COMPUTING RESEARCH NEWS

COMPUTING RESEARCH ASSOCIATION, CELEBRATING 40 YEARS OF SERVICE TO THE COMPUTING RESEARCH COMMUNITY

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INSIDE CRN

WELCOME
TO THE NEW COMPUTING RESEARCH NEWS!

With this edition Computing Research News moves to all-electronic publication. Since Fall 1988, we've published CRN – the voice of the Computing Research Association – in hard copy and shipped it off to researchers all over North America. As times change, so do the needs of our community. This edition represents a new digital format for the newsletter, delivered via email subscription – a format change we think will provide increased benefit to our community.

Why are we making this change? Most importantly, we're doing it so we can provide more timely information to you. We all know the fast pace of computing research, but there's also the fast pace of government policies that impact the research community (I know that fast paced government policies might seem an oxymoron). With a print publication, articles are at least a month old before they reach your desk. In a month, the Federal budget situation can go from extremely disheartening to extremely positive (and hopefully not in the other direction). Our new format will help us do a better job of keeping you up to date.

We'll also be able to provide more information of direct interest to you because the format is more flexible. (As an example, check out one of the latest Computing Research Highlights.

But we won't be changing what's important – we will continue to focus on the research community and the issues that matter to you. We'll highlight policy that impacts our community and focus on the things researchers are doing in our field that will likely be of interest to you.

This change is part of our larger effort to create a stronger communications strategy for CRA and its many activities. We also want you to know what we are doing on your behalf to keep your support and increase your interest. And perhaps you'll become interested in getting involved as we work to ensure a strong computing research ecosystem.

One further note – this current issue is only the first step on a path and not the destination. As we move forward with our communications activities there will be many additions and improvements.

Because we value your time and your privacy, please note that there is an opt out button if you do not wish to receive CRN, although we obviously hope you won't touch it. And we commit to using your email address only for sending CRN. And, feel free to forward CRN to others so that they can sign up!

We hope you enjoy the new format and welcome your comments and suggestions!

WITH ELECTIONS PENDING, BIG QUESTION ON SCIENCE BUDGETS REMAIN

Peter Harsha
CRA's Director of Government Affairs

With both parties having wrapped up their presidential nominating conventions, Congress returns to Washington with much of the Federal budget process unfinished. The congressional leadership has already conceded that they will not finish FY 2013 appropriations before the end of this session, leaving the 12 unfinished annual appropriations bills for the next Congress to resolve. Congress also remains unresolved about what to do with pending across-the-board cuts to federal agencies and programs that are scheduled for January, 2, 2013. Those cuts, called for in the Budget Control Act of 2011 and triggered because Congress failed to agree on a plan to cut the Federal budget deficit, will happen unless Congress agrees to do something to stop them.

But Congress and the President have a more important deadline on their collective mind: Tuesday, November 6th, when they will face voters for reelection. As a result, nearly all progress has stopped on tough questions like appropriations and budget cuts as Members of Congress are not interested in making tough decisions before election day.

So Federal science agencies sit in a sort of limbo as they wait to find out what their FY 2013 budgets will look like. In early August, House and Senate leaders announced they had reached an agreement to push the deadline for completion of FY 2013 appropriations until March 2013, six months after the October 1, 2012, start to the fiscal year. Unwilling and unable to finish appropriations before the September 30th deadline, the question before the leadership was whether to pass a so-called "continuing resolution" (CR) — a bill that continues funding Federal agencies in the new fiscal year at the same level they received in the previous one — that lasts until the end of November, giving the lame duck Congress an opportunity to finish them, or to extend the continuing resolution through January, giving the newly-elected Congress an opportunity to put its stamp on appropriations. The Republican leadership, sensing that GOP chances to pick up seats in both the House and the Senate (and perhaps take the White House) were quite good, leaving them in a better position than they'd have in the lame duck, pressed for the longer-term CR. The Democrats, perhaps having the same sense, wanted a short-term CR instead and wanted spending levels in FY 2013 above what House Republicans were likely to agree to. In the end, the leaders compromised, agreeing to a CR that will last until March 2013, but contain slightly higher spending levels.

Still unaddressed and of more immediate interest to Federal science agencies is the looming threat of budget sequestration. Sequestration was the "stick" written into the Budget Control Act of 2011 to compel Congress to reach an agreement to cut $1.2 trillion from the Federal deficit over the next ten years -- whether by reforming entitlement programs, cutting discretionary spending, raising taxes or some combination of the three. Failure to reach agreement would trigger the rather more sledgehammer-like approach of automatically cutting federal spending across the board by enough to reduce the deficit by $1.2 trillion over the next ten years. Because Congress failed to reach agreement, sequestration is now the law of the land and will occur on January 2, 2013, unless Congress acts to stop it. For Federal science agencies, sequestration could

NOTE TO DEPARTMENT CHAIRS

TAULBEE SURVEY 2011-12

Coming Soon!

If you have a new chair, please advise
membership@cra.org
to ensure the survey is properly addressed.

GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING

THEME: "ARE WE THERE YET?"

October 3-6, 2012
Baltimore, Maryland
Baltimore Convention Center
http://gracehopper.org/2012/

2010 HABERMANN AWARDEE ANNE CONDON ELECTED FELLOW OF THE ROYAL SOCIETY OF CANADA

The Royal Society of Canada, founded in 1882, celebrates the nation's leading scholars in the Arts, Humanities and Sciences through election as Fellows

This week, the Class of 2012 was announced - 69 new Fellows: 15 in the Arts and Humanities, 15 in the Social Sciences, and 39 in the Sciences.

Anne's citation reads:
Anne Condon, a researcher in computational complexity theory and algorithms, has advanced understanding of the computing time and memory needed to solve classical computational problems. She has also developed creative means for programming at the nanometer scale with DNA molecules. Her algorithms for predicting and designing nucleic acid secondary structures have had significant practical impact.

Congratulations Anne Condon, FRSC!

have a significant impact on FY 13 spending. Under the law, all non-defense discretionary spending accounts (which includes much of Federal science funding) would be cut by nearly 8 percent in FY 13. All defense-related accounts (which include the remainder of Federal science funding) would see cuts of nearly 10 percent. The law gives agencies very little discretion about how those cuts are made, and the White House Office of Management and Budget, which will have the ultimate authority to make the cuts, has indicated they intend to make the cuts as equitable as they can as they believe that is what the law proscribes.

No one in Congress, it is believed, really wants the cuts to happen. The across-the-board nature of the cuts means that lots of favored programs of Members will see what they believe are unmerited cuts. Others believe that the cuts represent an abrogation of their duty to set government spending levels. But it is unlikely that Congress will take the difficult step of acting before the election to defuse the trigger (for the same reason they don't want to make difficult decisions about appropriations before the election). This leaves the lame duck session as the last chance for Congress to act. To complicate matters, the Bush-era tax cuts are also due for renewal by the end of 2012. Republicans see renewing these tax cuts as a priority, so the Democrats are using their potential expiration to push Republicans to compromise on both cuts to non-defense discretionary spending in the sequester and for support in increasing the tax burden on some of the richest taxpayers. Tying these issues together has created what some are calling a "fiscal cliff" that the federal government is rushing headlong toward, and will reach by January 2nd.

In the meantime, Federal science agencies will remain in their holding patterns -- finishing up spending out their FY 2012 budgets, then cautiously starting to spend FY 2013 funds after October 1st, being careful not to spend beyond those FY 12 levels, and in many cases being unable to start new programs or hire new staff.

After November 6th, the picture will become somewhat clearer, though likely still unsettled for months to come. For all the latest details on the state of the budget process, the appropriations levels, and the fate of the sequester, check the Computing Research Policy Blog. ■

THE COMPUTING COMMUNITY CONSORTIUM:
RESEARCH VISIONING – AND HOW YOU CAN GET INVOLVED

Erwin P. Gianchandani
Director, Computing Community Consortium

Kenneth D. Hines
Program Associate,
Computing Community Consortium

Established six years ago through a Cooperative Agreement between CRA and the National Science Foundation (NSF), **the Computing Community Consortium (CCC) has sought to serve as a catalyst and enabler for the computing research community, providing mechanisms to encourage the community to identify compelling research visions for the future of the field, all the while attracting bright young talent and fostering development of the next generation of leaders.** During this time, the CCC itself has evolved – from a startup-like organization into a much more stable, long-term enterprise that empowers the field broadly. **This past spring, the CCC received a positive review from an independent peer review panel commissioned by NSF, and it is anticipated that a new Cooperative Agreement with support for another four years will be signed early this fall.** So as we embark upon a new period, we would like to revisit our core activity – community-wide visioning exercises that bring together members of our community to coalesce around research visions – and describe ways in which you can get involved.

VISIONING

We have employed several mechanisms for encouraging the generation of bold new research challenges and opportunities for the field, particularly in the context of national priorities like healthcare, energy, transportation, education, and national defense:
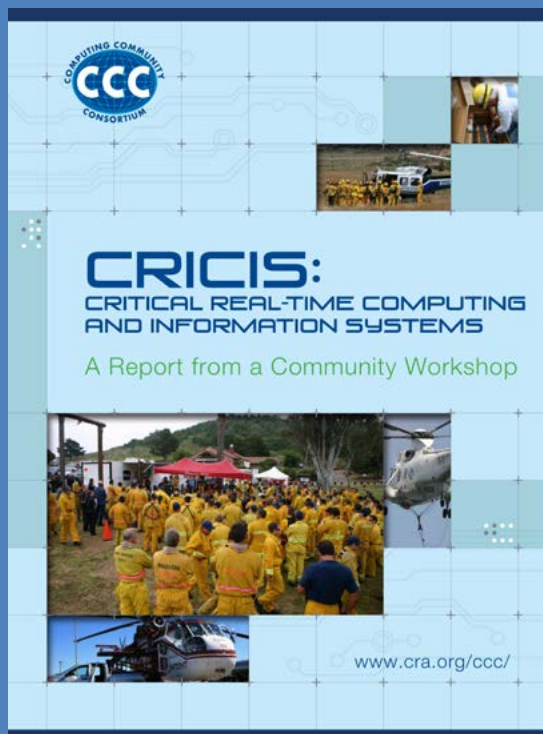
- The CCC supports **workshop programs** that seek to define compelling visions for exciting frontiers of computer science (and related fields). The workshop programs result in research roadmaps that are shared with Federal funding agencies. *Since 2007, the CCC has supported over a dozen such community-inspired visioning activities, and over half of these have resulted in new solicitations issued by Federal agencies.* For example, the CCC funded a visioning activity in the area of robotics research, including a series of workshops in late 2008 and 2009, followed by extensive discussions between the research community and government officials. This effort resulted in a definitive report titled A Roadmap for U.S. Robotics: From Internet to Robotics, developed by more than 100 robotics experts from academia and industry, that served as the basis for a new, multi-agency, $70 million investment in robotics called the National Robotics Initiative (NRI) announced in June 2011. There are three ways in which these efforts come into existence: (1) Members of the research community propose; the CCC works with them to formulate and carry out a plan. (2) An agency comes to the CCC with a suggestion or request; the CCC assembles members of the research community. (3) The CCC perceives an opportunity, and encourages the community to pursue it. See a complete list of our latest visioning activities here.

- The CCC funds Challenges and Visions Tracks at computing research conferences, encouraging outrageous, "out-of-the-box" thinking that could lead to transformative research frontiers. Nearly a dozen such tracks have been funded to date – with authors of Best Papers within each track receiving travel awards. Most recently, the CCC has partnered with several conferences to sponsor a set of computational sustainability challenges and visions tracks. The goal is to promote work at the intersection of computing and sustainability, on principle and applications that address environmental, economic, and societal needs in support of a sustainable future. These special CCC-sponsored conference tracks on computational sustainability are an outgrowth of a visioning workshop the CCC held in February 2011 in this space.

- And the CCC solicits white papers that articulate key research challenges and make specific recommendations for Federal investment. For example, a series of white papers produced for the Presidential Transition Team in fall 2008 was instrumental in shaping the initial activities of the current Administration. As an example, an author of a white paper on "Re-envisioning DARPA" was tapped to lead a new office within that Department of Defense (DoD) agency. A series of 8 white papers describing the promise of data mining, machine learning, predictive modeling, and related data analytics approaches – produced at the request of the White House Office of Science and Technology Policy (OSTP) – helped catalyze a $200 million Federal Big Data Research and Development Initiative, announced in March of this year. Most recently, the CCC shepherded a white paper on 21st century computer architecture that served to define a compelling agenda for that community. See the complete list of CCC-led white papers produced over the last several years.

COMPUTING FOR DISASTER MANAGEMENT

This spring, the CCC funded Robin Murphy (Texas A&M University) and Trevor Darrell (UC Berkeley) to co-organize a workshop on computing for disaster management. Together with a Steering Committee, they convened a group of 45 indivdiuals spanning computer science broadly – communications, social media, social science, sensors, visualization, human-computer interaction, artificial intelligence, robotics, high-performance computing, structural engineering, data mining, information retrieval, machine learning, geospatial databases, computing for economics, and game theory. **The primary goal was to formalize what we individually were seeing that made computing research for disasters unique. We each saw that disasters were more than an application area, yet required significant understanding of the larger socio-technical system in order to conduct research with broad impacts.** The resultant report, issued this summer, captures one vision of what it would take: a robust, multi-disciplinary community in which researchers partner with practitioners to tackle fundamental new research in socio-technical systems that enable decision making for extreme scales under extreme conditions. The report describes what is meant by "critical real-time computing and information systems" (CRICIS), why it is different from existing research areas and paradigms, what its benefits to society and to science are, and what a broad investment portfolio and living roadmap facilitating the engagement of researchers from all disciplines might entail.

Like CRICIS, we have several visioning activities planned this fall, the majority of which have been inspired by proposals submitted by members of the computing research community. Check out the CCC Blog for updates.

HOW YOU CAN GET INVOLVED

To achieve its goals, the CCC relies heavily upon the participation of the broader computing research community. Besides formulating a visioning proposal or white paper, or organizing a challenges and visions track at an upcoming research conference, here are **three quick and easy things you can do toda**y to become involved in CCC:

- Submit a "highlight" describing your most recent exciting research result. Over the last several years, the CCC has showcased a "Computing Research Highlight of the Week" every Thursday, showcasing a cool new research finding in the previous week. This fall, the CCC will expand this effort with a new feature called **"Transforming the Future: Computing Research Breakthroughs."** Every month, the CCC will select one submission to be featured in a short (two- to four-minute) "spot" video segment. On-site production and editing costs will be covered, and the lead researcher for the selected project will receive a $1,500 travel award to be used for an upcoming conference or workshop. Videos will be disseminated widely through CCC's websites and network. If you have a research result that you would like considered for this feature – or for our Highlight of the Week – submit it here. Press releases by your lab, department, or university press office are welcome!

- **Help us get the word out about the remarkable achievements of the field over the last several decades, as well as the potential for the future.** This past spring, the CCC organized a daylong symposium in Washington, DC, marking 20 years of the Federal government's Networking and Information Technology Research and Development (NITRD) program, providing a framework and mechanisms for coordination among 15 Federal agencies that support networking and information technology R&D. Attended by over 150 Federal officials, Congressional staffers, academic researchers, and industry leaders packed a room overlooking the United States Capitol, the symposium featured an excellent collection of short technical presentations reviewing the progress and promise of the field. Shortly after the symposium, the CCC launched a new website with complete materials from this extraordinary day – including videos, photos, slides, and written summaries from the 19 15-minute presentations by leaders of the field, plus the luncheon keynote by former Vice President Al Gore, a longtime champion of information technology R&D, and special remarks by former Congressman Tom Davis (R-Va.), also a champion of our nation's investments in fundamental R&D. Please check it out – and help us disseminate this resource by circulating it throughout your labs, classrooms, departments, and beyond.

- **Put together a short video describing exciting computing research that encourages undergraduates to pursue computer science.** Many undergraduates lack a clear understanding of computing research; often they believe it involves writing really large, complicated, even cumbersome programs. As part of a broader effort to encourage students to pursue computer science, the CCC is assimilating a collection of short videos that provide undergraduates with concrete, compelling examples of current research in computer science – described in ways that inspire and engage them. A video can be as short as one minute or as long as five minutes. The CCC will fund up to $1,000 to cover expenses (e.g., time for one or more graduate students to make a video). For the full solicitation, visit. And be sure to check out the videos that have already been funded. At least one, called Exploring Photobios, which aired by a local TV news station last summer.

To learn more, check out a new brochure and video that we have developed describing the CCC and our various activities. And please take a quick moment to subscribe to the CCC Blog, a constant source of news and information for and about the computing research community.
We hope to see you involved soon! ∎

NORTH AMERICAN COMPUTING LEADERSHIP CONVENES IN SNOWBIRD

CRA celebrated the 40th anniversary of its founding in July with the 20th instance of its biennial Chairs Conference at Snowbird. The two-day conference, held at the Snowbird Ski and Summer Resort in Little Cottonwood Canyon, Utah, is an opportunity for the leadership of the North American computing research community to gather and discuss issues of importance to the community.

High on the list of topics discussed at this year's conference was the emergence of "MOOC's" - Massively Open Online Courses - epitomized by the online courses offered by Stanford, MIT, and others that attract enrollments over 100,000 and the move to capitalize on such courses with the establishment of partnerships like Coursera and efforts like Udacity. Stanford University President John Hennessey catalyzed much of the discussion on the issue with a controversial opening night keynote address in which he claimed that the rise of MOOCs would likely decrease the need for faculty at universities, and that the number of research universities in the U.S. had probably reached its peak. Research institutions, according to Hennessey, are just too expensive to survive in large numbers given the new economy MOOCs will likely drive.

The topic was also the subject of a Monday morning plenary, as Google's Peter Norvig, who taught a particularly massive MOOC on Artificial Intelligence with Sebastian Thrun, and Salman Khan, who founded the popular Khan Academy, both shared their experiences navigating in the space. Both emphasized the potential they saw in online education to allow techniques that could dramatically improve learning at scale - including the possibility of providing the sort of private tutoring that has been shown to improve student performance by "two-sigma" over standard lecture-based instruction.

Conference attendees also heard from Farnam Jahanian, head of the National Science Foundation's Computer and Information Science and Engineering directorate on why computer science is well-positioned to address national priorities; from John Kleinberg of Cornell, on the convergence of social and technological networks; on fascinating new research directions from Shwetak Patel of the University of Washington an electricity and water sensing technologies and Daphne Koller from Stanford, on data-driven medicine; from Jeffrey Dean at Google, on the evolution and future directions of large-scale systems at Google; from CRA's Peter Harsha on computing research and science policy; and a whole lot more. The conference agenda is posted online: www.cra.org/events/snowbird-2012/ and contains links to each presenter's slides.

In addition to all the talks, Monday afternoon was devoted to a number of activities designed to allow participants a chance to get to know each other and spend some time on the mountain (if they desired). CRA sponsored three guide-led hikes of various exertion levels up the mountain or to the Albion Basin for wildflower viewing. Despite a sudden rain shower, conference attendees were near universal in their praise for the activities, so expect them to be a fixture at future Snowbird conferences. And mark your calendars for the 21st biennial conference, which will take place in July 20-22 2014, in the same beautiful location. ■
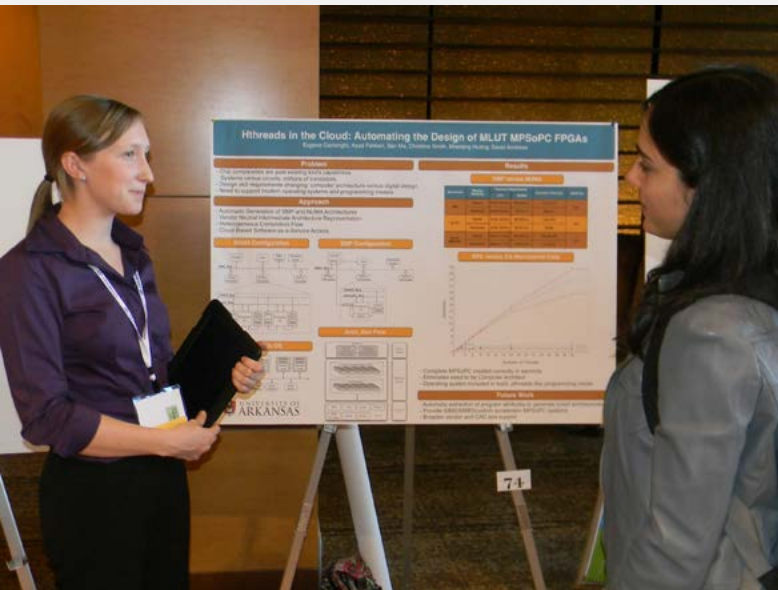
2012 CRA-W GRADUATE COHORT WORKSHOP

Erik Russell
CRA Director of Programs

On April 13-14, 2012 approximately 245 women computer science / computer engineering graduate students descended upon beautiful Bellevue, WA for the 2012 CRA-W Graduate Cohort Workshop. There they were joined by over 25 senior technical women representing academia, government, and industry. The Graduate Cohort Workshop, with significant support from Microsoft Research, along with support from Google, IBM, Yahoo!, and many University Departments, aims to increase the ranks of senior women in computing by building and mentoring communities of women through their graduate studies.
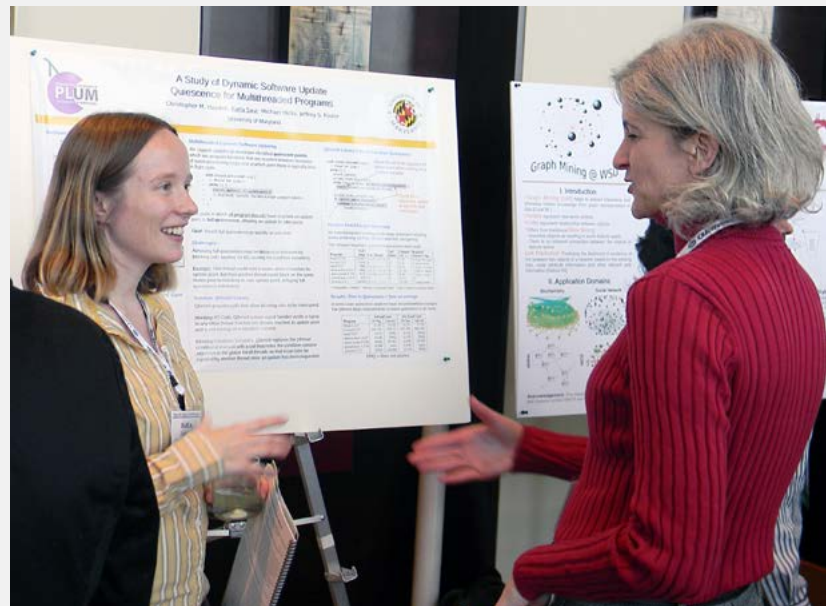
The format of the workshop consisted of a few plenary sessions and three cohort tracks specifically designed for attendees in their first, second, and third year of their graduate program. Each track offered a series of presentations specific to that cohort and led to excellent audience participation and fruitful discussions. The first year cohort included topics such as networking, finding and training your advisor, balancing graduate school and personal life. Second year sessions included finding a research topic, presentation skills, and interdisciplinary research. Third year participants were provided a wealth of information about publishing their research, PhD vs. Non-PhD Career Paths, and PhD job search.

Christina Smith presenting her poster at Grad Cohort 2012

In addition to the plenary and track sessions, students were encouraged to participate in a Poster Session on the afternoon of Friday, April 13th. Attendees for the poster session also included local university faculty and researchers from local industry labs including Microsoft Research, Google, Yahoo! Labs and IBM.

Microsoft Research and Google generously co-sponsored the Friday evening reception, which included quite the culinary buffet, and was followed by a DJ and lively dancing. All in all, the 2012 Grad Cohort Workshop was a great success. We would like to thank our sponsors for their steadfast support for this event. ■

Karla Saur presenting her research to Kathryn McKinley at Grad Cohort 2012

ACADEMIC CAREER WORKSHOPS FOR UNDERREPRESENTED GROUPS

Ann Q. Gates

Richard Ladner

Valerie Taylor

Bryant W. York

BRIEF HISTORY OF ACW

The first ACW was conducted in the fall of 2005 on a shoestring budget and the beneficence of Texas A&M University. There were 16 attendees (mostly assistant professors and late-term graduate students) and four senior computer science/computational mathematics faculty. The panels included navigating the tenure process, starting a research program, and managing work/life balance; in addition, a major component involved research proposal development. The latter component consisted of a presentation on proposal development by a former NSF program officer, as well as a mock review panel. We obtained permission from proposers to use their awarded and declined NSF proposals in a mock NSF proposal review panel. Our assumption was that the best way to learn to write good proposals was to learn to critically read actual proposals. Proposals were distributed to attendees before the workshop, and they were required to write their reviews prior to arrival. At least three reviewers (including a lead reviewer) were assigned to each proposal. During the mock panel, the attendees critically discussed the proposals, and the senior faculty provided feedback on the attendees' reviews. At the conclusion of each review, attendees were notified if the proposal had been awarded or declined and, where NSF reviews were available, they were shared with attendees. This process had at least three major benefits:

- Many attendees had never participated in an NSF panel. Thus, they were able to observe the process and participate in review in a somewhat risk-free environment.

- Some attendees had never written a research proposal. The workshop gave them the opportunity to examine both funded and not funded proposals, which allowed them to see how proposals can be organized and how investigators articulate the merits.

- Attendees were able to hone the skill of providing critical review through practice, reflection of comments from other attendees, and feedback from the senior faculty.

- Another benefit of the ACW workshop is the time provided for informal conversations and networking during breaks and shared meals. A strong community began to take root.

GROWTH OF ACW

Over the ensuing seven years the annual workshop has grown in both scale and scope. We now typically have in excess of 60 applications for approximately 35 openings. The number and range of panels have increased. For example, due to earlier successes, we now have a panel on "promotion from associate to full professor". Beginning in 2007, the annual workshop was funded by NSF; in 2010, it was broadened to include persons with disabilities; and in 2012 it was held jointly for the first time with the NSF-sponsored Workshop on Mentoring Minorities in Engineering. Since 2011, the ACW has been organized and administered by four organizations, the Center on Minorities and People with Disabilities in Information Technology , the Coalition to Diversify Computing, the Computing Alliance of Hispanic Serving Institutions , and the Alliance for Access to Computing Careers .

Table 1 shows the demographic composition of the ACW workshops since funded by NSF. No workshop was held in 2008 to allow for the movement of the workshop to the spring time frame.

Table 1: Demographic Decomposition of ACW Attendees, 2007 - 2012

	African American	Hispanic	Pacific Isl./Native Amer.	People w/Disabilities
Mar. 2012	17 (55%)	9 (29%)	3 (10%)	4 (13%)
Feb. 2011	18 (55%)	10 (30%)	1 (3%)	4 (12%)
Mar. 2010	15 (49%)	11 (36%)	2 (8%)	3 (10%)
Apr. 2009	19 (50%)	11 (29%)	7 (18%)	–
Dec. 2007	22 (68%)	5 (16%)	5 (16%)	–

STRUCTURE AND CONTENT OF THE 2012 ACW WORKSHOP

The current ACW workshop runs for two and a half days. It consists of a welcome reception and poster session the evening prior to the start of the workshop, seven panel sessions, two faculty development sessions for tenured faculty, and parallel mock review panel sessions (each session consists of at most 8 participants). The workshop organizers strive to have individuals from one or more underrepresented groups serve as panelists and lead sessions. Table 2 shows the structure of content for the 2012 ACW. As shown in the table, professional and research development are central to the workshop. The leader of the proposal development workshop has always been a former NSF program officer, and for the past several years it has been Dr. Timothy Pinkston, Professor and Vice Dean of Faculty Affairs, Ming Hsieh Department of Electrical Engineering, University of Southern California. In addition, the organizers have defined the sessions to address the different phases at which participants may be in their career path. For example, the two faculty development sessions are scheduled to run concurrently with the panels designed for the more senior attendees.

Table 2: Structure and Content of the March 2012 ACW

Day 1 Panels/Workshops	Day 2 Panels/Workshops	Day 3 Sessions
P1: Launching a Successful Research Program	P5: Getting Promoted from Associate to Full Professor W1: Affinity Research Group Model	Parallel Mock Review Panels (5 groups of size 7)
P2: Navigating Through Promotion and Tenure	P6: Getting Positioned for Opportunities in Administration W2: Writing Competitive Research Proposals	Parallel Mock Review Panels (5 groups of size 7)
P3: Engaging in Effective Career-Building Networking	P7: Alternative Career Choices	–
P4: Funding Agencies	–	–

EVALUATION

An extensive evaluation of the 2012 ACW was designed and carried out by Susan Geier of Purdue University. Her description of the evaluation follows:

The workshop evaluation consists of three surveys administered during the four-day workshop (pre-workshop, post sessions, and post workshop) and focus groups held at the end of the workshop. Using a combination of rating scales and open-ended items, workshop surveys were designed to gather participants' 1) demographics, 2) factors perceived by participants that are important to their professional development, 3) expectations of the workshop, 4) level of institutional support, 5) participants' perceptions (pre-workshop and post-workshop) of abilities and knowledge related to academic career success and making professional connections. The surveys also sought to capture the effectiveness of individual workshop sessions, community building efforts and the overall value of the workshop. Moreover the data collected will provide insights into participants' successes and challenges in their career progressions and inform future mechanisms (workshops, virtual communities, research collaborations etc.) to support the overall goals as stated above.

Susan's final evaluation report for the March 2012 workshop will be posted at the CMD-IT website; however, the preliminary report shows extremely positive results. Below are a few post-workshop survey comments from her report:

"Excellent workshop. Informative and encouraging. The focus on tenure-ship and research was both beneficial and enlightening."

"Being a PhD candidate at this conference not only exposed me to the world of the academy in its "uncut" view, but it also showed me how to manage my career decisions."

"I gained the confidence to reach out to network and collaborate for progress in an academic career."

"The information I learned helps in terms of writing proposals, research papers, and research statements because I understand how to articulate research thoughts more clearly to a general audience."

"I will be on a review panel later this spring & will make sure to prepare focused, succinct critiques of papers. I will also be confident in my critiques and I'll make sure to make my opinion known."

PERSONAL SUCCESS STORIES

It is difficult to really know what experiences and activities actually contribute to an individual's professional success. The dominant components are clearly the individual's talent, work ethic, personality, and dedication. In Table 3 we provide (with their permissions) a sample of 11 individuals who attended early ACW workshops, listing their positions in 2005 and now in 2012. The sample represents approximately 6% of the total number of participants in the ACW workshops to date. The date given in parenthesis identifies the year of the individual's participation in ACW. These individuals have all become strong contributing members of the academic computing community.

As organizers of the ACW we take pride in the fact that we were able to contribute to their success in some way.

Table 3: Tracking of ACW Participants

Position in 2005	Current Position 2012
Raheem Beyah, Asst Prof, Georgia State (2007)	Associate Professor, Georgia Tech
John Cavazos, Postdoc, Edinburgh (2007)	Assistant Professor, Delaware
Wei Ding, PhD student, Houston (2009)	Assistant Professor, UMASS - Boston
Juan Gilbert, Asst Prof, Auburn (2005)	Ideas Professor Chair, HCC Division, Clemson
Charles Isbell, Asst Prof, Georgia Tech (2005)	Professor, Senior Assoc Dean, Georgia Tech
Russ Joseph, Asst Prof, Northwestern (2005)	Associate Professor, Northwestern
Jose Morales, PhD student, FIU (2007)	Researcher, SEI, CMU
William H. Robinson, Asst Prof, Vanderbilt (2007)	Associate Professor, Vanderbilt
Cheryl Seals, Asst Prof, Auburn (2005)	Associate Professor, Auburn
Hakim Weatherspoon, PhD student, University of California, Berkeley (2007)	Assistant Professor, Cornell
Damon Woodard, Postdoc, Notre Dame (2005)	Associate Professor, Clemson

CONCLUSION

We conclude with three important points:

Although similar skills development is prominent in other workshops, the authors believe that the ACW workshops fill a critical, under-served niche that provides attendees an environment in which they can relate both academically and culturally to workshop presenters, panelists, and other attendees.

Many of the ACW presenters and panelists are former participants with current faculty or administrative positions at majority institutions. Thus, during informal networking, they are able to comment on both academic and cultural experiences at their current and past institutions. Although the ACW does not directly focus on the recruitment and retention of minority graduate students, the informal networking does provide some opportunity for these kinds of conversations.

CRA and CRA-W faculty can be supportive by helping their colleagues understand the importance of community-building (both cultural and academic) to the recruitment and retention of graduate students and faculty who are underrepresented minorities or persons with disabilities. The resulting communities might be real or virtual, leveraging social media technology.

Official announcement of the dates and location for the spring 2013 ACW workshop will be posted at CMD-IT website by the end of September. ■

TAULBEE IN-DEPTH: PHD SPECIALTY AREAS

Betsy Bizot
CRA Director of Statistics and Evaluation

The CRA Taulbee Survey reports new PhDs and their employment by specialty area each year. This article is an in-depth look at these numbers for data gathered in 2008 – 2011 including a total of 7,178 PhDs. Results by specialty area are presented only for those with specialty areas that are not "other" or "unknown," which is a total of 5,666 PhDs (78.9%). Similarly, percentages by gender, ethnicity, and citizenship are only for those who were not reported as "unknown."

OVERALL SUMMARY

79.6% male, 20.3% female

3.6% resident underrepresented minority (Black/African-American, Native American, Native Hawaiian/Pacific Islander, or Hispanic of any race), 45.6% resident majority, 50.8% nonresident

79.3% had a known type of employment (20.7% were unknown or other). Of those with known employment, 23.5% went to academia (tenure-track, research, and teaching), 18.2% to postdocs, and 58.2% to industry/government.

SPECIALTY AREAS BY GENDER

The overall percent of women receiving PhDs in computing was 20.3%, but this representation is unevenly distributed across specialty areas. Table 1 shows numbers and percentages of specialty area by gender over the four years. Representation as measured by the percentage of graduates within a specialty who are women is one measure of women's participation; raw numbers of women completing PhDs in a specialty is another. Because there are higher numbers of students graduating with specialties in Artificial Intelligence and Software Engineering, these areas have relatively high total numbers of women even though the percent of women in these areas is about average.

Highest Representation of Women (% within area): Information Science (38%), Human-Computer Interaction (36%), and Databases/Information Retrieval (26%).

Highest Numbers of Women: Artificial Intelligence, Databases/Information Retrieval, and Software Engineering

Lowest Representation of Women (% within area): Programming Languages/Compilers, Operating Systems, and Graphics/Visualization (all 14%).

Table 1: Specialty Area of Computing PhDs by Gender, 2008-2011.

Speciality Area	Male	% of specialty Male	Female	% of specialty Female	Total	% of PhDs in Specialty
Artificial Intelligence	579	81.0%	136	19.0%	715	12.9%
Computer-Supported Cooperative Work	29	74.4%	10	25.6%	39	0.7%
Databases/Information Retrieval	335	74.0%	118	26.0%	453	8.2%
Graphics/Visualization	339	85.8%	56	14.2%	395	7.1%
Hardware/Architecture	239	82.1%	52	17.9%	291	5.3%
Human-Computer Interaction	158	64.5%	87	35.5%	245	4.4%
High-Performance Computing	109	77.3%	32	22.7%	141	2.5%
Informatics: Biomedica/Other Science	197	76.1%	62	23.9%	259	4.7%
Information Assurance/Security	243	84.7%	44	15.3%	287	5.2%
Information Science	56	62.2%	34	37.8%	90	1.6%
Information Systems	105	75.5%	34	24.5%	139	2.5%
Networks	489	82.2%	106	17.8%	595	10.7%
Operating Sysyems	191	86.0%	31	14.0%	222	4.0%
Programming Languages/Compilers	200	85.5%	34	14.5%	234	4.2%
Robotics/Vision	211	84.7%	38	15.3%	249	4.5%
Scientific/Numerical Computing	85	76.6%	26	23.4%	111	2.0%
Social Computing/Social Informatics	57	68.7%	26	31.3%	83	1.5%
Software Engineering	422	78.3%	117	21.7%	539	9.7%
Theory and Algorithms	367	81.9%	81	18.1%	448	8.1%
Total	4,411	79.7%	1,124	20.3%	5,535	

SPECIALTY AREAS BY ETHNICITY

Even aggregated across four years, numbers of underrepresented minorities are low; 15 of the 19 specialty areas graduated 12 or fewer URM students in the four years. Percentages are not reliable when the numbers are that low, and therefore representation by percentage of underrepresented minorities is not discussed. The four specialty areas graduating more than 12 URM students were Artificial Intelligence (27), Software Engineering (20), Human-Computer Interaction (16), and Databases/Information Retrieval (14). Specialty areas graduating fewer than 5 URM students in four years are Information Systems (4), High-Performance Computing (3), Scientific/Numerical Computing (3), and Computer-Supported Cooperative Work (3, but note that CSCW has a particularly small number of total graduates).
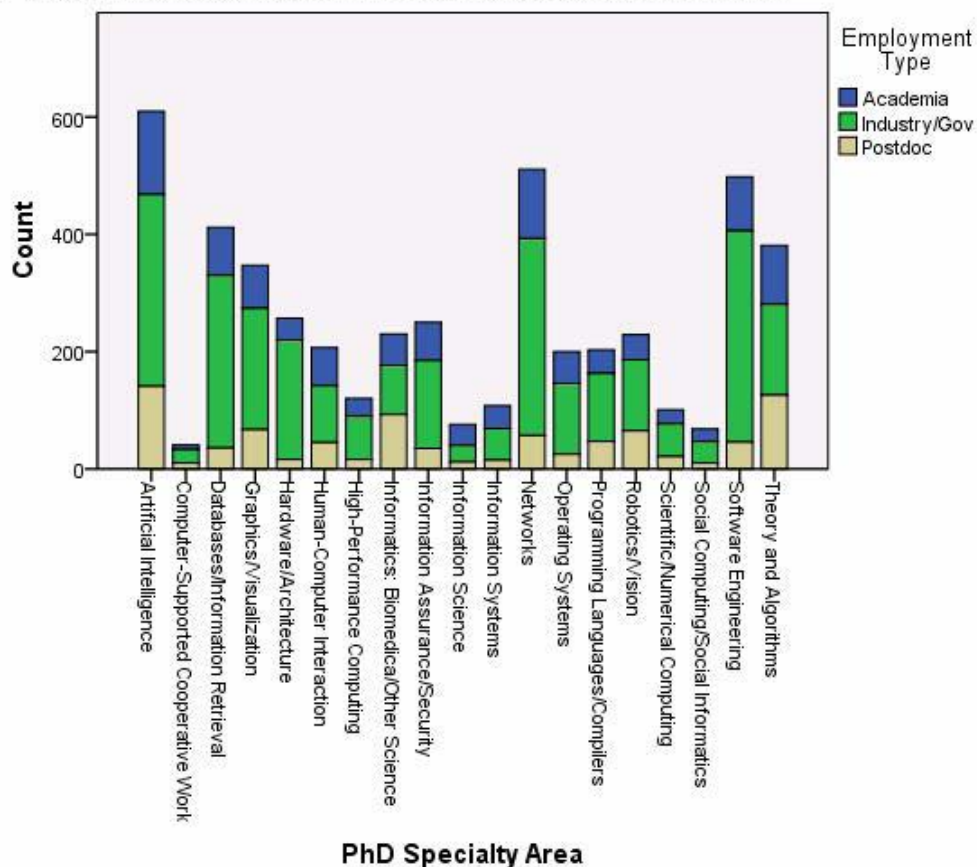
SPECIALTY AREA BY CITIZENSHIP

60% or more of degrees in the following specialty areas went to nonresident students: Databases/Information Retrieval (60%), Hardware/Architecture (60%), and Networks (69%). The smallest percentages of degrees to nonresident students were in the areas of Social Computing/Social Informatics (29%), Information Science (31%), and Human-Computer Interaction (31%).

SPECIALTY AREAS BY EMPLOYMENT TYPE

Figure 1 shows the employment type by specialty area over the four years. The greatest number of hires in industry are from Software Engineering (360), Networks (336), Artificial Intelligence (327), and Databases/Information Retrieval (294). The greatest numbers of postdocs are from Artificial Intelligence (141), Theory and Algorithms (126), and Informatics (93). The ratio of postdocs to industry hires is 31% overall; areas in which it is disproportionately high (higher proportion of postdocs) are Informatics (111%), Theory and Algorithms (81%), and Robotics/Vision (54%). Areas in which it is disproportionately low (lower proportion of postdocs) are Hardware/Architecture (8%), Databases/Information Retrieval (12%), and Software Engineering (13%). ■

Figure 1. Employment of PhD Specialties from 2008-2011.

NOMINEES SOUGHT FOR CRA BOARD

The Computing Research Association seeks your help in suggesting nominations for its Board of Directors. We seek individuals who have time, energy, initiative, and resources to work on CRA issues on behalf of the entire CRA community. Ours is a working board, and all members are expected to do a fair share of the work.

The 32 member Board provides the membership for various standing committees, including the Communications, Government Affairs, Snowbird Conference, Taulbee Survey, Finance, and Elections committees. In addition, issues affecting computing research arise unexpectedly and Board members must take the initiative and lead CRA's responses. Many CRA committees and initiatives involve year-round attention, regular conference calls, communications with lab directors and department chairs, proposal writing, and sometimes travel at the expense of the individual Board members.

The Board as a whole meets twice a year, with travel and hotel costs paid bythe individual members.

Board members serve staggered three-year terms. At the discretion of the Elections committee and based upon a member's proactive service record during the expiring term, members wishing to stand for re-election may be included on the draft ballot. There is a three term limit. Candidates need not be affiliated with CRA member organizations. Anyone can nominate a candidate but candidates must agree to be nominated.

RECENT BOARD ACTIVITIES INCLUDE:

- Working with the computing research community to envision the future computing research.
- Increasing the participation of women and minorities in computing research.
- Thinking strategically about computing education and its impact on the research enterprise.
- Testifying before Congress and meeting with policymakers to explain the role of computing and computing research
- Developing workshops on critical policy issues
- Planning the biennial CRA Conference at Snowbird
- Conducting the annual CRA Taulbee Survey
- Monitoring the CRA's budget and expenses

IMPORTANT DATES AND EVENTS:

- The deadline for receipt of nominations is December 7, 2012. The Elections Committee will carefully consider all nominations, with the aim of a final ballot containing about twice as many candidates as there are open slots. Important criteria considered by the committee will include distribution of candidates and current Board members among member institutions, distribution among types and sizes of institutions, evidence of leadership, and evidence of interest in and capacity for service beyond that expected of all faculty members and researchers.
- On January 18, 2013, the Elections Committee will announce the draft ballot. Additional names may be added by the CRA community as described below.
- On February 8, 2013, nominations by petition are due. Each such nomination must be signed by the heads of at least 10 Constituent Member Organizations that are current in dues payment. Current CRA members are listed at http://cra.org/about/members-list/
- On February 15, 2013, final ballots will be distributed to all CRA department chairs and lab directors. Each will have one vote for each open slot on the board.
- On March 1, 2013, completed ballots must be returned to CRA.
- On March 4, 2013, the election results are announced.

Additional information on CRA and its activities is available on the Web at http://www.cra.org/about/nominees/

Nomination forms and additional information are available at: http://cra.org/uploads/documents/resources/nomination_form_2012.pdf

Questions can be sent to elections@cra.org

CRA AWARD FOR OUTSTANDING
UNDERGRADUATE RESEARCHERS 2013
NOMINATIONS DUE MARCH 15, 2013

The Computing Research Association is pleased to announce the 19th annual CRA Award for Outstanding Undergraduate Researchers, which recognizes undergraduate students in North American universities who show outstanding research potential in an area of computing research.

Eligible nominees are enrolled as undergraduates in a North American college or university during the academic year September 2012 to May 2013. They must be nominated by two faculty members and recommended by the chair of their home department. No more than two male and two female candidates can be recommended by the same department chair in the same year.

The awards committee looks for demonstrated excellence of computing research ability. The type of department in which the student is majoring and the area of computing in which the student has demonstrated ability are immaterial. What is important is the quality of the research work done by the student. The awards committee also considers the student's academic record and service to the community. Preference is given to students in their senior year (or the equivalent).

A cash prize of $1,000 will be awarded to each of two undergraduate student researchers, one female and one male. A small number of other outstanding candidates will be recognized as Runners-Up and Finalists. All nominees whose research work is considered to be exemplary are recognized with Honorable Mentions.

The awards will be presented at one of the major computing research conferences sponsored by CRA, ACM, the IEEE Computer Society, SIAM, AAAI, or USENIX. The two first-prize winners will receive financial assistance from CRA to travel to the conference. CRA will also sponsor a departmental reception for the two winners at their home institutions.

CRA gratefully acknowledges the support of Mitsubishi Electric Research Labs (MERL) and Microsoft Research who sponsor the Award in alternate years. Microsoft Research is the 2013 sponsor.

Additional information about the nomination procedure and criteria for selection are posted on the CRA website: http://cra.org/awards/undergrad. All nominations must reach CRA by March 15, 2013.

CRA HOSTS 2012
TISDALE FELLOWS LUNCH

CRA was pleased to welcome a 2012 Tisdale Fellow as a summer intern.

TJ Kaplan, a recent graduate of Georgia Tech in Electrical Engineering, spent eight weeks learning about science and technology policy in Washington through his work with the CRA Government Affairs staff and the Computing Community Consortium, and from other Tisdale Fellows.

The Tisdale Fellowship Program brings college students to Washington for summer internships that explore current public policy issues of critical importance to the high technology sector of the economy. In addition to CRA, other participants in the program this year included: Philips Electronics; Business Software Alliance; Dell Computers; Hewlett-Packard; and Technology CEO Council.

On June 28, CRA hosted a luncheon for the Fellows, after which government affairs director, Peter Harsha, provided an overview of CRA's activities.

Tisdale Fellows 2012 (L to R):
TJ Kaplan, Georgia Institute of Technology (CRA)
Brian Fuentes,University of California, Riverside (Phillips)
Elizabeth Garrett (Business Software Alliance)
Crystal Nwaneri, Stanford University (Dell Computers)
Meredith Whipple, Ohio State University (Hewlett-Packard)
Eric Nakano,UCLA (Technology CEO Council)

DECEMBER 14 DEADLINE FOR CRA SERVICE AWARD NOMINATIONS

The Computing Research Association invites nominations for the CRA Distinguished Service Award and the A. Nico Habermann Award for 2013.

DISTINGUISHED SERVICE AWARD

CRA makes an award, usually annually, to a person who has made an outstanding service contribution to the computing research community. This award recognizes service in the areas of government affairs, professional societies, publications or conferences, and leadership that has a major impact on computing research. See "Guidelines for Nominators" at: http://cra.org/awards/service/

A. NICO HABERMANN AWARD

CRA makes an award, usually annually, to a person who has made outstanding contributions aimed at increasing the numbers and/or successes of underrepresented groups in the computing research community. This award recognizes work in areas of government affairs, educational programs, professional societies, public awareness, and leadership that has a major impact on advancing these groups in the computing research community. Recognized contributions can be focused directly at the research level or at its immediate precursors, namely students at the undergraduate or graduate levels. See "Guidelines for Nominators" at: http://cra.org/awards/habermann/

For a list of previous recipients of these two awards, see: http://cra.org/awards/

NOMINATION PROCESS

Send a nomination letter (no longer than two pages) that describes the contributions on which the nomination is based to awards@cra.org. Refer to the appropriate "Guidelines for Nominators" for the award. Include the candidate's current curriculum vitae. Questions or comments may be addressed to awards@cra.org.

Nominators are responsible for collating the nomination materials before e-mailing the complete package to: awards@cra.org. The deadline for receipt of nominations is December 14, 2012.

Current members of the CRA Board of Directors are not eligible for these awards.

STAFF CHANGES

With this issue CRA bids a fond farewell to Jean Smith who has been editing CRA publications for 15 years. In addition to handling our various communication channels, Jean handle both the Board and the awards committees. She will be sorely missed as she makes the most of her retirement by traveling to new and exotic locations.

Also departing CRA was Kapil Patnaik, who dealt with our IT needs. Kapil wanted to move into IT management which necessitated a move to a larger organization - TechAmerica. Before he left, Kapil moved CRA into the cloud.

Which lead to CRA hiring Maria Zhuravleva who has a strong background in design while also being able to handle our simpler IT needs.

The Computing Innovation Fellows Project

CCC LAUNCHES NEW CIFELLOWS PROJECT WEBSITE

Erwin P. Gianchandani
Director,
Computing Community Consortium

In early 2009, the Computing Community Consortium (CCC), with the support of the National Science Foundation (NSF), launched the Computing Innovation Fellows Project, a short-term initiative providing recent Ph.D.s with one- to two-year postdoctoral positions at academic institutions and industrial organizations with fundamental computing research and education programs. Three years later, we have developed a new website: http://cra.org/ccc/cifellows to establish a permanent record for the program.

The motivation for the CIFellows Project in 2009 to forestall the permanent loss of research talent likely to occur as a consequence of the financial crisis, and to enable new Ph.D.s to develop additional experience, making them effective researchers and/ or teachers in the long term. Because economic conditions did not improve rapidly, the program was continued with additional funding from NSF during two subsequent years. Overall, 127 CIFellows were funded — 60 in 2009, 47 in 2010, and 20 in 2011.

Today, the majority of the 2009 and 2010 CIFellows have departed the program with permanent opportunities in the form of tenure-track faculty appointments or research positions in industry or government. Of the 20 CIFellows who started in fall 2011, 18 are embarking upon a second year in the program this fall — and we are hopeful many of them will also land permanent positions in the course of the coming year.

The new website (http://cra.org/ccc/cifellows) summarizes the motivations and goals for the program, key aspects of its implementation, and preliminary results to date. It features short bios of all 127 CIFellows, noting their research areas, Ph.D-granting colleges/universities, host organizations, and in many cases, current (permanent) employment. Sample success stories are featured. The CCC will keep this site updated with the latest accomplishments of the CIFellows.

Please take a few minutes to explore the website to learn more about the program and the bright, young talent who have been funded through it – they truly represent the future of our field!

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Director of the Computing Community Consortium (CCC)

The Director works with the CCC Council Chair, Vice-Chair, Executive Committee, and membership as well as the CRA staff to ensure that the CCC succeeds in its mission: to serve as a catalyst and enabler for the computing research community, by providing mechanisms for the community to identify compelling research visions for the future of the field and articulating those visions to key stakeholders.

The Director ensures that the CCC functions smoothly and effectively, and meets all of its contractual requirements in a timely and high-quality fashion. The Director works with her/his partners to develop new initiatives in furtherance of the CCC mission.

This position receives direct supervision from the CRA Executive Director while working primarily with the CCC Council Chair, Vice-Chair, Executive Committee, and membership. An ability to work independently and with significant autonomy is necessary. Innovation, imagination, organization, maturity, and judgment are vital to this position. The staff member must be able to operate under pressure in a busy office and maintain comprehensive control of a multitude of projects simultaneously while pushing all projects to timely completion and providing continual updates on the status of each project. A strong interest in computing research and its impacts is important.

Tasks (not exhaustive):

• Work closely with the CCC Council Chair, Vice-Chair, and Executive Committee to establish CCC directions and priorities

• Coordinate the preparation, quality and timeliness of all reporting requirements to funding sources, particularly NSF

• Serve as a key liaison between the computing research community and various Federal agencies, maintaining connections and relations

• Oversee CCC visioning efforts by attending workshops; ensuring that outputs are timely and of high quality; helping to generate reports and publicity; and helping to connect to possible funding sources

• Manage the Computing Innovation Fellows (CIFellows) Project, funding postdoctoral positions in computer science, through its projected life span

• Track all CCC activities to ensure progress

• Create positive press for the computing research community via blog entries, press releases, articles, etc.; a key part of this is maintaining the CCC Blog, which serves as a resource of information for the research community, funding agents, and the public at large

• Oversee regular assessment and evaluation of CCC; be the main interface with any external evaluation teams

• Supervise CCC staff who handle administrative and other tasks

• Work with CRA's Director of Government Affairs as appropriate

This is not a research position but an understanding of research is essential. It is a position working with and supporting the computing research community.

Desired background:

• Ph.D. in a technical area

• Experience working with the computing research community

• Research experience in a technical discipline (computing preferred)

• Demonstrated organizational and inter-personal skills

Please address applications and inquiries to employment@cra.org.

About CRA: The Computing Research Association is an association of more than 230 North American academic departments of computer science, computer engineering, and related fields; laboratories and centers in industry, government, and academia engaging in basic computing research; and affiliated professional societies with a focus on enhancing the computing research environment. CRA offers an excellent benefits package and competitive salaries. For more information, see www.cra.org.

About CCC: The Computing Community Consortium (CCC) is an activity of the Computing Research Association funded through a cooperative agreement between the CRA and the National Science Foundation. It serves as a catalyst and enabler for the computing research community, seeking to bring the community together to identify compelling research challenges and opportunities for the field, particularly in the context of national priorities. For more details, visit http://cra.org/ccc.

Brigham and Women's Hospital and Harvard Medical School

Division of Pharmacoepidemiology, Department of Medicine
Computer Scientist in Pharmacoepidemiology

The Division seeks post-doctoral fellows to join a cutting edge research group working with large healthcare databases on computationally intensive algorithms for causal inference. Preferred applicants will be experienced in natural language processing with a doctoral degree in computer science or related fields.

Please send letter of interest and CV to: Sebastian Schneeweiss, MD, ScD, Vice-Chief, Division of Pharmacoepidemiology and Pharmacoeconomics, Brigham and Women's Hospital, 1620 Tremont St., Suite 3030, Boston, MA 02120, or via e-mail to jobs@drugepi.org.

Brigham and Women's Hospital/Harvard Medical School Equal Opportunity/Affirmative Action Employers are actively committed to increasing the diversity of our faculty: women and members of underrepresented minority groups are therefore strongly encouraged to apply.

Brown University

Institute for Computational and Experimental Research in Mathematics (ICERM)

ICERM invites applications for two types of positions:

Postdoctoral Institute Fellowship: a one-year non-renewable salaried Postdoctoral Institute Fellowship that commences in September 2013. This position is intended for a mathematical scientist at an early career stage who will be in residence at ICERM starting in September 2013 with an ICERM faculty mentor, and who would like to participate in ICERM's spring 2014 semester program: Network Science and Graph Algorithms. Program and application details can be found at: https://www.mathjobs.org/jobs/jobs/3872.

Postdoctoral Fellowships: four one-semester non-renewable Postdoctoral Fellowships with stipend, to commence in January 2014. These positions are intended for mathematical scientists at an early career stage who would like to participate in the spring 2014 semester long program at ICERM: Network Science and Graph Algorithms. Program and application details can be found at: https://www.mathjobs.org/jobs/jobs/3877

Documentation of completion of all requirements for a doctoral degree in mathematics or a related area by the start of the appointment is required. Preference will be given to applicants with a PhD awarded in 2010 or later. Brown University is an Equal Opportunity/Affirmative Action employer and encourages applications from women and minorities.

Cornell NYC Tech Campus

Electrical and Computer Engineering
Multiple Tenured Faculty Positions

Multiple tenured faculty positions in electrical and computer engineering are available at Cornell's new CornellNYC Tech campus in New York City. Faculty hired in these positions will be tenured professors in the School of Electrical and Computer Engineering, which will span the Ithaca and New York City campuses.

We are interested in applicants with research expertise in Electrical and Computer Engineering. We seek individuals whose research will have a substantial impact on the broad areas of complex data sets, human health, and intelligent infrastructure. Some examples of research areas include, but are not limited to, computation and information processing of large-scale data sets, bio-electrical sensing, interfacing, and actuation, and control and communication systems for intelligent infrastructure. Applicants must hold a Ph.D. and have demonstrated ability to conduct outstanding research and education at the level of tenured faculty in the School. Applicants must also have a strong interest in the technology commercialization and entrepreneurship mission of the campus. In addition, interest in international programs and/or pre-college (K-12) education is advantageous.

To ensure full consideration, applications should be received by October 1, 2012; however we will begin reviewing and interviewing candidates before this date and continue until the positions are filled. Applicants should submit a curriculum vita, brief statements of research and teaching interests, and the names and contact information of at least three references on-line at: https://academicjobsonline.org/ajo/jobs/1533.

Cornell University is an inclusive, dynamic, and innovative Ivy League university and New York's land-grant institution, with its main campus in Ithaca, NY, its medical campus on the Upper East Side of Manhattan, and its new CornellNYC campus planned for Roosevelt Island in New York City. The University's staff, faculty, and students impart an uncommon sense of larger purpose and contribute creative ideas and best practices to further the university's mission of teaching, research, and outreach. These faculty positions are based in New York City at the CornellNYC Tech campus which will be located in temporary facilities until moving to its permanent home on Roosevelt Island.

Cornell University is an equal opportunity, affirmative action educator and employer.

Drexel University

Department of Computer Science / College of Engineering
Assistant Professor

Drexel University's Department of Computer Science (www.cs.drexel.edu) in the College of Engineering invites applications for up to 3 tenure-track faculty

Information Systems Tenure-Track Faculty Position

The Tepper School of Business at Carnegie Mellon University seeks a professor in Information Systems for tenure-track appointment, starting September 2013. We invite applications from individuals who are involved in cutting edge research involving information technologies and who are interested in how information technology will transform businesses, markets, and economic processes.

Applicants may hold a doctoral degree in information systems, any other business discipline, computer science, economics, or statistics. We are primarily seeking candidates at the Assistant Professor level. Applicants should have completed or be nearing completion of a Ph.D., and should demonstrate potential for excellence in research and teaching. Teaching assignments encompass BS, Masters, and Ph.D. programs.

Being an innovative technology expert in a leading business school brings unique opportunities for high-impact and highly visible work; collaboration across disciplines is an important part of the culture of the Tepper School and the wider Carnegie Mellon community. This open environment provides opportunities to work with our top-ranked economics and marketing groups and the school of computer science.

Application Instructions

Applicants should submit a current curriculum vitae, a statement of research interests, a short statement of teaching philosophy, copies of up to four representative publications or preprints, and at least three references through https://academicjobsonline.org/ajo/jobs/1744.

If you have any questions about the application, please contact Mr. Phil Conley (isgroup@andrew.cmu.edu, 412-268-6212). Screening begins immediately and candidates are encouraged to submit their completed applications as soon as possible. In order to ensure full consideration, completed applications must be received by November 30, 2012.

Carnegie Mellon is an equal opportunity, affirmative action employer with particular interest in identifying women and minority applicants for faculty positions.

PROFESSIONAL OPPORTUNITIES

positions at the Assistant Professor level. Preferred areas of expertise are Systems, Data Mining, and Networks. Candidates in areas that align with the strengths of the department will also be considered, namely Software Engineering, HCI, Applied Algorithms, Computer Vision, Security, AI, Scientific Computation, High Performance Computing, and Computer Gaming. The department offers BS, BA, MS, and PhD degrees in computer science, as well as BS and MS degrees in software engineering. The department has a tradition of rigorous academic programs that feature a co-op experience, and a strong emphasis on research, as evidenced by the number of NSF CAREER Award recipients on the faculty.

Drexel is a private university founded in 1891 and is the third largest university in the Philadelphia area with over 12,000 undergraduate, 7000 graduate students, and over 1,000 faculty members. The University consists of 11 colleges and schools offering 175 degree programs. Drexel is a national pioneer of cooperative education, with formal relationships in place with over 2,700 local, national and multi-national companies. Drexel is located on Philadelphia's "Avenue of Technology" in the University City District and at the hub of the academic, cultural, and historical resources of one of the nation's largest metropolitan regions.

Review of applications begins immediately. To assure consideration, materials from applicants should be received by January 31, 2013. Successful applicants must demonstrate potential for research and teaching excellence in the environment of a major research university. To be considered, please send email to: cs-search-13@cs.drexel.edu with a cover letter, CV, brief statements describing your research program and teaching philosophy, and at least four letters of reference. Electronic submissions in PDF format are preferred.

Drexel University is an Equal Opportunity/Affirmative Action Employer. The College of Engineering is especially interested in qualified candidates who can contribute to the diversity and excellence of the academic community. Background investigations are required for all new hires as a condition of employment, after the job offer is made. Employment will be contingent upon the University's acceptance of the results of the background investigation

Indiana University

Data to Insight Center
Postdoctoral Fellow in Scientific Data Management in Cloud Computing

Work on a newly funded NSF project that uses cloud resources for large-scale ensemble applications in the environment with attention to metadata and provenance capture and data reuse. The candidate will have an opportunity to engage in other research areas of the Center including the HathiTrust Research Center and the NSF funded DataNet project, Sustainable Environments Actionable Data. The ideal candidate has a Ph.D. in computer science, a strong research record, and experience in e-science interdisciplinary research. A Ph.D. in computer science or a related field is required.

The Data To Insight Center is part of the Pervasive Technology Institute, a research-intense, world-class organization dedicated to advancing information and computing research at Indiana University. PTI is located in Indiana University Bloomington's new technology corridor. Bloomington has been identified as one of the most cultural and livable small cities in the U.S.

Initial appointment will be for one year with potential for renewal for an additional year. Send curriculum vita and contact information for three references to: Robert Ping, Pervasive Technology Institute, 2719 E. 10th St., Bloomington, IN. Phone: 812-856-1064; e-mail: robping@indiana.edu.

Indiana University is an Affirmative Action/Equal Employment institution. Women and minorities are particularly encouraged to apply.

Middlebury College

Tenure-Track Faculty Position

Middlebury College invites applications for a tenure-track faculty position in computer science, at the rank of Assistant Professor, beginning September, 2013. Specialization is open, with preference for candidates working in computer systems, networks, security, or applied areas with interdisciplinary focus.

For more information, see http://apptrkr.com/270300. Applications must be received by November 15, 2012.

An Equal Opportunity Employer, the College is committed to hiring a diverse faculty as we work to foster innovation in our curriculum and to provide a rich and varied educational experience to our increasingly diverse student body.

Princeton University

Computer Science Department
Tenure-Track Positions

The Department of Computer Science at Princeton University invites applications for faculty positions at the Assistant Professor level. We are accepting applications in all areas of Computer Science.

Applicants must demonstrate superior research and scholarship potential as well as teaching ability. A PhD in Computer Science or a related area is required. Candidates should expect to receive their PhD before Fall, 2013. Successful candidates are

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SCHOOL OF INFORMATICS AND COMPUTING

INDIANA UNIVERSITY
Bloomington

The School of Informatics and Computing at Indiana University, Bloomington, invites applications for six positions beginning in Fall 2013, in the areas of computer science (all subareas; two positions), computer science education research (joint position with School of Education), computer security, health informatics, and human-computer interaction. The School expects continued hiring in the coming years.

Positions are open at all levels. Applicants should have a Ph.D.in the relevant area and a well-established record (senior level) or demonstrable potential for excellence in research and teaching (junior level).

The IU Bloomington School of Informatics and Computing is the first of its kind and among the largest in the country, with unsurpassed breadth. It includes more than 70 faculty members, 500 graduate students, and strong undergraduate programs. Degrees offered include M.S. degrees in Computer Science, Bioinformatics, Human Computer Interaction Design, and Security Informatics, and Ph.D. degrees in Computer Science and in Informatics. The School has received public recognition as a "top-ten program to watch" (Computerworld) thanks to its excellence and leadership in academic programs, interdisciplinary research, placement, and outreach. The school offers excellent work conditions, including attractive salaries and research support, and low teaching loads in a setting of strong student growth.

Located in the wooded rolling hills of southern Indiana, Bloomington is a culturally thriving college town with a moderate cost of living and the amenities for an active lifestyle. IU is renowned for its top-ranked music school, high performance computing and networking facilities, and performing and fine arts.

Applicants should submit a curriculum vitae, a statement of research and teaching, and the names of 3 references (junior level) or 6 references (senior level) using the submissions link at https://indiana.peopleadmin.com (preferred) or by mail to Faculty Search Committee, School of Informatics and Computing, 919 E 10th Street, Bloomington, IN 47408. Questions may be sent to faculty-search12@informatics.indiana.edu. To receive full consideration completed applications must be received by December 1, 2012.

Indiana University is an Equal Opportunity/Affirmative Action employer. Applications from women and minorities are strongly encouraged. IU Bloomington is vitally interested in the needs of Dual Career couples.

PROFESSIONAL OPPORTUNITIES

Department of Computer Science — Montclair State University

DESCRIPTION

Candidates for the position of Department Chair are expected to merit appointment as full professor and have records of distinguished research and educational achievements.

The Chair of Computer Science provides academic leadership within the department as well as contributes to the teaching and research mission of the department and Montclair State University. The Chair will bring vision and drive to the position to ensure a modern and relevant curriculum, build interdisciplinary and collaborative partnerships, guide the department's accreditation activities, and develop and implement strategic plans and growth. As the academic leader and chief academic officer of the department, the chair is a member of the dean's academic council and reports directly to the Dean of the College of Science and Mathematics.

The successful applicant will have the ability to teach a variety of information technology or computer science subjects, and have a strong commitment to both the undergraduate mission of the department in the context of a liberal arts education, and the ability to undertake research and contribute to the graduate teaching within the department.

Activities required of all faculty members include curriculum development, research, recruitment and retention activities, advising, service to the department, college and university. Montclair State University places an emphasis on teaching and scholarly activities.

Major duties and responsibilities include:
- Serve as department chair of computer science.
- Teaching at the undergraduate and graduate level.
- Conduct research in computer science and/or information technology.
- Direct recruitment and retention activities.
- Lead continued growth of the undergraduate and graduate programs.
- Promote development of on-line programs.
- Build interdisciplinary and collaborative partnerships.
- Supervise advising services to students of the department.
- Assure progress of Outcomes Assessment protocols.
- Performs other duties as assigned by the Dean.

The above statements reflect the general details considered necessary to describe the principal functions of the job as identified, and shall not be considered as a detailed description of all work requirements that may be inherent in the position.

Qualifications

Earned PhD in Computer Science/Information Technology or closely related field
Excellent communication skills (both oral and written)
Demonstrated potential for research and teaching excellence
Previous administration experience is a bonus.

Salary Range: Commensurate with qualifications and experience
Starting Date: January 1, 2013
Send Letter and Resume to: chair-search@cs.montclair.edu (include V number) V-F29
Apply By: October 15, 2012

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expected to pursue an active research program and to contribute significantly to the teaching programs of the department. Applicants should include a CV and contact information for at least three people who can comment on the applicant's professional qualifications.

There is no deadline, but review of applications will be underway by December 2012. Princeton University is an equal opportunity employer and complies with applicable EEO and affirmative action regulations.

You may apply online at: http://jobs.cs.princeton.edu/. Requisition Number: 1200555.

The Skolkovo Institute of Science and Technology

Faculty Positions in Science, Technology, and Innovation

The Skolkovo Institute of Science and Technology (Skolkovo Tech) seeks candidates for tenured and tenure-track positions to begin Fall 2013 or thereafter. Skolkovo Tech is an innovative, new, private university located just outside of Moscow, Russia.

Established in collaboration with the Massachusetts Institute of Technology (MIT), Skolkovo Tech integrates strong foundational graduate educational programs and cutting-edge basic and applied research with an ecology of innovation and entrepreneurship to establish a new model for advancing knowledge, developing technology, and creating economic value to improve the Russian Federation and our world.

We encourage applications for positions in and across Skolkovo Tech's five technical focus areas, as well as in Entrepreneurship and Innovation:

- **Information Science and Technology** (including computer science, computational science and engineering, mathematics, electrical engineering);

- **Biomedical Science and Technology** (including biology, biological and biomedical engineering, biophysics, biochemistry, microbiology, cognitive and neuroscience, health science and technology);

- **Energy Science and Technology** (including chemistry and chemical engineering, physics, materials science and engineering, environmental science and engineering, power systems, mechanical engineering);

- **Space Science and Technology** (including aeronautical engineering, astronautics, earth and planetary science);

- **Nuclear Science and Technology** (including nuclear engineering, chemical physics, high-energy physics, nuclear medicine, radiation biomedicine); and

- **Entrepreneurship and Innovation** (including commercialization, product design/development, manufacturing, large scale systems).

Faculty will lead the development of a new curriculum and innovative research structure, with the opportunity to spend their first year at MIT to develop classroom materials and launch new research collaborations. Teaching and research will be carried out in the English language. Internationally competitive salary and benefits, startup packages, and opportunities for substantial research funding will be provided.

Please visit http://web.mit.edu/sktech/faculty-positions/ and http://www.skolkovotech.ru for more information, and submit application materials to https://sktech-search.mit.edu/

Applications will be reviewed starting September 15, 2012 and must be received by December 15, 2012 to be assured of receiving consideration.

Skolkovo Tech is committed to diversity and equity, and all are invited to apply without regard for gender, race or national origin.

Stevens Institute of Technology

Computer Science
Postdoctoral Position in AI/Biomedical informatics

We are seeking a postdoctoral researcher with interests in developing methods for analysis of massive, complex, and temporal biomedical datasets. The position allows a unique opportunity to do cutting edge research with an impact on patient care.

The position is available immediately and is open until filled.
For more information see: http://www.cs.stevens.edu/~skleinbe/postdoc.txt

To apply, send a CV, 2-3 representative publications and email addresses for 2-3 references to samantha.kleinberg@stevens.edu

Toyota Technological Institute Chicago

Faculty Positions at All Levels

Toyota Technological Institute at Chicago (TTIC) is a philanthropically endowed degree-granting institute for computer science located on the University of Chicago campus. Applications are being accepted in all areas, but we are particularly interested in machine learning, speech processing, computational linguistics,

Computer vision, computational biology and optimization. Positions are available at all ranks, and we have a large number of three year 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

PROFESSIONAL OPPORTUNITIES

University of Chicago

Department of Computer Science
Assistant Professor

The Department of Computer Science at the University of Chicago invites applications from exceptionally qualified candidates in the areas of theory of computing, systems and networking, and machine learning for faculty positions at the rank of Assistant Professor.

The University of Chicago has the highest standards for scholarship and faculty quality, and encourages collaboration across disciplines. We encourage strong connections with researchers across the campus in such areas as mathematics, natural language processing, bioinformatics, logic, molecular engineering, and machine learning, to mention just a few.

Applicants must have completed all requirements for the PhD except the dissertation at time of application, and must have completed all requirements for the PhD at time of appointment. The PhD should be in Computer Science or a related field such as Mathematics or Statistics.

The Department of Computer Science www.cs.uchicago.edu is the hub of a large, diverse computing community of two hundred researchers focused on advancing foundations of computing and driving its most advanced applications. Long distinguished in theoretical computer science and artificial intelligence, the Department is now building a strong Systems research group. This closely-knit community includes the Toyota Technological Institute, the Computation Institute, and Argonne's Mathematics and Computer Science Division.

The Chicago metropolitan area provides a diverse and exciting environment. The local economy is vigorous, with international stature in banking, trade, commerce, manufacturing, and transportation, while the cultural scene includes diverse cultures, vibrant theater, world-renowned symphony, opera, jazz, and blues. The University is located in Hyde Park, a Chicago neighborhood on the Lake Michigan shore just a few minutes from downtown on an electric commuter train. All applicants must apply through the University's Academic Jobs website. For applicants in:

1. the theory of computing, the LINK is academiccareers.uchicago.edu/applicants/Central?quickFind=52334.

2. systems and networking, the LINK is academiccareers.uchicago.edu/applicants/Central?quickFind=52337.

3. machine learning, the LINK is academiccareers.uchicago.edu/applicants/Central?quickFind=52338.

A cover letter, curriculum vitae including a list of publications, a statement describing past and current research accomplishments and outlining future research plans, and a description of teaching experience must be uploaded to be considered as an applicant. Candidates may also post a representative set of publications, as well as teaching evaluations, to this website. Three reference letters are required, one of which must address the candidate's teaching ability. The reference letters can be sent by mail to:

Chair, Department of Computer Science
The University of Chicago
1100 E. 58th Street, Ryerson Hall
Chicago, IL. 60637-1581
Or by email to: Recommend@mailman.cs.uchicago.edu (letters can be in pdf, postscript or Microsoft Word).

To ensure fullest consideration of your application all materials, including supporting letters, should be received by November 19. However, screening will continue until all available positions are filled.

The University of Chicago is an Affirmative Action/Equal Opportunity Employer.

University of Chicago

Department of Computer Science, Large-Scale Systems Group (LSSG)
Postdoctoral Scholar-Computer Architecture

We are recruiting a talented, ambitious postdoctoral scholar with the energy and creativity to pioneer a new generation of microprocessor architectures. This position provides the opportunity to work with leading computer scientists in LSSG, the University of Chicago, Argonne National Laboratory, the University of Illinois and the San Diego Supercomputing Center, as well as the broader community of DARPA's Perfect program The position will involve research across computer architecture (instruction sets, processor customization, memory hierarchies), and use of CAD tool chain flows to thoroughly evaluate energy and performance of resulting designs. Software-driven emulation using large workloads and detailed simulation will be used based on the best advanced circuit and process models for NTV and sub 10nm devices.

For information on LSSG see https://sites.google.com/site/uchicagolssg/lssg and the Department of Computer Science Systems Group see http://systems.cs.uchicago.edu

Application Instructions:

A recent PhD (or other doctoral degree) in Computer Science or related discipline is required. This position is available Fall 2012. Postdoctoral Scholar appointments are typically renewable on annual basis.

For more information, contact:
Professor Andrew A. Chien
achien@cs.uchicago.edu
1100 East 58th Street
Chicago, IL 60637

The University of Chicago is an Affirmative Action / Equal Opportunity Employer.

University of Chicago

Department of Computer Science, Large-Scale Systems Group (LSSG)
Postdoctoral Scholar Opportunity

We are recruiting a talented postdoctoral scholar with the ambition and creativity to invent new foundations (programming abstractions, algorithms, data structures, and resilience techniques.) for future large-scale computing in a wide range of areas (big data analytics, extreme modeling in science and engineering, and Exascale computing). The key challenge is how to combine extreme scalability, fine-grained concurrency and sharing with reliability.

The scholar will work with leading computer scientists in LSSG, the University of Chicago, the CESAR Center (cesar.mcs.anl.gov), and the broader community; combining access to the critical infrastructure and real problems with an academic setting to pursue the underlying fundamental intellectual challenges. The position will involve work with the LSSG Global-view Resilience (GVR) project and CESAR, but also involve interaction with technical experts in many areas of computing and applications.

For information on LSSG see https://sites.google.com/site/uchicagolssg/lssg and the Department of Computer Science Systems Group see http://systems.cs.uchicago.edu

A recent PhD (or other doctoral degree) in Computer

PROFESSIONAL OPPORTUNITIES

Science or related discipline is required. This position is available Fall 2012. Postdoctoral Scholar appointments are typically renewable on annual basis. For more information, contact Professor Andrew A. Chien, achien@cs.uchicago.edu, 1100 East 58th Street, Chicago, IL 60637

The University of Chicago is an Affirmative Action / Equal Opportunity Employer.

University of Colorado Denver

Assistant Professor Positions

Two Assistant Professor positions, Computer Science and Engineering Department, University of Colorado Denver beginning Spring or Fall 2013. A Ph.D. in computer science, computer engineering or a closely related field is required. Successful candidates will develop a strong research and educational program at undergraduate, MS, and Ph.D. levels and will develop an externally funded research program.

For details and to apply electronically, please visit www.jobsatcu.com posting #818654.

University of Colorado Boulder

Institute of Cognitive Science

Computational Approaches to Cognition, Institute of Cognitive Science Tenure Track Position

The Institute of Cognitive Science at the University of Colorado invites applications for a full-time tenure-track position in computational approaches to cognitive and/or affective processes at the assistant professor level with a starting date of Fall 2013. The Institute is a multidisciplinary unit with representation from the departments of Psychology & Neuroscience, Computer Science, Education, Philosophy, Linguistics, Architecture & Planning, and Speech, Language & Hearing Sciences.

We seek applicants with a strong research program in theoretical and technical aspects of computational science. preferably with prior experience or interest in integrating cognitive science with state-of-the-art computational approaches. Duties include research, research supervision, service, as well as graduate and undergraduate teaching. For Full Job listing and details please see Jobs@CU.

Applicants are directed to the CU online job application website: www.jobsatcu.com.
Job Posting Number 818695.

For fullest consideration, please apply by September 24th, 2012.

The University of Colorado is an Equal Opportunity Employer committed to building a diverse workforce. We encourage applications from women, racial and ethnic minorities, individuals with disabilities and veterans. Alternative formats of this ad can be provided upon request for individuals with disabilities by contacting the ADA Coordinator at hr-ada@colorado.edu.

The University of Colorado Boulder conducts background checks on all final applicants being considered for employment.

University of Georgia

Department of Computer Science
Lecturer Position

The Department of Computer Science at the University of Georgia invites applications for the position of Lecturer, starting January 2013. The primary responsibilities of this position are to teach foundational courses in the undergraduate major. It is also intended that the person holding this position will periodically teach a senior/beginning graduate level course in his/her specialty.

Successful candidates should hold a Ph.D. degree in Computer Science or a closely related field. Scholarly credentials should reflect a strong commitment to teaching at the undergraduate level. Although not tenure track, it is expected that the person holding this position will remain with the department long term.

To apply, please upload an application letter, curriculum vitae, and a statement of teaching philosophy, as a

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UNIVERSITY of WASHINGTON | BOTHELL
COMPUTING & SOFTWARE SYSTEMS

Tenured or Tenure Track Faculty
Cyber Security Engineering

The University of Washington Bothell Computing & Software Systems Program is seeking candidates for a tenured or tenure track faculty position (open rank) beginning fall 2013. The position requires teaching interest in the general area of cybersecurity with demonstrated research ability (at the tenured Associate or full Professor level) or promise (at the Assistant Professor level) and a background in a relevant subfield, such as: secure SW development, vulnerability analysis, event analysis/forensics, incident response, reverse engineering malware, network security, mobile computing, or security testing. Successful candidates are expected to develop externally sponsored research programs, supervise graduate students, and teach and advise students

The Bothell campus of the University of Washington was founded in 1990 as an innovative, interdisciplinary campus within the University of Washington system – one of the premier institutions of higher education in the US. Faculty members have full access to the resources of a major research university, with the culture and close relationships with students of a small liberal arts college.

Required qualifications include an earned doctorate in computer science or another relevant field, a body of work that warrants appointment at the rank of Assistant, Associate, or full Professor (determination among which will be made commensurate with the individual's qualifications), demonstrated experience in and commitment to excellence in undergraduate and graduate education, and a commitment to enhancing learning for diverse student populations.

Please send: **(1)** a cover letter, **(2)** a curriculum vitae, **(3)** a list of a minimum of three professional references, **(4)** a statement of teaching philosophy including experience with and commitment to working with students from diverse backgrounds, **(5)** evidence of teaching effectiveness, and **(6)** a research plan. Review of applications will begin on **November 15, 2012**; the position will remain open until filled. Please address application materials to the CSS Cybersecurity Search Committee and submit to **css-search@uwb.edu**.

For additional information, please see **www.uwb.edu/css/faculty-positions**.

UNIVERSITY of WASHINGTON | BOTHELL
COMPUTING & SOFTWARE SYSTEMS

Senior Lecturer
Computer Science/Computer Engineering

The University of Washington Bothell Computing & Software Systems Program invites applications for a Senior Lecturer position, with a teaching focus on either computer engineering or the integration of computing into liberal arts education, on a full-time, 9 month, 1–3 year renewable appointment beginning fall 2013. We are in particular interested in candidates with experience in ABET accreditation who will manage that process in return for reduced teaching load. Expertise areas include, but are not limited to: computer architecture, embedded systems, big data/data mining/machine learning, web development, mobile computing, liberal arts computing, OS, and databases.

Situated in one of the largest and most dynamic software and technology industry concentrations in the world, the University of Washington Bothell is an innovative, interdisciplinary campus within the University of Washington system – one of the premier institutions of higher education in the US. Faculty have full access to the resources of a major research university with the culture and close relationships with students of a small college.

Required qualifications include a master's degree or earned doctorate (preferred) in computer science, computer engineering, software engineering, or other relevant field, a body of work that warrants appointment as Senior Lecturer, demonstrated experience in and commitment to excellence in undergraduate and graduate education, and a commitment to enhancing learning for diverse student populations.

Please send: **(1)** a cover letter, **(2)** a curriculum vitae, **(3)** a list of a minimum of three professional references, **(4)** a statement of teaching philosophy including experience with and commitment to working with students from diverse backgrounds, and **(5)** evidence of teaching effectiveness. Review of applications will begin on **November 15, 2012**; the position will remain open until filled. Please address application materials to the CSS Senior Lecturer Search Committee and submit to **css-search@uwb.edu**.

For additional information, please see **www.uwb.edu/css/faculty-positions**.

single PDF file, at http://recruitment.franklin.uga.edu. Applicants should also arrange for at least three letters of reference to be uploaded separately to the same web site.

The search committee will begin reviewing applications on September 17, 2012 until the position is filled. Please see http://www.cs.uga.edu for more information about the department and the university.

Lecturer Search Committee
Department of Computer Science
415 Boyd Grad Studies Research Building
University of Georgia
Athens, GA 30602
Email: recruiting@cs.uga.edu

The Franklin College of Arts and Sciences, its many units, and the University of Georgia are committed to increasing the diversity of its faculty and students, and to sustaining a work and learning environment that is inclusive. The University of Georgia is an EEO/AA institution.

University of Memphis

Department of Computer Science, WiSe MANet Lab
Postdoctoral Fellow

We are recruiting a talented postdoctoral scholar with the ambition and creativity to advance the frontiers of newly emerging area of mobile health (behavior modeling, data analytics, machine learning) in collaboration with health researchers, engineers, and computer scientists spread across multiple institutions as part of federally funded projects from National Science Foundation (NSF) and National Institutes of Health (NIH). The key challenge is how to make reliable inferences from 3,000+ hours of rich multi-sensor data collected on physiology, behavior, and health of 100+ human subjects (including smokers, drinkers, and drug users) from their mobile environment.

For information, see the detailed advertisement at: http://www.cs.memphis.edu/~santosh/Postdoc-Ad-2012-FieldStream.pdf

Application Instructions:
A recent PhD (or other doctoral degree) in Computer Science or related discipline is required. This position is available Fall 2012.

For more information, contact Professor Santosh Kumar via email: santosh.kumar@memphis.edu.

University of Memphis is an Affirmative Action/Equal Opportunity Employer.

University of Oregon

Department of Computer and Information Science
Faculty Position

The Department of Computer and Information Science (CIS) seeks applications for a tenure track faculty position at the rank of Assistant Professor, beginning Fall 2013. The University of Oregon is an AAU research university located in Eugene, two hours south of Portland, and within one hour's drive of both the Pacific Ocean and the snow-capped Cascade Mountains.

The CIS Department is part of the College of Arts and Sciences and is housed within the Lorry Lokey Science Complex. The department offers B.S., M.S. and Ph.D. degrees. More information about the department, its programs and faculty can be found at http://www.cs.uoregon.edu.

We offer a stimulating, friendly environment for collaborative research both within the department and with other departments on campus. Faculty in the department are affiliated with the Cognitive and Decision Sciences Institute, the Computational Science Institute, and the Neuro-Informatics Center.

The department seeks to hire faculty in the general area of systems, with specific specialization that complements existing faculty strengths in systems-related fields. The successful candidate will have strong record of accomplishments that demonstrate a highly creative approach to systems research, knowledge of state-of-the-art techniques and technology, and significant collaborative project work. In addition, the candidate should have experience creating, evaluating, and applying experimental systems artifacts. Opportunities for interactions with systems-oriented faculty include: parallel and distributed systems, networking, databases, intelligent systems, informatics, and computational science. Applicants must have a Ph.D. in computer science or closely related field, a demonstrated record of excellence in research, and a strong commitment to teaching. A successful candidate will be expected to conduct a vigorous research program and to teach at both the undergraduate and graduate levels.

Applications will be accepted electronically through the department's web site (only). Application information can be found at http://www.cs.uoregon.edu/Employment/. Review of applications will begin January 15, 2013 and continue until the position is filled. Please address any questions to faculty.search@cs.uoregon.edu.

The University of Oregon is an equal opportunity/ affirmative action institution committed to cultural diversity and is compliant with the Americans with Disabilities Act. We are committed to creating a more inclusive and diverse institution and seek candidates with demonstrated potential to contribute positively to its diverse community.

University of Washington

The Information School
Non Tenure-Track Faculty Position

The University of Washington Information School (iSchool) is seeking a creative individual to teach in the areas of web development, information architecture, or data management. iSchool lecturers focus on teaching, pedagogy, working with diverse populations, and bringing professional experience into the classroom to create exceptional learning opportunities.

Our new colleague will join a broad-based, inclusive Information School with multiple degree programs committed to the values of leadership, innovation, and diversity. University of Washington faculty engage in teaching, research and service. This is a full-time 9 month appointment with faculty voting rights anticipated at the rank of Lecturer Full-time or Senior Lecturer Full-time commensurate with qualifications and experience (opportunities to teach in the summer may become available). Applicants must have a Masters Degree or equivalent degree by date of appointment. Three years of professional experience and prior teaching experience is desirable.

The University of Washington is an affirmative action, equal opportunity employer. The University is building a culturally diverse faculty and staff and strongly encourages applications from women, minorities,

individuals with disabilities and covered veterans. Applicants may find further information about the UW Information School at ischool.uw.edu.

Application Instructions

Review of applications will begin 9/15/2012.

For complete posting and information on how to apply please visit us at http://ischool.uw.edu/jobs/faculty

University of Washington

The Information School
Tenure-Track Faculty Positions

The Information School of the University of Washington is seeking four outstanding individuals to fill tenure-track positions in the areas of Information Management, Data Curation, Assistant Professor, and Information Assurance and Cybersecurity.

Our new colleagues will join a broad-based, inclusive information school. Faculty members teach across programs. University of Washington faculty engage in teaching, research and service. Candidates should show a commitment to bridging research and practice. These are full-time 9 month appointments anticipated at the rank of Assistant Professor, Associate Professor or Professor commensurate with qualifications and experience. Applicants must have a Ph.D. or equivalent degree by date of appointment.

The University of Washington is an affirmative action, equal opportunity employer. The University is building a culturally diverse faculty and staff and strongly encourages applications from women, minorities, individuals with disabilities and covered veterans. Applicants may find further information about the UW Information School at ischool.uw.edu.

Application Instructions:
Review of applications for Information Management candidates will begin 9/15/2012. Review of Data Curation candidates will begin 9/30/2012. Review of Assistant Professor candidates will begin 10/15/2012. Review of Information Assurance and Cybersecurity candidates will begin 11/15/2012.

For complete posting and information on how to apply please visit us at http://ischool.uw.edu/jobs/faculty.

U.S. Naval Academy

Computer Science Department
Tenure Track Positions

The U.S. Naval Academy's Computer Science Department invites applications for one or more tenure track positions. Appointments at all ranks will be considered, but preference is for junior faculty at the rank of Assistant Professor. These positions may begin as early as the Fall of 2012. A Ph.D. in Computer Science or closely related field is required.

Applicants with backgrounds, experience and research interests in cyber security, and information assurance are especially encouraged to apply, however all backgrounds of computer science will be considered. Applicants must have a dedication to teaching, an ability to teach a broad range of computer science courses, and the ability to initiate and maintain a strong research program.

The Computer Science Department offers majors in Computer Science and Information Technology, and is developing a new major in Cyber Security. We currently have 85 CS majors, 100 IT majors and a

faculty of 21. The department is housed in a state of the art building overlooking the scenic Severn River, and discussions have begun regarding a new academic building to support the department, including the new cyber security program. Our spaces provide outstanding office, laboratory, and research facilities for both students and faculty, including specialized labs for information assurance, networking, and robotics, as well as three micro-computing labs and two high performance computing labs. In addition to computer science and information technology courses for the majors, we also teach a required course on cyber security to the entire freshman class.

The Naval Academy is an undergraduate institution located in historic downtown Annapolis, Maryland on the Chesapeake Bay. Roughly half the faculty are tenured or tenure track civilian professors with Ph.D.s who balance teaching excellence with internationally recognized research programs. The remaining faculty are active duty military officers with Masters or Doctoral degrees. Each year the academy graduates roughly 1000 undergraduate students with majors in the sciences, engineering, and humanities. More information about the department and the Academy can be found at http://www.usna.edu/cs/ and http://www.usna.edu/.

Applicants should send a cover letter, teaching and research statements, curriculum vitae, and arrange for three letters of recommendation that address both teaching and research abilities to be sent to cssearch@usna.edu.

Review of applications will begin immediately, continuing until the positions are filled.

The United States Naval Academy is an Equal Opportunity Employer. This agency provides reasonable accommodations to applicants with disabilities. This position is subject to the availability of funds.

Yale University

Department of Computer Science
Faculty Position Openings

The Department of Computer Science at Yale is seeking to fill a faculty position at the level of Assistant Professor (tenure track). We are interested in applicants from any of the following areas: Artificial Intelligence, Economics and Computation, Human Computer Interaction, Machine Learning, Networking, Operating Systems, Programming Languages, Robotics, and Theory of Computing. Applicants whose research spans two or more of these areas are particularly encouraged to apply. We seek excellent researchers who are also committed to excellence in teaching.

Members of the Yale Computer Science faculty have many opportunities to collaborate. Interdisciplinary work is encouraged with Yale's world-class faculty in such computationally active fields as biology, chemistry, economics, engineering, geophysics, management, mathematics, medicine, psychology, physics, and statistics. Yale faculty members teach excellent students, both graduate and undergraduate, in relatively small classes.

Candidates should hold a Ph.D. in computer science or a related discipline. Review of applications will begin on December 15, 2012, and candidates are encouraged to apply early.

Applications from qualified women and minority candidates are especially welcome. Yale is an affirmative action/equal opportunity employer. The department's home page can be found at http://www.cs.yale.edu.

Applicants should submit a curriculum vita, brief statements of research and teaching, and the contact information for three references. Applications should be submitted online at https://academicpositions.yale.edu/.

Questions should be directed to faculty-recruiting@cs.yale.edu.

York University

Lassonde School of Engineering
Software Engineering Position

York University, Toronto, Canada seeks an outstanding candidate in Software Engineering to commence on July 1, 2013. The position calls for research excellence in Software Engineering with an emphasis on mission critical systems, dependable safety critical systems, industrial strength formal methods for software systems, high assurance business and mobile systems, and rigorous methods for verifying, validating and certifying software systems. Outstanding candidates in all areas of software engineering are invited to apply. The rank is open and commensurate with experience. This position will play a key role in the development of the software engineering program within the Lassonde School of Engineering.

York University offers a world-class, modern, interdisciplinary academic experience in Toronto, Canada's most multicultural city. York is at the centre of innovation, with a thriving community of 62,000 students, faculty and staff, as well as over 250,000 alumni worldwide. York's 11 Faculties and 28 research centres are committed to providing an engaged learning and research environment that cuts across traditional academic boundaries. The Lassonde School of Engineering currently offers fully accredited and innovative programs in Computer Engineering, Geomatics Engineering, and Space Engineering. We are currently expanding with new programs in Software Engineering, Electrical Engineering, Mechanical Engineering, Civil Engineering, and Chemical Engineering. The Software Engineering position will be in York's Department of Computer Science and Engineering (to be renamed Department of Electrical Engineering and Computer Science) which is a leading academic and research department in Canada with 45 research-active faculty members, offering a range of undergraduate programs in Computer Science, Computer Engineering, Software Engineering, Digital Media, and Computer Security, as well as research intensive MSc and PhD degrees in Computer Science and Engineering.

Applications must be received by November 15, 2012 along with a CV, statement of contribution to research, teaching, and curriculum development, and three reference letters at:

Chair, Search Committee for Software Engineering
Lassonde School of Engineering
York University
4700 Keele Street
Toronto, ON, Canada M3J 1P3,
Tel: (416) 650-8135
Email: eng@yorku.ca

For further details, please visit http://www.yorku.ca/acadjobs.

All York University positions are subject to final budgetary approval.

UNIVERSITY OF WATERLOO | **IQC** Institute for Quantum Computing

Postdoctoral Fellowships
at the Institute for Quantum Computing

IQC.UWATERLOO.CA

The Institute for Quantum Computing is inviting applications for postdoctoral positions in all aspects of quantum information processing, bridging areas from fundamental theory to physical implementations.

Quantum information science aims to develop transformational technologies that harness the power of quantum mechanics. The Institute for Quantum Computing (IQC) is a world-leading institute for research in quantum information at the University of Waterloo. IQC has 16 faculty members whose research programs span the areas of Applied Mathematics, Chemistry, Combinatorics & Optimization, Computer Science, Electrical & Computer Engineering, and Physics & Astronomy. IQC members have the opportunity to interact with other research groups at the University, such as the Centre for Applied Cryptographic Research, and with the nearby Perimeter Institute for Theoretical Physics. New infrastructure including a state-of-the-art nanofabrication and metrology centre is supporting an expansion of our experimental research programs. This year, IQC will expand into the new Mike and Ophelia Lazaridis Quantum-Nano Centre, a state-of-the-art facility at the heart of the University of Waterloo campus, which will provide unprecedented opportunities for research, collaboration and innovation.

IQC seeks promising candidates to help advance our understanding of the foundations of quantum information, to develop new quantum applications and algorithms, and to implement these ideas in laboratory experiments and engineered systems. A PhD and proven ability, or strong potential, for excellence in research is required.

To learn more about IQC and for information on how to join as a postdoctoral fellow, please visit the positions link at **iqc.uwaterloo.ca**

The preferred deadline for receiving applications is November 15, 2012, but late applications may be considered until positions are filled. Candidates are also encouraged to visit the NSERC (**www.nserc-crsng.gc.ca**) website to learn about the prestigious Banting Postdoctoral Fellowship. Please note the very early deadline of November 2, 2012 for Banting PDF applications; qualified candidates should contact a potential supervisor immediately.