, and the search will continue until the position is filled. Electronic submission of application materials should be completed on-line, please refer to the following web link:

Inquiries Directed to:
University of Wyoming
Computer Science Department
Jerry Hamann, Dept. Head
hamann@uwyo.edu
Dept. 3315, 1000 E. University Avenue
Laramie, WY 82071, USA
Instructions for electronic submission:
http://www.cs.uwyo.edu

The University of Wyoming is a Carnegie Foundation Research/Doctoral Extensive Institution, and adheres to the principles of equal employment opportunity and diversity and welcomes applications from qualified individuals, independent of race, color, religion, sex, national origin, disability, age, veteran status, sexual orientation or political belief. We welcome applications from diverse groups, including women and people of color, and international candidates.

Virginia Tech

Department of Computer Science

Senior Position, Artificial Intelligence/Machine Learning

The Department of Computer Science at Virginia Tech (www.cs.vt.edu) invites applications for a full-time tenured position at the Professor or Associate Professor rank from candidates in artificial intelligence with particular interests in machine learning, knowledge representation, or data mining. Candidates should have an established record of scholarship, leadership, and collaboration in computing and interdisciplinary areas; demonstrated ability to contribute to teaching at the undergraduate and graduate levels in AI and related subjects; sensitivity to issues of diversity in the campus community; and the skills needed to establish and grow a multidisciplinary research group.

CS@VT has over 40 tenure-track research-oriented faculty. PhD production is among the top 30 in the US and annual research expenditures exceed $6 million. There are rich opportunities in a highly collaborative department with strengths in HCI, HPC, CS education, digital libraries, computational biology and bioinformatics. Active interdisciplinary research also explores CyberArts, digital government, problem-solving environments. Emphases on security and personal health informatics are underway in collaboration with the newly formed VT-Carilion Research Institute associated with the VT-Carilion School of Medicine, opening in Fall 2010.

CS@VT is part of the College of Engineering (www.eng.vt.edu) in a comprehensive research university with more than 26,000 students. The main campus is in Blacksburg, which is consistently ranked among the country's best places to live (http://www.liveinblacksburg.com/).

Salary for suitably qualified applicants is competitive and commensurate with experience. Virginia Tech is an Equal Opportunity/Affirmative Action Institution.

Applications must be submitted online to https://jobs.vt.edu for posting #090529. Applicant screening will begin January 15, 2010 and continue until the position is filled. Inquiries should be directed to Dennis Kafura, Hiring Committee Chair, kafura@cs.vt.edu.

Wentworth Institute of Technology

Computer Science Department

Assistant Professor

Full-time faculty position starting in 2010. Preference will be given to candidates with significant expertise in at least one of the following areas: (1) Games programming; (2) Networking; (3) Bioinformatics. In addition, candidates should be able to teach standard undergraduate courses in areas including Network Technology, Operating Systems, Object-Oriented Programming (C++ and Java), C, Database Management, Algorithm Design, Software Design, etc.

Although the primary mission of the faculty is to teach undergraduate courses, they are also expected to engage in research and render service to the institute (such as undergraduate advising and serving on committees).

Requirements: A PhD in Computer Science (or closely related field) or a master's degree plus significant teaching and industrial experience is required. A PhD in Computer Science is preferred. Significant college-level teaching experience is also preferred.

To apply, please visit our online application site at:

http://jobs.wit.edu/applicants/Central?quickFind=50940

Wentworth is an AA/EEO employer. Women and minorities are encouraged to apply. Wentworth is a tobacco-free campus.

Wright State University

Department of Computer Science

Post-Doctoral Researcher Position

The Advanced Visual Data Analysis laboratory of the Department of Computer Science and Engineering at Wright State University seeks applicants for a Post-Doctoral Researcher position. The Advanced Visual Data Analysis laboratory is involved in several projects in scientific visualization and biomedical image analysis. The Post-Doctoral Researcher will specifically be involved in the research team for advancing tools to analyze CT-scanned human hearts by extracting various geometric properties to improve the detection of diffuse coronary artery disease. The Advanced Visual Data Analysis laboratory provides a friendly work environment with the opportunity to work directly with students of Computer Science. The successful applicant is required to have an earned Ph.D. degree in Computer Science or a related field and is expected to be proficient in C++, image processing, computer graphics, and visualization and familiar with a Linux environment.

Applicants should provide a brief statement of their research interests and goals. The application should include a complete vitae with the names, addresses, telephone numbers, and e-mail addresses of at least two references, plus any additional supporting information. For more information and to apply go to:

https://jobs.wright.edu/applicants/Central?quickFind=51223

Consideration of candidates starts November 23, 2009. For details and information, you may call (937)775-5057 or contact Thomas Wischgoll, thomas.wischgoll@wright.edu

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Computing Research News

Vol. 22/No. 1

Computing Research News
(ISSN 1069-384X) is published five times per year, in January, March, May, September, and November.

Subscriptions: Call 202-234-2111, send e-mail to crn@cra.org, or mail subscription inquiries to CRA, 1100 17th Street, NW, Suite 507, Washington, DC 20036-4632. A free subscription is available to qualified subscribers. One-year paid subscriptions are $30 in the United States, $45 (U.S.) in Canada, and $54 (U.S.) elsewhere.

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CRA CONFERENCE AT SNOWBIRD ♦ JULY 18 – 20, 2010 ♦ SNOWBIRD, UTAH
PRELIMINARY PROGRAM

About the Snowbird Conference: The biennial CRA Conference at Snowbird is the flagship invitation-only conference for the leadership of the North American computing research community.

Invitees: Computer science, computer engineering, and information technology department chairs; assistant, associate, and prospective chairs; directors of graduate or undergraduate education; directors of industry or government research labs/centers; and professional society or government leaders in computing.

The conference site: The Snowbird Resort is located in the Wasatch Mountains about 30 miles from Salt Lake City. A top-rated ski resort in the winter, off-season at Snowbird offers hiking amidst beautiful scenery.

This year at Snowbird: Yoky Matsuoka, Torode Family Endowed Career Development Professor at the University of Washington, will be the after-dinner speaker on the opening night of the conference. Her topic will be: "Move Better with a Robot." One of the plenary speakers will be Dr. Regina E. Dugan who was sworn in as the 19th Director of DARPA on July 20, 2009. She will outline her vision for the Agency; the need for adaptability and discontinuity; the willingness to challenge one's world view; and a conceptual framework for creating strategic surprise and disruptive changes. There will be numerous parallel workshop sessions, a workshop for new department chairs, a "State of the CRA" address, and presentation of the CRA Distinguished Service and A. Nico Habermann Awards. Below is a preliminary program that will continue to be updated on the CRA website (http://www.cra.org) as additional information becomes available. Online registration will open in April.

Plenary Sessions

1. **Why Can't Teaching Be More Like Research?**
   Chair: Lynn Andrea Stein (Olin College of Engineering)
   Speaker: Sally Fincher (University of Kent)

2. **Peer Review in Computing Research**
   Chair: H.V. Jagadish (University of Michigan)
   Panel Moderator: Moshe Y. Vardi (Rice University)
   Speakers: Rich Baranuik (Rice University); Lance Fortnow (Northwestern University); Jeffrey Mogul (HP Labs); Jeannette Wing (NSF)

3. **Making a Federal Case for Computing**
   Chair: Fred Schneider (Cornell University)
   Speaker: Peter Harsha (CRA)

4. **Foresight and Flexibility**
   Chair: Peter Lee (DARPA)
   Speaker: Regina Dugan (Director, DARPA)

Workshops

- **The CS/10K Project**
  The CS/10K Project aims to transform high school computing with a rigorous and well-taught curriculum centered on a completely new Advanced Placement (AP) course. The new course will not replace AP CS A, but will provide a more accessible option for students. It will be rigorous, but also engaging and inspiring. It will not be programming-centric, but instead will focus on the fundamental concepts of computing, while exposing students to its breadth of application and "magic." This panel covers the motivation, design methodology, and current thinking for the new course in the larger context of high school computing curriculum.
  Chair: Jan Cuny (NSF)
  Panel: TBA

- **CRA-E Report on Basic Computing Knowledge**
  CRA-E was created by CRA to explore the issues of undergraduate education in computing and computational thinking for those who will do research in disciplines from the sciences to the humanities. The committee generated six recommendations in two main themes: mechanisms for refactoring the computer science curricula that provide a flexible and adaptable range of options, and issues of mind skills and mastery that pervade the entire curriculum, from introductory "attractor" courses through the advanced courses taken by seniors heading to graduate school. In this session, we will discuss these recommendations.
  Chair: Mary Fernandez (AT&T Labs Research)
  Speaker: Andries van Dam (Brown University)

- **Enriching Undergraduate Learning Through Apprenticeships**
  Learning a discipline and preparing for a profession benefit greatly from exposure to a variety of teachers, each helping to develop a student's education through his or her own experience. This workshop explores three modes of apprenticeship: co-operative education, research internships, and mentorships. Co-operative programs supplement academic teachers with managers and senior co-workers from industry and government. Research internships provide opportunities to work with senior researchers from academic or industrial laboratories. Mentorships engage experienced professionals to motivate and guide students towards their objectives. Each speaker will outline a form of apprenticeship and describe how to incorporate it, or improve it, within your undergraduate program.
  Chair: Frank Tompa (University of Waterloo)
  Panel: Arnie Dyck (University of Waterloo),
  Ran Libeskind-Hadas (Harvey Mudd College),
  David Porush (MentorNet)

- **CCC Workshop on Discovery and Innovation in Health IT**
  Chair: Susan Graham (University of California, Berkeley)
  Panel: TBA

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PRELIMINARY PROGRAM

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- **Education in the Magic Circle: The Promise of Games**
  A strong motivator for students entering computer science programs is a desire to create computer games. This session will present success stories from several computer science departments that have dramatically and persistently increased their enrollments by offering strong, game-oriented degree programs. Games also can be inspirational for K-12 education: we present an update on efforts to use computer games as a means of educating students in traditional K-12 subjects.
  Co-Chairs: Michael Mateas (University of California, Santa Cruz) and John Nordlinger (Microsoft)

- **Computer Science and Global Development: A New High-Impact Research Area**
  There has been a recent explosion in the use of information and communication technologies (particularly mobile phones) in many developing countries. These technologies have the potential to aid in many global development efforts, including those focusing on public health, sustainable livelihood development, the environment and education. Computer Science researchers have been assisting in these efforts by developing novel approaches for long-distance wireless networking, human-computer interaction for different literacy levels and cultures and low-cost computing devices, among other areas. Technical research must be inherently multi-disciplinary, as it seeks to use the tools and techniques of Computer Science to address problems faced by these domains. This session will summarize and discuss some of these efforts, and provide a brief overview of this new but growing field. We will also discuss our proposal for SIGDEV, a new ACM special interest group focusing on this topic.
  Speakers: Tapan Parikh (University of California, Berkeley), and Lakshmi Subramanian (New York University)

- **Communicating Computer Science**
  Computing has become extremely complex, especially with the rapid leaps made in the Internet, hardware, entertainment and information science. The trend over the past ten to fifteen years has been to present computing via applications that are visual and application-oriented. Computer scientists have been tasked with the challenge of making computing palatable to the general public, and this they have done royally with robotics, gaming, applications in medicine, sensors, early education, to name a few. However, such exposure is at the expense of what is happening underneath. Thus the terminology of our core disciplines—graphics, languages, OS, AI, SE, networks—is much less known. It is time to assess and reverse this trend. We will be looking at novel ways to communicate our science to the public, to statesmen, and to university management. Speakers in this session have experience in a wide variety of public communication.
  Chair: Judith Bishop (Microsoft)
  Panel: TBA

- **The Computing Innovation Fellows (CIFellows) Program**
  The past year's economic downturn caused universities and companies to severely curtail their hiring of new PhDs in computing fields. In February 2009, when it became clear that many new PhDs were in danger of falling out of research and education careers, a project was undertaken, with support from NSF, to create opportunities for at least some new PhDs to start careers at top research and education organizations, thereby saving the large investments that have been made in their training and education. In this session, we will review the origins, structure, and process of the CIFellows Project. We will discuss some preliminary lessons learned, plans for continued assessment, and possibilities for the future. Ultimately, the future of CIFellows will be determined by engaging the community, starting with this session at Snowbird.
  Speaker: Peter Lee (DARPA)

- **Understanding and Using Graduate Program Rankings in Computer Science**
  Computer Science rankings, whether by the National Research Council, The US News and World Reports, or by any of several other groups generate considerable discussion among faculty, students, and academic administration alike. In this panel, we overview several different ranking efforts of graduate programs and research activity in computer science departments and the methodologies by which these rankings are established. We also discuss various perspectives on how rankings might be used by various individuals, and will have an open discussion on what advice/perspectives that we, as a community, might want to provide to these individuals.
  Chair: Jim Kurose (University of Massachusetts)
  Panel: Charlotte Kuh (National Research Council)
  Other panelists (TBA)

- **CRA Guidelines for Coordinating Faculty Recruitment**
  In 2008, the CRA Board considered the issue of faculty hiring practices, especially the timing of the process and associated gridlock as faculty candidates wait to hear from universities and vice versa. Several problems were identified with the current procedures and guidelines were suggested for improvement. The effectiveness of the improvements depends on how broadly they are implemented, and thus we need, as a community, to decide if we have a strong will to implement new procedures. This session will review the CRA's proposal, encourage open discussion on the proposal, and discuss potential implementation.
  Chair: Jeffrey Vitter (Texas A&M University)

For program details and registration information, please see the CRA website: http://www.cra.org; e-mail: snowbird@cra.org.

Additional Opportunities at Snowbird:

CRA Board of Directors Meeting – July 17-18

Workshop for New Department Chairs – July 18 – **Chair:** Mark Gennert (WPU), Barbara Ryder (Virginia Tech), and Darrell Whitley (Colorado State)

CRA-Deans' Meeting – July 20-21– Debra Richardson (UC Irvine)

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