

## PCAST Finds IT R&D Critical to U.S. Competitiveness, Calls for Renewed Federal Investment

Backed by strong support from the White House, the President’s Council of Advisors on Science and Technology (PCAST) last month released a biennial report about the nation’s 14-agency, \$4.3 billion Networking and Information Technology Research and Development (NITRD) program – emphasizing the critical role of advances in networking and information technology (NIT) to U.S. economic competitiveness, and calling upon the nation to “continue to innovate more rapidly and creatively than other countries in important areas of NIT” in order to sustain and improve quality of life.

The nation’s CTO and CIO joined other leading White House officials, co-chairs of PCAST’s NITRD review working group, and external discussants at the December 16 public release of the “Designing a Digital Future” report in Washington.

Among the participants, Office of Science and Technology Policy Deputy Director for Policy Tom Kalil

summarized why NIT R&D is so important to the administration:

- The information revolution is far from over, with a number of core challenges in computer science yet to be addressed;
- NIT can accelerate the pace of discovery in virtually every scientific domain;
- NIT is having a huge impact upon the nation’s economy, contributing to over two-thirds of the increase in productivity since 1995; and
- There exists a direct relationship between NIT and our nation’s grand challenges – healthcare, education, energy, open government, etc.

Kalil’s comments were consistent with PCAST’s key findings:

“Advances in NIT are crucial to achieving our major national and global priorities... NIT will be an indispensable element in buildings that manage their own energy usage; attention-gripping, personalized methods that reinforce classroom

lessons; continuous unobtrusive assistance for people with physical and mental disabilities; and strong resilience in cyberwarfare... NIT advances accelerate the pace of discovery in nearly all other fields.”

And they came just days after then-National Economic Council Director Larry Summers delivered impassioned remarks about the significance of IT to the nation’s economy (see <http://tinyurl.com/cccblog-pcast-healthit>):

“If you look at the economic history of the last 150 years, it’s a lot about the steam engine, it’s a lot about electricity, it’s a lot about things that came from the automobile – all of which gave people capacities to do things they hadn’t done before and touched almost every aspect of life. And *this* generation’s technology is information technology with all that it makes possible, and we need to make sure that it is exploited as widely and as pervasively as possible. And what better time to accelerate investment in information technology than at a time of substantially unemployed resources that can be put to work providing jobs that are important in the short term and providing capabilities that are profoundly important in the long run.”

### PCAST’s Key Recommendations

PCAST makes three key recommendations in the report, beginning with a call for new multi-agency NIT R&D initiatives that support high-risk/high-reward research in areas of particular importance to national priorities:

- **Health information technology:** make possible comprehensive lifelong multi-source health records for individuals; enable both professionals and the public to obtain and act on health knowledge from diverse and varied sources; and provide appropriate information, tools, and assistive technologies that empower individuals to take charge of their own health and healthcare to reduce cost. Importantly, PCAST recommends we “[go] well beyond the current national program to adopt electronic health records.”
- **Energy and transportation:** dynamic power management broadly; interoperable standards for real-time control; low-power systems and devices; and improved surface and air transportation.

PCAST Finds IT R&D Critical - Continued on Page 4

| Inside CRN                           |   |
|--------------------------------------|---|
| Expanding the Pipeline.....          | 2 |
| Undergraduate Award Winners.....     | 3 |
| Tapia Conference Reshaped.....       | 4 |
| Mid-Term Elections Affect Funding .. | 5 |
| Tech-Mediated Social Participation.. | 6 |
| Professional Opportunities.....      | 7 |

## Pursuing *Your* Visions for the Future

By Erwin P. Gianchandani, Ed Lazowska, and Susan L. Graham

### Computing Community Consortium

In the three years since the inception of the Computing Community Consortium—an experiment by the National Science Foundation and the Computing Research Association to create an entity that mobilizes the community to debate long-range research challenges and builds consensus around specific research visions—researchers in many different areas of our field have stepped to the forefront to lead activities that have defined key questions shaping our intellectual future. Yet undoubtedly there are many areas and ideas still unexplored and, as we begin a new year, **we encourage you and your colleagues to pursue your boldest, most innovative concepts with us—today!**

CCC-funded visioning activities have covered a wide range of computing research areas, including cyber-physical systems, health information technologies, big data, theory, free and open source software, computer architecture, and interactive technologies (a full list appears at: <http://cra.org/ccc/activities.php>). In addition, individuals (and, in some cases, small teams) have authored White Papers on topics spanning transportation, energy and sustainability, “P4 medicine,” and data analytics (see <http://cra.org/ccc/>

<http://cra.org/ccc/> initiatives.php). And as reported in this space last November, the results of these activities are now informing our nation’s leaders on new directions and paths for Federal R&D funding.

For example, thanks in large part to the terrific efforts of **Henrik Christensen** at the Georgia Institute of Technology, **Matt Mason** at Carnegie Mellon University, and **Vijay Kumar** at the University of Pennsylvania, and several others, the CCC-led **Robotics Roadmap** project has resulted in numerous new funding programs, such as **RTD2: Research for Robotics** which was announced by the White House last fall (for details, see: <http://www.whitehouse.gov/blog/2010/09/15/rtd2-research-robotics>). Similarly, **Beverly Woolf** of the University of Massachusetts at Amherst has been working closely with Federal officials to explore possible initiatives in education technology, largely stemming from the CCC’s **Ed Tech Roadmap** (<http://cra.org/ccc/edtech.php>). Later this spring, CCC leadership will begin to pursue action on a series of White Papers describing the role of data mining, machine learning, predictive modeling, and others, in the context of national priorities such as healthcare, energy, and transportation.

Although the CCC is pushing ahead on a number of new visioning topics (stay tuned for more details in

the coming issues of the *CRN*—and you can also keep up to date through our blog at <http://cccblog.org>), **we welcome your involvement today.** Do you have audacious and inspiring research challenges for the field? Can you work with others to refine and state them in compelling ways? And, guided by the CCC, would you be willing to devote time and energy to do the extensive work required to connect the resultant visions to initiatives at NSF and at mission agencies? If so, please consider submitting short visioning proposals to the CCC (for instructions, see <http://cra.org/ccc/visions.php>). Our goal is to help provide leadership to facilitate exciting visions put forward by the computing research community. To do that ably, we need your constant involvement! ■

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Expanding the Pipeline

Mentoring Across the Pipeline: CRA-W Programs at the Grace Hopper Celebration of Women in Computing

By Joann J. Ordille

The Computing Research Association Committee on the Status of Women in Computing Research (CRA-W) continued its central role in the Grace Hopper Celebration of Computing last year. CRA-W provided mentoring across the pipeline in a series of workshops targeted at undergraduates, graduate students, and early career researchers. In conjunction with AT&T, CRA-W sponsored a luncheon for researchers in industrial and government laboratories.

CRA-W’s role goes far beyond these programs. Past CRA-W Co-Chair Lori Pollock was the Program Co-Chair of the Conference and CRA-W Board Member Tracy Camp was the General Chair. Members of the CRA-W Board participated across the spectrum of conference committees with CRA-W filling formal slots on both the academic and industrial advisory committees for the conference. This full participation stems from CRA-W’s role as a founding sponsor of the conference, and its history of having participated in every Grace Hopper Conference in a significant way.

On September 28, 2010, the Grace Hopper Conference opened again to a sold-out attendance of 2,147, a 37 percent increase over last year’s sold-out participation. This year participants arrived from 29 countries and included members of industry, government and academia as well as many students. One could overhear lively discussion about the topics of change and cross-gender collaboration raised by Keynote Speakers Carol Bartz, CEO of Yahoo! and Duy-Loan Le, Senior Fellow at Texas Instruments. The full program included presentations from other executives as well and from experts in industry, government, and academia. Some of the experts were students presenting their work for the first time, and change agents who had made significant positive social impacts with their work in computing.

CRA-W’s career mentoring workshops for undergraduates sought to answer the questions:

- What is research?
- Is research for me?
- How do I become a researcher?

Professor Nancy Amato of Texas A&M, Dr. Dilma Da Silva of the IBM T.J. Watson Research Center, and undergraduate Katie Wolf of the University of Minnesota led a wide-ranging discussion about identifying research questions in the context of industry and academia, and the joy of pursuing those topics. Professor Amato discussed the special challenges of multi-disciplinary research, explaining that it is not necessary to be an expert in all the disciplines involved. What is necessary is learning to speak the language of other disciplines well enough to converse with collaborators. Katie Wolf connected directly with the audience by describing her research experiences as an undergraduate.

In the “Is research for me?” session, Professor Susan Roger of Duke led

a lively interaction facilitated also by Professor Ellen Walker of Hiram University, PhD candidate Arbrita Chakravarty of Duke, and PhD candidate Susanna Ricco of Duke. Students gained direct experience of thinking through a research problem, and discussing it with others.

In “How do I become a researcher?” Professor Maria Gini, University of Minnesota; Professor Cecilia Aragon, University of Washington, and PhD candidate Katherine Panciera, University of Minnesota, illuminated the process of applying to and starting out successfully in graduate school. Student concerns were laid to rest by a rousing discussion of all the reasons **not** to attend graduate school and the alternative reasons **to** attend.

All the sessions highlighted the importance and usefulness of undergraduate research experiences. These experiences help answer the question of “whether research is for me,” and add to the appeal of applications to graduate school. For summer and year-long research experience programs funded by CRA-W, see: [www.cra-w.org/UgradResearch](http://www.cra-w.org/UgradResearch). Students who want to do research and faculty who want to act as mentors are encouraged to apply to the program. Several of these programs are sponsored in conjunction with the Coalition to Diversify Computing (CDC) ([www.cdc-computing.org](http://www.cdc-computing.org)), which seeks to encourage the participation of underrepresented groups in computer science.

CRA-W and CDC offer additional support for recruiting undergraduates to enter graduate school through their Distinguished Lecture Series ([www.cra-w.org/dls](http://www.cra-w.org/dls)). The series brings distinguished lecturers from underrepresented groups to colleges, universities and regional conferences. In conjunction with the lecture, a panel discussion is held on the topics of this mentoring workshop.

The graduate workshops sought to answer the questions:

- How do I enjoy and succeed in graduate school?
- How do I build my professional network?
- What does it take to do great research?

Professor Elizabeth Mynatt of Georgia Tech, Professor Erika Shehan Poole of Penn State, and Dr. Jane Prey of Microsoft Research led an enthusiastic discussion of ways to flourish in graduate school.

Dr. Mary Czerwinski of Microsoft and Professor Soha Hassoun of Tufts then led students in an interactive exercise on building their professional network. Students practiced elevator pitches, and learned both how to and how **not** to network.

Dr. Nina Bhatti of HP Labs and Professor Mary Jean Harrold of Georgia Tech led the final session in what it takes to do great research. The discussion included picking a research advisor and a PhD topic, finding funding for research after graduate

school, and venturing out into new and important research areas.

These three sessions represent a small overview of the full multi-day program in CRA-W’s Grad Cohort for Women ([www.cra-w.org/gradcohort](http://www.cra-w.org/gradcohort)). This program, sponsored by Google and Microsoft, provides both career-building and community-building sessions. Participants gain new skills and new contacts to help them succeed in graduate school and their subsequent careers.

The early career workshop addressed the questions:

- How do I start my own research program?
- How do I become a leader in my field?
- How do I get promoted?

Professor Andrea Danyluk of Williams, Professor Lise Getoor of the University of Maryland, and Dr. Ashley Stroupe of the Jet Propulsion Lab helped participants learn to create a research program whether they worked at a teaching college, a research university or a government/industrial laboratory.

Dr. Deb Agarwal of Lawrence Berkeley National Lab, Professor Carla Gomes of Cornell, and Dr. Irene Greif of IBM’s Center for Social Software then led participants through the many aspects of establishing their leadership in the field. One highlight was Dr. Greif’s discussion of the creation of the computer-supported cooperative work research area.

In the final session, Dr. Laura Haas, IBM Fellow and Director of Computer Science at IBM Almaden, and Professor Ellen Zegura, Chair of the School of Computer Science in the College of Computing at Georgia Tech, outlined the qualities and activities that lead to being promoted in academia or industrial research.

These three sessions provide a subset of the multi-day program in the CRA-W’s Career Mentoring Workshops ([www.cra-w.org/mentorWrkshp](http://www.cra-w.org/mentorWrkshp)). There are three variations of these workshops—for research faculty, for faculty in undergraduate education, and for researchers in government and industrial labs.

In addition to these programs, CRA-W and AT&T sponsored a luncheon for researchers and others interested in industry and government labs. The meeting spawned the idea of having a half-day session for labs researchers at the next Grace Hopper Conference. Look for details of that in future months.

This year’s programs were coordinated by Dr. Joann Ordille of Avaya Labs Research. Next year’s programs at the Grace Hopper Conference will be coordinated by Dr. A. J. Brush of Microsoft Research.

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

Computing Research Association

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# CRA Announces Outstanding Undergraduate Researcher Award Winners

The Computing Research Association honors the recipients of its 2011 Outstanding Undergraduate Researcher Awards, sponsored this year by Microsoft Research. Mitsubishi Electric Research Labs (MERL) and Microsoft sponsor the awards in alternate years.

## Winner, Female Award



Hijung (Valentina) Shin is a Senior at Princeton University majoring in Computer Science.

Over the years, there have been a number of projects seeking to use Computer Science techniques to help reassemble archeological artifacts such as broken wall paintings. However, these projects have typically used brute force approaches to matching pieces and have been only somewhat successful. Valentina pioneered a completely different approach based on detailed analysis of the way frescoes break. She created an algorithmic fracture model through a semi-automatic study of frescoes that have been reconstructed by hand. This model of the breaking process shows great promise for improving the automatic matching of pieces. The model also opens the door on other possibilities such as understanding what kinds of events caused the destruction of a particular wall.

In addition to quality research, Valentina is a star student ranked as one of the best in the entire university. She also tutors in Princeton's Engineering Education for Kids program.

## Winner, Male Award



Peter Bailis is a Senior at Harvard University majoring in Computer Science. Peter created a system for proactively

reducing average-case processor temperatures by injecting idle cycles into computation, decreasing cooling requirements. Leading a team of two undergraduates, one graduate student, and two faculty members, he extended this approach to large data centers and analytically determined that it could enable broader geographical adoption of free-cooling techniques (e.g., leveraging cold outside air). Peter also has worked on the Harvard RoboBees project, where he explored the relative importance of shared and private information in honeybee foraging models, which resulted in a paper that won the Best Student Paper award at a swarm intelligence conference. He has

also contributed to the ongoing design and construction of a distributed operating system for micro-aerial vehicle swarms.

In addition to the research above, Peter has worked as a volunteer at the Harvard-based Small Claims Advisory Service, managing their IT infrastructure and assisting clients with legal requests.

## Winner, Male Award



Patrick Wendell is a Senior at Princeton University majoring in Computer Science.

A key problem in deploying Internet-scale systems is directing client requests to the best (closest/most responsive) instance of a web site. Patrick designed, built, and deployed a system called DONAR that overcomes the limitations of the current state-of-the-art of replica selection and has both conceptual and practical contributions. The work realizes optimal replica selection through a robust distributed algorithm that is both stable and effective. He demonstrated this through formal proofs, extensive simulations, and real deployment. Today, DONAR runs on a network of global servers and provides replica selection for CoralCDN, a large content distribution network and MeasurementLab, a distributed research platform.

This past summer, Patrick worked at Cloudera. There, he quickly became one of the trusted committers to Apache's Avro—the RPC networking layer to be used in Hadoop, a distributed computing framework. Patrick's work on Avro is designed to improve the performance, maintenance, and debugging of large distributed systems.

## Runner Up, Male Award



Mitchell Koch is a Senior at Rice University majoring in Computer Science.

Mitchell's main research focus has been on inferring models of signaling networks from large data sets containing expression levels of key proteins in human T-cells. Learning networks from data is computationally very hard, scaling super-exponentially in the number of nodes. Mitchell devised a clever method for assessing the confidence of connections and discovered six new crosstalk mechanisms in the T-cell signaling pathway.

Recently, he has developed new

algorithms for learning dynamic Bayesian networks. He began doing research while only a sophomore in high school. His first project involved detecting cancerous lesions in images of prostate biopsies. He transitioned into the research track described above as a junior in high school and has continued it during his years at Rice.

## Runner Up, Male Award



Mark D. Leiserson is a Senior at Tufts University majoring in Computer Science.

New high-throughput genomic experiments have resulted in massive graphs that can be mined for data about groups of genes that work together. One of the most useful patterns to look for in these graphs are small tightly connected subgraphs that have large negative maximum cuts. Mark (Max) was the lead student researcher on a project to automatically locate such subgraphs. He implemented the entire algorithm and devised a clean and elegant technique for pruning the results. In this work he has shown both computational and biological sophistication.

Since the summer after his freshman year at Tufts, Max has worked on algorithmic problems in Computational Molecular biology. His first project resulted in his co-authoring a publication in RECOMB 2009; currently he is the first author on a paper submitted to RECOMB 2011.

## Finalists, Female Award

Jacqueline Addesa, Virginia Tech; Eleanor Avrunin, Yale University; Laura Bartha, Queen's University; Erin McManus, Vanderbilt University; Robin Miller, University of Rochester; and KatieAnna Wolf, University of Minnesota.

## Finalists, Male Award

Jory Denny, Texas A&M University; Francis Ferraro, University of Rochester; Harry Gao, College of William and Mary; Stephen Miller, UC Berkeley; Todor Mollov, UC San Diego; and Adrian Vladu, Brown University;

## Honorable Mentions, Female Award

Dania Alvarez, University of Louisiana at Lafayette; Sarah Cannon, Tufts University; Jun Hui Erh, Cornell University; Sarah Ferraro, Harvey Mudd College; Heather Friedberg, University of Pittsburgh; Leilani Gilpin, UC San Diego; Joy Kim, University of Washington; Melisa Kudeki, University of Illinois at Urbana-Champaign; Kay Ousterhout, Princeton; Daniela Retelny, Cornell University; Elizabeth

Sams, University of North Carolina at Chapel Hill; Cleo Schneider, Mount Holyoke College; Cathy Tianjiao Zhang, Mount Holyoke College; Jessica Wetstone, University of Pennsylvania; and Sophia Yang, Pomona College.

## Honorable Mentions, Male Award

Jacob Bank, Cornell University; Shrutarshi Basu, Lafayette College; John Bohlmann, Purdue University; Trevor Brown, York University; Desai Chen, Carnegie Mellon University; Christopher Cunningham, University of Virginia; Jeffrey Deuel, Texas A&M University; Akihiro Eguchi, University of Arkansas; Daniel Fielder, Harvey Mudd College; Nicholas FitzGerald, University of British Columbia; Ronald Garduno, University of New Mexico; Andrew Gocke, Northwestern University; Daniel Hefner, University of Louisiana at Lafayette; Cipta Herwana, Columbia University; Yuxing Huang, Williams College; Forrest Iandola, University of Illinois at Urbana-Champaign; Christopher Johnson, Knox College; Antony Kaplan, New York University; Sean Kelley, Tufts University; Samuel Kerr, Purdue University; Tsvetan Komarov, University of Nevada, Reno; Kevin Lewi, Carnegie Mellon University; Jake Lussier, University of Notre Dame; Eric McCann, University of Massachusetts, Lowell; Aleksander Morgan, University of Virginia; Thomas Morgan, Massachusetts Institute of Technology; Fred Morstatter, Arizona State University; Casey J. O'Brien, Marquette University; Jairo Pava, Florida International University; Patrick Plonski, University of Minnesota; Brandon Plost, University of Texas at Austin; Jeff Rasley, University of Washington; Vinicio Reynoso, Loyola University Chicago; Aaron Rosenfeld, Drexel University; Abhishek Sarkar, University of North Carolina at Chapel Hill; R. Colin Scott, University of Washington; Ben Shirley, University of Western Ontario; Christopher Steinmuller, Louisiana State University; Nicolae Sturca, University of Texas at Austin; Peter Terlep, DePauw University; Kyle Thurow, Marquette University; Stephen Tu, UC Berkeley; Michael Ty, Princeton University; Joseph Wantroba, DePaul University; Samuel White, University of Rochester; Linfeng Yang, Harvard University; Anak Yodpinyanee, Harvey Mudd College; and Jiaqi Zhai, Cornell University.

This year's selection committee included Richard Waters (Mitsubishi Electric Research Labs), Chair; Ed Fox (Virginia Tech); Gary Leavens (University of Central Florida); Anna Lubiw (University of Waterloo); and Chris Stone (Harvey Mudd College).

The Outstanding Undergraduate Researcher Award competition is announced each year in mid-August; nominations are due in mid-October; and the results are announced December 1. For details, see: <http://www.cra.org/awards/undergrad/> ■

# Tapia Conference 2011: Reshaped by Feedback

By David Patterson

To bring a fresh perspective, the founders of the Richard Tapia Celebration of Diversity Conference chose a General Chair for the 10-year anniversary who had never attended the conference. When Richard Tapia himself called, it was such an interesting opportunity that I couldn't decline. After highlighting the program—to be held April 3-5 in San Francisco—I'll explain the process that led to it.

Our top goal was to find luminaries and rising stars who are also great speakers. Based on feedback (see below), we've increased the number of plenary speakers:

- Blaise Aguera y Arcas of Microsoft, who *Technology Review* selected as a 2008 Young Innovator, will give a talk on “*Dynamic and Augmented Reality for Maps.*”
- Deborah Estrin, the Jon Postel Professor of Computer Science at UCLA and a member of the National Academy of Engineering, will talk on “*Participatory Sensing: From Ecosystems to Human Systems.*”
- Alan Eustace, Senior Vice President of Engineering and Research at Google, will give an after-dinner talk entitled “*Organizing the World's Information.*”
- Illya Hicks, Associate Professor in the Computational and Applied Mathematics Department at Rice University and recipient of the 2005 Optimization Prize for Young Researchers, will talk on “*Discrete Optimization Techniques for Network Analysis.*”
- Ayanna Howard, Associate Professor in the ECE School at Georgia Tech who *Technology Review* selected as a 2003 Young Innovator, will give the talk “*SnoMotes—Robotic Scientific Explorers for Understanding Climate Change.*”
- John Kubiatiowicz, CS Professor at UC Berkeley who U.S. News and World Report named as a Person

to Watch in 2004, will give the talk “*Reinventing Operating Systems for Manycore Computing.*”

- Patty Lopez of Intel, a winner of Hewlett Packard's Technical Leadership Award in 2001 and co-founder of Latinas in Computing, will talk on “*Testing to Ensure that Moore's Law Continues.*”
  - Irving Wladawsky-Berger, former chair of the IBM Academy of Engineering and the 2001 HENAAC Hispanic Engineer of the Year, will give the Ken Kennedy Memorial Lecture on “*The Changing Nature of Research and Innovation in the 21st Century.*”
- The rest of the program ([http://tapiaconference.org/2011/prog\\_sched.html](http://tapiaconference.org/2011/prog_sched.html)):
- Keeps popular sessions from 2009 (doctoral consortium, resume workshop, grad school workshop, career advice workshop, student poster session, town hall, banquet, and dance).
  - Adds a few fresh ones as experiments for 2011 (lunch with successful local people, opportunity poster session and meetup, see the city), and
  - Offers five “Birds of a Feather” or panel sessions proposed and run by attendees.

## Reshaping Tapia

How should we evaluate which ideas best match Tapia 2011? We decided to first reflect on its mission, and write it down. As it would shape the program, there was a lot of discussion and even disagreements between founders of the conference. The result:

- “*The goal of the Tapia Conferences is to bring together undergraduate and graduate students, professionals, and faculty in CS&E from all backgrounds and ethnicities to:*
- *Celebrate the diversity that currently exists in CS&E;*
  - *Connect with others with common backgrounds, ethnicities, and gender*

*so as to create communities that extend beyond the conference;*

- *Receive advice from and make useful contacts with CS&E leaders in academia and industry; and*
- *Be inspired by great presentations and conversations with successful people in CS&E who have similar backgrounds, ethnicities, and gender to the attendee.”*

Next we decided to ask students what they liked in addition to asking past organizers, much like getting feedback from students as well as past instructors when teaching a new course. We polled Tapia 2009 attendees in May 2010 to see which sessions they attended and enjoyed and to solicit new ideas. From the 141 respondents (35% of Tapia 2009), we saw strong positive reviews for the resume workshop, the student poster session, the doctoral consortium, the town hall meeting, the banquet, and many invited speakers. We also learned that many talks based on submitted papers were unpopular, the many parallel events were poorly attended, the conference needed more visibility, and the conference was probably one-half day too long.

We brainstormed about the feedback and came up with a tentative plan and several new ideas that we tested with a follow-up survey in June. Although a few proved unpopular, the 2009 attendees liked the following:

- Given that more than two-thirds of attendees are students, make sure most events are attractive to students.
- Have more single-track sessions so that attendees have more opportunities to share the same experiences.
- Take advantage of being in San Francisco by having one long lunch with successful Silicon Valley people.
- Try leaving the hotel to see local sites so as to bond and to encourage attendance at other sessions.
- Add some panels or Birds of a Feather sessions based on

proposals by attendees so that more people can participate in shaping the program. There was also one thought-provoking comment in the first survey that influenced our thinking: *Create opportunities for people to do something REAL together. ... interviews tell us that people need good reasons to have enduring relationships. ... more creativity in hooking people up is needed.*

In response, we are trying to link students with professionals and professors who have research opportunities. Hence, in addition to the poster sessions where students show off what they have done, we added an *Opportunity* Poster Session for students to learn what they might want to do next. First, some professionals and professors will try to recruit students to work remotely on research projects. (With email, Twitter, Skype, and so on, many projects are already geographically distributed; most open source projects involve people who have never met!) In addition to research projects, the Opportunity Poster Session will also include universities recruiting for graduate school and companies hoping to hire. A “meetup” session on the final afternoon, including both the student and the opportunity posters, acts as a networking opportunity and a chance to solidify enduring relationships.

Given the importance of feedback on Tapia 2011, we'll survey during and after the conference to see what worked.

We hope to see you and your students April 3-5 in beautiful San Francisco for what we believe will be a stimulating and memorable event. ■

**David Patterson** is the Pardee Professor of Computer Science at the University of California at Berkeley and General Chair of the 10th Anniversary Tapia Conference 2011 in San Francisco.

## PCAST Finds IT R&D Critical to U.S. Competitiveness, Calls for Renewed Federal Investment from Page 1

- **Security and robustness of cyber-infrastructure:** more effective ways to build trustworthy computing and communications systems; better defense mechanisms for today's infrastructure; and fundamentally new approaches for making cyber-infrastructure truly resilient to cyber-attack, natural disaster, and inadvertent failure.
- PCAST further calls for increased investment in a number of fundamental NIT research areas that will accelerate progress across a broad range of priorities, including: privacy and security; human-computer interaction; large-scale data analytics; and computing in the physical world (i.e., sensor and control networks, robotics, etc.).
- A third PCAST recommendation is to create a new standing committee of leading academic and industrial

NIT experts to help guide NITRD and provide strategic advice for the program.

## Improving How we Classify NIT R&D

As part of its NITRD review, PCAST found that current budget reporting mechanisms do not accurately detail the Federal investment in NIT R&D. Instead, many agencies use existing IT to advance R&D in their own fields, leading to substantial overstatement of the true Federal investment in core NIT R&D. For example, a review of NIH's FY 2009 commitments found between only two and 11 percent of the \$1 billion reported to NITRD could actually be ascribed as core NIT R&D. The rest corresponded to applications constituting important infrastructure to support R&D in biomedicine.

As PCAST working group co-chair Ed Lazowska of the University of Washington emphasized, “[This] is an absolutely appropriate expenditure, and it's an essential expenditure; it's important that NIT drives forward all other fields of discovery. On the other hand, these are for the most part not investments that are pushing the forefront of NIT... What we advocate is simply that the budget categories make this clear, so that the nation knows how much it is actually investing in driving this critical field forward. Today, we believe we are investing far less in advancing this field than one would believe from the budget reports.”

## Federal Investment is Critical

Importantly, while industry continues to make major contributions to the field, PCAST notes in its report that we must not “equate the very large

industry R&D investment in NIT with fundamental research of the kind that is carried out in universities and a small number of industrial research labs. The vast majority of industry R&D in NIT is focused on development... fundamental research with the potential for future transformational application represents a fraction of overall industry R&D in NIT... [and thus] Federal investment in NIT R&D is and will remain essential.”

## For More Information:

- <http://tinyurl.com/pcast-nitrd-report>
- <http://tinyurl.com/pcast-nitrd-video>
- Continuing coverage of the report's impact on the CCC Blog (<http://cccblog.org>) and CRA's Policy Blog (<http://cra.org/blog>) in the coming months. ■



# Mid-Term Elections Throw Federal Science Funding in Doubt

## Science Agencies May See Flat Funding or Worse in Coming Year, Beyond

By Peter Harsha

With a change in the balance of power in Congress after the November congressional elections, including a shift in the leadership of the House of Representatives, prospects for any significant increase in funding for federal science programs have dimmed considerably, though perhaps are not yet completely extinguished. As this goes to press in early December, funding increases for key science agencies approved by congressional appropriators for the 2011 fiscal year appear in jeopardy, as Democrats in the lame-duck Congress weigh whether to attempt to push through an omnibus spending bill before the end of the session or punt the uncompleted spending measures to the new Congress in January.

It appears likely that the leadership will elect to pass a stop-gap spending measure known as a Continuing Resolution (CR) for fiscal year 2011 (which began October 1, 2010) that will continue to fund the operations of government at fiscal year 2010 levels. What is not yet known as this is written is the length of that CR. Fiscally conservative members of both parties are lobbying the leadership to consider passage of a CR that would extend until the start of FY 2012 in October 2011, effectively giving up on the FY 2011 appropriations cycle. Doing so, they argue, would effectively freeze discretionary spending at FY 2010 levels, leaving federal agencies forced to cut programs to fund rising personnel costs, and

perhaps prohibiting them from starting any new programs or hiring new personnel for the duration of the fiscal year.

However, a Senate vote in December that failed to ban congressional earmarks in the authorization and appropriations process—a ban proposed by the so-called Tea Party wing of the GOP but opposed by eight Republican senators—may have given Democratic leaders some hope that they can secure enough Republican votes to push through the \$1.1 trillion omnibus spending measure before they adjourn the session. The Senate earmark ban was defeated by 59 votes, one short of the supermajority required to ensure the passage of the omnibus.

While details of the omnibus appropriations bill were not available at this writing, it is believed that the bill represents the best chance for the National Science Foundation and National Institute of Standards and Technology to realize significant increases in FY 2011 that congressional appropriators had approved for them earlier in the appropriations process.<sup>1</sup> However, even in this “best case” for the U.S. science community, deal-making with GOP lawmakers still on the fence could mitigate any gains in funding. To entice the support of these undecided lawmakers, the leadership could offer to include such things as a ban on earmarks within the bill, or perhaps an across-the-board cut to spending in the bill that would reduce

or eliminate many of the increases previously approved by appropriators.

A third option is that Congress might elect to pass a CR that expires in February, giving the new session of Congress some time to decide whether to pass an omnibus for FY 2011 or just extend the CR for the duration of the year.

There remains a significant amount of uncertainty in the short-term, but one thing that is certain post-election is that lawmakers feel considerable pressure to cut discretionary spending and work to reduce the federal deficit. House Republicans are rallied behind a plan that would cut back discretionary spending to FY 2008 levels. Such a move would have a devastating effect on federal science agency budgets. If the cuts were applied to the NSF budget, the agency would lose \$620 million in current annual funding; DOE’s Office of Science would lose more than \$1 billion in current funding; and NIST’s core research accounts would lose \$108 million.<sup>2</sup>

However, it is not clear that science budgets would receive the full brunt of the GOP’s planned cuts. There is a growing sentiment in the House and Senate, and amplified by a recent report by a Presidential commission looking for deficit reduction solutions, that investments in research and education are critically important to U.S. economic growth and ought to be protected in any deficit reduction plan. The two chairs of the President’s National Committee on Fiscal Responsibility and Reform—former Republican Senator Alan Simpson (WY) and former Clinton Chief of Staff Erskine Bowles—recommended more than \$200 billion in cuts to government programs through 2015, but also recommended continued investment “in education, infrastructure and high-value R&D.”

While that support is encouraging for advocates of increased science funding, congressional retirements and election results have significantly diminished the number of “congressional champions” for research funding in the Congress. With the retirements of current House Science and Technology Committee chair Bart Gordon (D-TN), Rep. Vern Ehlers (R-MI), and appropriations chairman David Obey (D-WI), along with the election losses of Commerce, Justice, Science Appropriations Subcommittee Chair Alan Mollohan (D-WV), Research and Education Subcommittee ranking member Bob Ingliss (R-SC), and Energy and Environment Subcommittee Chair Brian Baird (D-WA), the science community has lost six powerful voices of support for its issues in Congress—six members who have helped defend the research investment during the appropriations process and helped defend the science community whenever it

faced challenges in either chamber. A key priority for science advocates in the new Congress is identifying and nurturing the next generation of congressional champions for science.

The long-term challenge for Congress is to address the untenable current growth of both mandatory spending, like federal payments for Social Security and health care, and discretionary spending. In this environment, all discretionary spending, including investments in research, will be under heightened scrutiny. Science community advocates will need champions in the Congress to help make the case for continued investment in the months and years ahead.

Those champions will be needed not only for the appropriations battles ahead, but to pass meaningful science policy. The America COMPETES Act, a bill that would reauthorize many federal science and education programs, also appears to have fallen victim to the changing political landscape in Washington. House and Senate leaders, having considered markedly different versions of the bill in each chamber last year, were unable to work out a compromise measure in time to make it on the lame-duck calendar. Instead, Congress pushed forward with more politically salient votes on extending expiring tax breaks and attempting to eliminate the Department of Defense’s “Don’t Ask, Don’t Tell” policy covering gay and lesbian servicemen and women. COMPETES will have to be reintroduced in the new Congress and, as a result, will likely contain much more modest authorizations for the NSF, DOE Science and NIST budgets, and support only for programs specifically designed to increase the participation of U.S. students in math and science disciplines.

The end of the 111th Congress in December and the beginning of the 112th Congress in January promises to be dynamic and full of challenges for the science advocacy community. For all the latest details about how the landscape is shaping up, as it happens, visit CRA’s Computing Research Policy Blog at: <http://cra.org/blog>. ■

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**Notes:**

<sup>1</sup> House and Senate appropriators approved increases of over \$340 million to NSF’s research accounts and more than \$26 million to NIST’s core research budget in FY 2011, but votes by the full House and Senate on the appropriation bill containing those increases were postponed until after the election.

<sup>2</sup> In percentage terms, NSF would lose 8.4 percent of its proposed FY 2011 budget, DOE Science would lose 20.3 percent, and NIST would lose 15.2 percent.

**DREU: Distributed Research Experiences  
for Undergraduates**

*(formerly the DMP, Distributed Mentor Project)*

Application Deadline: **February 15, 2011**

Details:  
<http://parasol.tamu.edu/dreu/Application.php>

**CRA Service Awards  
2011**

**Distinguished Service Award**

**A. Nico Habermann Award**

Nominations Due: **January 28, 2011**

Details:  
<http://www.cra.org>

# Promoting a National Initiative for Technology-Mediated Social Participation

By Ben Shneiderman, Jennifer Preece and Peter Pirolli

Social media such as Facebook, Twitter, blogs, wikis, Flickr, and YouTube have garnered a billion users and their popularity is spreading rapidly, particularly on mobile devices. *Technology-mediated social participation (TMSP)* is a useful term for describing how these social media tools, user-generated content sites, discussion groups, problem reporting, and volunteer systems can be applied to national priorities. Provocative examples suggest transformative applications for healthcare/wellness, disaster response, energy sustainability, cost-effective education, and economic health. Additional new missions for these sociotechnical infrastructures include cultural heritage, political participation, environment/climate protection, public safety, international development, and local civic involvement.

While community activists and government staffers are dealing with many practical implementation aspects, these social media applications represent an exciting research topic for computer, information, and social scientists. For example, researchers are just beginning to understand how improved designs can more effectively support: 1) trust among collaborators so they can rapidly resolve their differences and act effectively when needed; 2) decision-making by responsible leaders (integrating authoritative guidance from respected parties, while building a searchable archive of case studies for future consultation); and 3) entrepreneurial and community projects that depend on reaching relevant local markets and niche audiences.

Recently, the National Science Foundation funded a pair of workshops to explore these very issues about TMSP. The workshops were held in Palo Alto, CA, in December 2009 and Arlington, VA, in April 2010 (<http://www.tmsp.umd.edu>). More than 60 leading faculty and graduate students from a variety of disciplines, along with representatives of key corporations, government agencies, and non-government organizations, participated. A key goal of this activity was to encompass civic efforts that would benefit local, regional, national, and international communities.

The breakout groups developed six papers covering scientific foundations, infrastructure for research, design issues, health/wellness, open government, and educational reforms. These papers—along with an introduction summarizing the effort and key conclusions—comprised a special November 2010 issue of *IEEE Computer*. Among the highlights:

- The report on “Social media technology and government transparency” indicated how much progress has already been made in data access, but how

much more is needed to achieve successful collaboration and participation.

- The report on “Social participation in Health 2.0” gave a rich set of possibilities for healthcare/wellness projects spanning personal health, public health, and clinical health research.
- The innovative ideas for setting educational priorities spanned K-6, Middle School, High School, Undergraduate and Graduate education, and then described lifelong learning and cooperative extension services for business.

A common theme across the articles was to apply social participation strategies to the research efforts by establishing collaboratories to coordinate research, sharing data and results, enabling active communities of practice, and promoting public awareness.

The workshop participants also agreed that, as national initiatives are launched in several countries to dramatically increase research and education on social media, a coordinated approach across the computing, information, and social sciences communities will be helpful. Clearly stated research challenges should have three key elements:

1) **Close linkage to compelling national priorities.** A rapidly growing range of websites enable residents to report emergency situations involving storms, fires, earthquakes, highway accidents, and crimes to local, national and international authorities as well as traditional media outlets. For example, recent efforts in the aftermath of Haiti’s earthquake have inspired new strategies for coordination among aid agencies, innovative geo-mapping tools, and rapid development of translation software. Similarly, NIH’s Office of Behavioral and Social Sciences has launched two grant programs to apply social media to health/wellness priorities such as smoking cessation, obesity reduction, diabetes care compliance, and improved consumer health information or discussion groups. Serve.gov enables citizens to volunteer for national parks, museums and other institutions. The Encyclopedia of Life (EoL; <http://eol.gov>) supports scientists and the public to document species across the world, helping to track the earth’s changing biodiversity.

2) **Deep science questions based on established theories and well-defined research questions that address privacy, reciprocity, trust, motivation, etc.** Researchers are making noble attempts to apply a plethora of existing theories from different disciplines with limited success. New frameworks or overarching theories are needed to guide research. Theories will address motivation and incentives for ongoing participation in different types of

systems. For example, what motivates citizens to contribute sightings of organisms to the EoL? How is their motivation different from that of the scientists who must validate the entries? How is the motivation of citizens who respond in emergencies, such as the Hurricane Katrina disaster, Haiti earthquake, or California wildfires different from, or similar to, the EoL participants? Addressing these issues is particularly complex because social interaction, whether online or offline, operates on many levels—societal, community, group, peer-to-peer—often crisscrossing these levels in complex and subtle ways. Successful systems such as Wikipedia and Twitter, which were developed without theory to guide them, are the exceptions rather than the norm. More systems fail than succeed. For example, more than half of the Wikis hosted on MediaWiki fail. The successful systems are increasingly becoming online laboratories in which researchers investigate specific questions. Collectively these research studies provide helpful hints about designing and managing social systems, though care is needed in generalizing findings that tend to be strongly influenced by locally developed social norms and other contextual influences.

3) **Technology research challenges such as security, privacy protection, scalability, visualization, end-user development, distributed data handling for massive user-generated content, network analysis of community evolution, cross network comparison, etc.** A growing circle of researchers is refining algorithmic approaches to “big data” analysis to derive actionable insights related to genuine social questions. Billions of users send billions of messages each day using social software systems. How can researchers learn from this vast data collection, which currently is accessible to only a small number of computer scientists? Part of the answer lies in the development of easily accessible data analysis tools that are usable by other scientists. Such tools will support social network analysis on scales not yet seen by producing meaningful metrics and flexible visualizations that enable researchers

to examine online behavior, study the impact of interventions, and refine guidelines for community managers. Important implementation challenges will include ensuring high levels of privacy and security protection as well as reliability, all on scales never before considered. The database, networking, operating, and mobile systems design challenges are enormous, providing research opportunities for many decades. And beyond the technology platforms, social media systems require continuous monitoring to enable interventions when dangers emerge from scammers, spammers, malicious attackers, and rumormongers. Visual analytics solutions will also help researchers, as well as the far more numerous community managers who need to identify problems and be trained to apply powerful tools to limit dangers.

Ultimately, the *IEEE Computer* special issue serves as a helpful foundation, but much more effort is needed to coordinate interdisciplinary research agendas for each area. Many participants in the TMSP activity believed social media research and applications will have profound societal impacts in the coming decades. For more information, please review the November 2010 issue of *IEEE Computer* or see a recent presentation about TMSP, including discussion with Sonal Shah (White House Director of Innovation and Civic Participation) and Ginny Hunt (Google) at the New America Foundation ([http://www.newamerica.net/events/2010/technology\\_social\\_innovation](http://www.newamerica.net/events/2010/technology_social_innovation)). ■

**Ben Shneiderman** ([ben@cs.umd.edu](mailto:ben@cs.umd.edu)) is Professor of Computer Science and Founding Director of the Human-Computer Interaction Lab at the University of Maryland-College Park; **Jenny Preece** ([preece@umd.edu](mailto:preece@umd.edu)) is Professor and Dean of the University of Maryland’s College of Information Studies; and **Peter Pirolli** ([pirolli@parc.com](mailto:pirolli@parc.com)) is a Principal Scientist at PARC.

## CRA-W Anita Borg Early Career Award

Nomination Deadline:  
**February 15, 2011**

Details: <http://www.cra-w.org/borg>



# Professional Opportunities

## Arizona State University Ira A. Fulton Schools of Engineering *Announcement of Faculty Position in Scientific Visualization*

We are seeking outstanding candidates for a tenured/tenure track faculty position in Scientific Visualization starting August 2011. Individuals will be expected to develop an internationally recognized and externally funded research program, collaborate with scientists and engineers to address major engineering challenges, teach graduate and undergraduate courses, advise and mentor students, and undertake service activities.

### REQUIRED QUALIFICATIONS:

An earned PhD in Computer Science or closely related field with rigorous preparation in one or more core technologies relevant to Scientific Data and Information Visualization including but not limited to Computer Graphics, Large Scale and Complex Data Management/Mining and HCI; excellent teaching and student mentorship ability; demonstrated research excellence and strong communication skills. For senior applicants, an extensive record of excellence in teaching, research and student mentorship is required.

### DESIRED QUALIFICATIONS:

Undergraduate degree in computer science, engineering, or mathematical/physical science;

Educational experience in a U.S. academic institution with demonstrated teaching excellence;

Demonstrated success in multidisciplinary, collaborative research;

Background and interest in one or more of the Fulton Schools research themes of energy, health care, sustainability, security, exploration and/or engineering education.

APPLICATION DEADLINE AND PROCEDURE:

DEADLINE: January 1, 2011; if not filled, every two weeks thereafter until search is closed.

Applicants must submit a letter of application, current vitae, statement of teaching and research interests, and contact information for at least three references to scientific.visualization.faculty@asu.edu. Please address the letter and any questions about the position to the Search Committee Chair, Professor Ronald Askin (ron.askin@asu.edu).

ASU is a Research Extensive university, widely recognized as among the most dynamic educational institutions in the US. The Tempe Campus is located in the heart of metropolitan Phoenix. The Ira A. Fulton Schools of Engineering provide a stimulating environment of research and teaching, with an emphasis on innovation, entrepreneurship, and transdisciplinary collaboration. For more information about Arizona State University, Ira A. Fulton Schools of Engineering, and the School of Computing, Informatics, and Decision Systems Engineering, you are invited to visit <http://engineering.asu.edu> and <http://engineering.asu.edu/cidse>. A background check is required for employment.

Arizona State University is an Equal Opportunity/Affirmative Action Employer

## AT&T Labs – Research

### *Researcher Positions*

AT&T Labs Research, one of the premier industrial research laboratories in the world, is looking for talented individuals to make a difference in the world of communications. AT&T engages in core computer science research, with specific research areas including algorithms, network design and management, mobile computing, speech processing, multimedia, web, social media, visualization, statistics, data management, software systems, cloud computing, security, communications

science, and many more. Our staff includes renowned researchers who have received many significant honors in recognition of their scientific and technical achievements, including fellowships at IEEE, ACM, and SIAM, memberships in the National Academy of Engineering, and recently the Knuth Prize. Access to massive amounts of real-world data, the ability to collaborate with external researchers, the possibility of making an impact by developing solutions that will be used by millions of people, and the freedom to publish our results are just some of the reasons AT&T Labs Research is an exciting place to work.

Outstanding PhD-level candidates at all levels of experience are encouraged to apply. Interviews will be conducted in February 2011. For more information, visit [www.research.att.com](http://www.research.att.com) and click on “Working with us.” AT&T Companies are Equal Opportunity Employers. All qualified candidates will receive full and fair consideration for employment.

## Bloomberg, LP, New York, NY Research and Development *Senior Computer Science Technical Trainer - R&D Training Team NY-C/C++, UNIX*

### The Company

Bloomberg is the world’s most trusted source of information for businesses and professionals. Bloomberg combines innovative technology with unmatched analytic, data, news, display and distribution capabilities, to deliver critical information via the BLOOMBERG PROFESSIONAL® service and multimedia platforms. Bloomberg’s media services cover the world with more than 2,200 news and multimedia professionals at 146 bureaus in 72 countries. The BLOOMBERG TELEVISION® 24-hour network delivers smart television to more than 240 million homes. BLOOMBERG RADIO® services broadcast via SIRIUS

XM Radio and Iworldspace™ satellite radio globally and on WBBR 1130 AM in New York. The award-winning monthly BLOOMBERG MARKETS® magazine, Bloomberg BusinessWeek magazine and the BLOOMBERG.COM® financial news and information Web site provide news and insight to businesses and investors.

### The Role

Bloomberg R&D is responsible for creating and maintaining all functions within the Bloomberg Professional Service. Bloomberg R&D’s training team is looking for an experienced, hands-on software professional to develop and deliver technical training. You will work from the New York office, with responsibility for the development needs of a global R&D department of over 2000 people. You will work closely with senior managers in R&D to analyze technical training needs and be responsible for parts of the curriculum as well as for the presentation of training programs and initiatives. These include delivering new hire technical training, providing continuing educational training for job skills, and ongoing professional development programs.

It is essential that you have technical expertise gained through practical programming experience, as well as advanced academic training in a relevant discipline. You must have the ability to apply that practical experience to communicate technical concepts effectively in a training environment.

### Qualifications:

- MSc or PhD, in Computer Science or equivalent experience in a scientific, engineering, financial, or mathematical discipline.
- Solid C/C++ development experience
- Familiarity with the Unix environment

# Spearhead Cutting-Edge Technology and Design for a Better World

Be one of the top 4 academic leaders in the Singapore University of Technology and Design

The **Singapore University of Technology and Design (SUTD)**, established in collaboration with the Massachusetts Institute of Technology (MIT), is seeking a pillar head in the area of Information Systems Technology and Design for this new university slated to matriculate its first intake of students in April 2012.

SUTD, the first university in the world with a focus on design accomplished through an integrated multi-disciplinary curriculum, has a mission to advance knowledge and nurture technically grounded leaders and innovators to serve societal needs. SUTD is characterised by a breadth of intellectual perspectives (the “university”), a focus on engineering foundations (“technology”) and an emphasis on innovation and creativity (design). The University’s programmes are based on four pillars leading to separate degree programmes in Architecture and Sustainable Design, Engineering Product Development, Engineering Systems and Design, and Information Systems Technology and Design. Design, as an academic discipline, cuts across the curriculum and will be the framework for novel research and educational programmes.

MIT’s multi-faceted collaboration with SUTD includes the development of new courses and curricula, assistance with the early deployment of courses in Singapore, assistance with faculty and student recruiting, mentoring, and career development, and collaborating on major joint research projects, through a major new international design centre and student exchanges.

## FOUNDING HEAD OF PILLAR (Information Systems Technology and Design)

For the Founding Head of Pillar, our search criterion is nothing short of the best and most reputable in the field. Shortlisted candidates must minimally have an excellent doctoral qualification and be an international award recipient for academic and research contributions to the relevant specialised field, with publications in renowned and reputable journals recognised by the international research community.

### The final selection of the Head of Pillar will be based on:

- Your current senior academic position in a renowned prestigious university
- Your successful history in attracting funding for research
- Your proven track record in managing research projects
- Your ability to leverage diverse teams and effectively manage people and resources
- Your passion to share SUTD’s vision on the “Big D” approach, focusing on the art and science of design within your specialisation
- Your appetite for entrepreneurship and risk taking
- Your ability to innovate and create an environment that promotes creativity and experimentation
- Your ability to inspire and motivate young minds to become leaders and inventors of tomorrow

We invite applications for the above position. Successful candidates can look forward to internationally competitive remuneration, and assistance for relocation to Singapore. If you share SUTD’s vision on multi-disciplinary curricula and research with a focus on Design in the broadest sense, please email your profile and queries to: **Ms Jaclyn Lee** at [jaclynlee@sutd.edu.sg](mailto:jaclynlee@sutd.edu.sg)

To learn more about SUTD, please visit [www.sutd.edu.sg](http://www.sutd.edu.sg)



# Professional Opportunities

- A solid understanding of data structures, algorithms, and Modular/object-oriented design
- Experience with relational database technologies
- Strong verbal and written communication and presentation skills
- Ability to multi-task, and to work independently and effectively under pressure
- Prior training experience in either a business or academic setting
- Other desirable skills include:
- Experience with web technologies (XML, PHP, Apache, etc.)
- Experience with multi-threaded programming
- Unix scripting / Perl

To apply, go to: <http://careers.bloomberg.com/hire/jobs/job27512.html>

**Brown University**  
Department of Computer Science  
*Faculty Position Available*

The Department of Computer Science at Brown University invites applications for an open-rank tenure-track or tenured associate or full professor faculty position, with a preference for junior applicants, starting on September 1, 2011. We will consider candidates in computer and software systems, broadly construed (including, for example, databases, distributed systems, programming languages and security) and in artificial intelligence, broadly construed. Preference will be given to those candidates who best meet the teaching and research needs of the department. All applicants should have a demonstrated potential for excellence in research and teaching.

The department has 27 tenured and tenure-track faculty members as well as several adjunct, research, and visiting faculty members. Department members frequently take advantage of Brown's interdisciplinary culture via collaborations with numerous other departments and centers, including Applied Mathematics, Art, Biology, Brain Science, Cognitive and Linguistic Studies, Computational Molecular Biology, Computer Vision, Economics, Engineering, Mathematics, Medicine, the Physical Sciences, and Psychology.

Brown University is located in Providence, RI, close to Narragansett Bay, an hour from Boston and about three hours from New York City. Providence has been consistently rated as among the Northeast's most livable cities and is home to diverse intellectual, artistic, and business communities.

Junior applicants must have completed all requirements for the doctoral degree by September 1, 2011. The initial appointment as assistant professor is for three years and is renewable.

Applicants for a junior position must submit 3 letters of reference, and senior candidates should submit 5 names of references whom the committee may contact. These should be submitted online through the Computer Science Department's website <http://www.cs.brown.edu/>. Full consideration will be given to applications received by December 15, 2010. After that date, applications will be considered to the extent feasible until the position is filled.

Inquiries may be addressed to [faculty\\_search\\_2011@cs.brown.edu](mailto:faculty_search_2011@cs.brown.edu).

Brown University is an equal opportunity/affirmative action employer and strongly encourages applications from women and minorities.

**Bryn Mawr College**  
Computer Science Department  
*Postdoctoral Research Fellow: Machine Learning*

The Bryn Mawr College computer science department invites applications for

a Postdoctoral Fellow in machine learning. The Fellow will conduct research on lifelong learning and knowledge transfer, focusing on the development of methods for continually learning and refining knowledge over multiple successive learning tasks. The Fellow will also contribute to an on-going project on relational learning using the community structures in heterogeneous relational networks.

The position will begin in Spring 2011 and will be renewable annually for up to 2.5 years. A Ph.D. in computer science (or an equivalent degree) is required. The position will report to Professor Eric Eaton. The compensation package includes a competitive salary, benefits package, career mentoring, and travel support to conferences.

For further details, visit <http://cs.brynmawr.edu/opening.html>

To apply, e-mail a cover letter, curriculum vitae, research statement, hyperlinks to three representative publications, and contact information for at least two references as a single PDF file to [postdocsearch@cs.brynmawr.edu](mailto:postdocsearch@cs.brynmawr.edu). Applications will be accepted until the position is filled, although preference will be given to applications received by December 15, 2010.

Bryn Mawr College is an affirmative action/equal-opportunity employer. Minority candidates and women are especially encouraged to apply.

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

The faculty of the Division of Engineering and Applied Science and the Division of the Humanities and Social Sciences of the California Institute of Technology invites applications for a tenure-track position in computer science and economics. We are seeking highly qualified candidates who are committed to a career in research and teaching.

Examples of research areas of interest include social networks, game theory, mechanism design, and matching, although the quality of the work is more important than the area. We have a particular interest in someone who has a good training in economics and/or game theory, but outstanding candidates from any background are welcome to apply.

The term of initial appointment is normally four years, if untenured, and is contingent upon completion of the Ph.D. Interested candidates should apply electronically via <http://www.eas.caltech.edu/positions/cs-econ/> and submit a letter of application describing their current research, a vita, three letters of recommendation, and sample of work.

Caltech is an Equal Opportunity / Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply. Applications will begin to be reviewed on November 15, 2010, but they will be accepted until the positions are filled.

**Carnegie Mellon University in Qatar**  
*Computer Science Faculty Positions*

Carnegie Mellon University in Qatar invites applications for teaching-track positions at all levels in the field of Computer Science. These career-oriented, renewable appointments involve teaching high-achieving international undergraduate students, and maintaining a significant research program.

Candidates must have a Ph.D. in Computer Science or related field, substantial exposure to Western-style education, outstanding teaching record and excellent research accomplishments or potential. Specifically, we are seeking candidates with substantial experience teaching introductory programming

courses, or with expertise in systems, databases and/or data mining, or human-computer interaction. Truly exceptional candidates in other areas of Computer Science will also be considered.

The position offers a competitive salary, foreign service premium, research seed grant, excellent international health coverage and allowances for housing, transportation, dependent schooling and travel.

Carnegie Mellon is internationally recognized as a leader in research and higher education. In 2004, the university established a highly selective branch in Education City, a state-of-the-art campus that is home to six top universities. Collaboration opportunities with internationally known researchers and world-class businesses are abundant.

For further information or to apply, visit <https://csjobs.qatar.cmu.edu/faculty>

**Carnegie Mellon University (CMU) in Qatar**

*Postdoctoral Position in Networking*

There is an opening for a postdoctoral fellow to join the Networking Systems Lab (NSL) at Carnegie Mellon's Qatar campus, located in Doha, Qatar to work on a collaborative project between Boeing and the NSL. The NSL conducts basic and applied research in several areas of wireless and mobile networking as well as sensor networks. The position will start as early as January of 2011 and for a duration of one year, renewable pending funding.

The holder of this position will help transition interference and wireless performance models developed by the research group at the NSL to the Boeing toolchain for interference modeling, and specifically to the ns-3 discrete event network simulator's WiFi and spectrum-related models. In particular, the objective is to exploit the MAC interference models developed by the NSL to validate the WiFi models in ns-3 as well as to identify opportunities to improve the ns-3 models. Duties will also include assisting in various research management activities such as writing proposals, project planning, and report writing.

Applicants must hold a Ph.D. in Computer Science/Engineering by the time of appointment. They should have a strong research record in one or more of the areas mentioned above. Strong systems and programming skills, building simulators and using simulation packages such as NS3, NS2, Qualnet or OpNet is a must.

Applications should include a full CV, research statement, and references, if ready, in PDF format only, emailed to Nael Abu-Ghazaleh <[nabughaz@qatar.cmu.edu](mailto:nabughaz@qatar.cmu.edu)> and Khaled Harras, <[kharras@cs.cmu.edu](mailto:kharras@cs.cmu.edu)>. Please ensure that all emails have [PostDoc Position] in the subject line. We expect to make a hiring decision by January 15th, 2011.

Carnegie Mellon offers very competitive postdoctoral salaries with numerous additional benefits for residing in Qatar. For more information on Carnegie Mellon's Qatar effort, please visit <http://www.qatar.cmu.edu>.

**Central Washington University**  
Computer Science  
*Assistant/Associate Professor*

Central Washington University, Computer Science Dept--accepting applications for Ass't/Assoc Prof. All specialization areas are welcome.

To apply online, visit: <https://jobs.cwu.edu>  
Screening date: 1/03/2011  
AA/EEO/Title IX Institution.

**The Citadel**  
Department of Mathematics and Computer Science  
*Tenure-Track Faculty Position*

The Department of Mathematics and Computer Science invites applications

for a tenure-track faculty position in Computer Science at the Assistant Professor level beginning August 2011. Qualifications include an earned Ph.D. in Computer Science or a closely related field and a strong commitment to excellence in teaching, research, and service. Candidates from all areas of computer science are encouraged to apply.

For application procedures and information about the school and department see:

[http://www.mathcs.citadel.edu/cs\\_position\\_2011.html](http://www.mathcs.citadel.edu/cs_position_2011.html)

Review of applications will begin on January 10, 2011, and will continue until the position is filled.

Applications from women and minorities are especially encouraged. The Citadel is an affirmative action/equal opportunity employer actively committed to ensuring diversity in all campus employment.

**Columbia University**  
Department of Computer Science  
*Tenured or Tenure-Track Faculty Positions*

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

Assistant Professors at Columbia are academic officers holding the doctorate or its professional equivalent who are beginning a career of independent scholarly research and teaching.

Associate Professors at Columbia are academic officers holding the doctorate or its professional equivalent who have demonstrated scholarly and teaching ability and show great promise of attaining distinction in their fields of specialization.

Professors at Columbia are academic officers holding the doctorate or its professional equivalent who are widely recognized for their distinction. Candidates for senior-level appointment must have a distinguished record of achievement and evidenced by leadership in their field of expertise, publications, professional recognition, as well as a commitment to excellence in teaching.

Candidates must have a Ph.D. degree, DES, or equivalent degree by the starting date of the appointment and are expected to establish a strong research program and excel in teaching both undergraduate and graduate courses.

Our department of 36 tenure-track faculty and 1 lecturer attracts excellent Ph.D. students, virtually all of whom are fully supported by research grants. The department has active ties with major industry partners including Adobe, Autodesk, Canon, Disney, Dreamworks, Microsoft, Nvidia, Google, Sony, Weta, Yahoo! and also to the nearby research laboratories of AT&T, Google, IBM (T.J. Watson), NEC, Siemens, Telcordia Technologies and Verizon. Columbia



# Professional Opportunities

University is one of the leading research universities in the United States, and New York City is one of the cultural, financial, and communications capitals of the world. Columbia's tree-lined campus is located in Morningside Heights on the Upper West Side.

Applicants should apply online at: [academicjobs.columbia.edu/applicants/Central?quickFind=54003](http://academicjobs.columbia.edu/applicants/Central?quickFind=54003) and should submit electronically the following: curriculum-vitae including a publication list, a statement of research interests and plans, a statement of teaching interests, names with contact information of three references, and up to four pre/reprints. Applicants can consult [www.cs.columbia.edu](http://www.cs.columbia.edu) for more information about the department.

The position will close no sooner than December 31, 2010, and will remain open until filled. Columbia University is an Equal Opportunity/Affirmative Action employer

**Cornell University**  
**School of Electrical and Computer Engineering**  
*Tenure-Track Faculty Position*

The School of Electrical and Computer Engineering at Cornell University and Cornell Center for Sustainable Future, Ithaca, New York invites applications for tenure-track faculty positions in areas of power and energy systems. Specific areas of interest include but not limited to power systems, smart grids, renewable energy, electricity markets, control and optimization for future grids, and related emerging technologies.

Applicants must hold a doctorate in an appropriate field, must have demonstrated an ability to conduct outstanding research, and show promise for excellent teaching. Both junior and senior levels will be considered. A senior candidate should have a distinguished record of research accomplishments and be willing to play a leading role in shaping broad research agendas in the area of sustainable energy futures and collaborate with existing activities across the campus.

Applicants should submit a curriculum vitae, a research statement, a teaching statement, three recent publications, and complete contact information for at least three references. Personal statements summarizing teaching experience and interests, leadership efforts and contributions to diversity are encouraged.

Applications must be made on-line at: <http://fast-power.ece.cornell.edu>. Applications received by January 14, 2011 will receive full consideration.

The School of Electrical and Computer Engineering, and the College of Engineering at Cornell embrace diversity and seek candidates who will create a climate that attracts students of all races, nationalities and genders. We strongly encourage women and underrepresented minorities to apply. Cornell University seeks to meet the needs of dual career couples, has a Dual Career program, and is a member of the Upstate New York Higher Education Recruitment Consortium to assist with dual career searches.

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

**Cornell University**  
**School of Electrical and Computer Engineering**  
*Tenure-Track Faculty Position*

The School of Electrical and Computer Engineering at Cornell University, Ithaca, New York invites applications for tenure-track faculty positions in all areas of electrical and computer engineering, in particular in areas that will make an impact on healthcare, mobility, and energy. High priority is given to overall originality and

promise of the candidate's work, with secondary priority given to the specific area of specialization. Applicants must hold a doctorate in an appropriate field, must have demonstrated an ability to conduct outstanding research, and show promise for excellent teaching. We anticipate hiring at the Assistant Professor level, but applications at other levels will be considered; salary and rank are commensurate with qualifications and experience.

Applicants should submit a curriculum vitae, a research statement, a teaching statement, three recent publications, and complete contact information for at least three references. Personal statements summarizing teaching experience and interests, leadership efforts and contributions to diversity are encouraged.

Applications must be made on-line using the School's system at: <http://fast.ece.cornell.edu>. Applications received by January 14, 2011 will receive full consideration.

The School of Electrical and Computer Engineering, and the College of Engineering at Cornell embrace diversity and seek candidates who will create a climate that attracts students of all races, nationalities and genders. We strongly encourage women and underrepresented minorities to apply.

Cornell University seeks to meet the needs of dual career couples, has a Dual Career program, and is a member of the Upstate New York Higher Education Recruitment Consortium to assist with dual career searches.

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

**D. E. Shaw Research**  
*Scientific Software Development in Computational Biochemistry*

Extraordinarily gifted scientific research programmers and computational scientists are sought to join a New York-based interdisciplinary research group pursuing an ambitious, long-term project aimed at achieving major scientific advances in the fields of biochemistry and molecular biology.

Among the group's current research activities is the development of new algorithms and software for large-scale data analysis and simulation both on commodity clusters and on a massively parallel special-purpose supercomputer of our group's design. Successful candidates will have the opportunity to work closely with a number of the world's leading computational chemists and biologists, and to make fundamental contributions within the fields of biology, chemistry, and medicine.

Serious candidates will have an exceptionally distinguished history of academic and/or industrial accomplishment. Particularly relevant areas of expertise might include parallel computation, scientific computing, molecular dynamics, large-scale data management and analysis, and high performance data-parallel computing on multicore and GPU architectures, but specific knowledge of any of these areas is less critical than exceptional intellectual ability and a demonstrated track record of achievement. We are prepared to reward exceptionally well-qualified individuals with above-market compensation.

To submit an application, please use the link provided below:  
<http://www.deshawresearch.com/recruit/jobs/Ads/CRA/SP>  
EOE

**D. E. Shaw Research**  
*Software Development: Supercomputer for Computational Biochemistry*

Exceptional software developers sought to write scientific code for

a massively parallel special-purpose supercomputer. Successful hires will join an interdisciplinary research group pursuing an ambitious, long-term project aimed at achieving major scientific advances in the fields of biochemistry and molecular biology.

Ideal candidates will have outstanding low-level programming ability and excellent verbal and written communication skills. Relevant areas of expertise might include parallel programming, multicore systems, compilers, assembly language programming, or architectural simulation, but specific knowledge of any of these areas is less critical than exceptional intellectual ability and a demonstrated track record of achievement. We will consider candidates at all levels of experience and are prepared to reward exceptionally well-qualified individuals with above-market compensation. Candidates will primarily be considered for opportunities in New York and Silicon Valley.

To submit an application, please use the link provided below:  
<http://www.deshawresearch.com/recruit/jobs/Ads/CRA/ASD>  
EOE

**DePaul University**  
**College of Computing and Digital Media, School of Computing**  
*Assistant/Associate Professor*

The School of Computing at DePaul University invites applications for a tenure-track position in distributed systems. We seek candidates with a research interest in data-intensive distributed systems, cloud computing, distributed databases, or closely related areas.

For more information, see:  
<https://facultyopportunities.depaul.edu/applicants/Central?quickFind=50738>

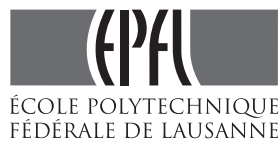
**Emory University, Atlanta, Georgia**  
*Computational and Life Sciences Initiative Faculty Positions*

Emory University seeks to recruit outstanding faculty under the University's Computational and Life Sciences (CLS) strategic initiative (<http://www.cls.emory.edu/>). CLS is part of a University-wide plan that has uniquely positioned Emory for significant growth in key areas spanning Computational Science and Informatics, Synthetic Sciences, and Systems Biology. This interdisciplinary initiative bridges and builds upon Emory's strengths in the computational, physical, biological, and health sciences.

Faculty applications at all academic ranks are invited from individuals with a PhD (or MD) in a relevant discipline. This year the emphasis is on Computational and Quantitative Biology, but exceptional candidates in other CLS-related areas will also be considered. Applicants should have a proven record (or promise) of excellence in both research and teaching. Ideal candidates will have multidisciplinary interests and will be appointed jointly across departments/schools. Applications consisting of a CV, research and teaching statements, and three letters of recommendation directly from recommenders should be sent via email to [cls@emory.edu](mailto:cls@emory.edu). Informal inquiries are also invited by email. Screening starts December 1, 2010. Please note that appointments are subject to final funding approval.

For further details on the CLS initiative please see: <http://www.cls.emory.edu/>

Emory University is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women and members of minority groups.



**Faculty Positions in Computer Science**  
**Ecole polytechnique fédérale de Lausanne**

The School of Computer and Communication Sciences at EPFL invites applications for faculty positions in computer science. We are primarily seeking candidates for **tenure-track assistant professor positions, but suitably qualified candidates for senior positions will also be considered.**

Successful candidates will develop an independent and creative research program, participate in both undergraduate and graduate teaching, and supervise PhD students.

Candidates from all areas of computer science will be considered, but preference will be given to candidates with interests in **algorithms, bio-informatics and verification.**

EPFL offers internationally competitive salaries, significant start-up resources, and outstanding research infrastructure. To apply, please follow the application procedure at <http://icrecruiting.epfl.ch>.

The following documents are requested in PDF format: curriculum vitae, including publication list, brief statements of research and teaching interests, names and addresses (including e-mail) of 3 references for junior positions, and 6 for senior positions. Screening will start on **January 1, 2011**. Further questions can be addressed to :

**Professor Willy Zwaenepoel**  
**Dean**  
**School of Computer and Communication Sciences**  
**EPFL**  
**CH-1015 Lausanne, Switzerland**  
**[recruiting.ic@epfl.ch](mailto:recruiting.ic@epfl.ch)**

For additional information on EPFL, please consult:  
**<http://www.epfl.ch>** or  
**<http://ic.epfl.ch>**

EPFL is an equal opportunity employer.

# Professional Opportunities

**EPFL Ecole Polytechnique  
Federale de Lausanne**  
School of Computer and Communication  
Sciences  
*Postdoc / Research Scientist*

A postdoc position will become available shortly in Willy Zwaenepoel’s research group. The group does research in many aspects of software systems, see <http://labos.epfl.ch> for more information.

We are seeking a candidate to work on an ongoing project concerning integration of database queries into Java, specifically taking advantage of Java’s newly proposed functional programming facilities. We are seeking someone with a Ph.D. in computer science (or equivalent) and expertise in the above areas. The project involves programming language design as well as implementation. Besides working on this project, the person will also be able to pursue his own research agenda.

The initial appointment is for a year and renewable on an annual basis.

Review of applicants will start immediately and continue until the position is filled. The application package should contain a CV along with contact information for 3 referees, and a short statement describing previous research experiences with emphasis on the possible relevance to the topics above.

The documents in PDF format should be sent to: [madeleine.robort@epfl.ch](mailto:madeleine.robort@epfl.ch)

**Florida International University  
(FIU)**  
College of Engineering and Computing  
*Director of the School of Computing and  
Information Sciences (SCIS)*

FIU is a multi-campus public research university located in Miami, a wired, edgy, globally connected 24/7 city. The city’s bright skyline, tasteful tropical cuisine, vibrant arts, storied ethnic neighborhoods, chic South Beach scene, bustling international trade, and youthful exuberance provide a perfect living laboratory for our engaged university.

Serving more than 42,000 students, FIU offers more than 180 baccalaureate, masters, professional, and doctoral degree programs. As one of South Florida’s anchor institutions, FIU is worlds ahead in its local and global engagement, finding solutions to the most challenging problems of our times.

Florida International University (FIU) invites applications and nominations for the position of Director of the School of Computing and Information Sciences (SCIS) in the College of Engineering and Computing. Founded in 1965, FIU is one of Florida’s 11 state universities and Miami’s first and only four-year public research university. FIU, a federally designated Hispanic-serving institution, is classified as a Carnegie Code RU/H, Research University/high research activity. The University is accredited by the Southern Association of Colleges and Schools.

SCIS is the 6th largest computer science program in the nation and is a major school in the College of Engineering and Computing at FIU. SCIS has 32 faculty members who support its offerings of BS (ABET accredited), MS, and PhD programs in Computer Science, BS/BA and MS in Information Technology (IT), and MS in Telecommunications and Networking. The School serves approximately 1,150 undergraduates, 170 masters, and 90 doctoral students, and provides service courses to many students in various Engineering, Business, and Arts & Sciences departments. In 2008-10, SCIS received external funding in excess of \$8M. Faculty members have received many prestigious awards including the NSF CAREER Award, DoE CAREER Award, and IBM Faculty Research Award. SCIS has broad and dynamic partnerships with industry. Its research groups include the NSF CREST Center for Emerging Technologies for Advanced Information Processing and High-Confidence Systems,

the High Performance Database Research Center, the Center for Advanced Distributed Systems Engineering, and several research laboratories. SCIS has excellent computing infrastructure and technology support.

Candidates must have a doctorate in Computer Science or a closely related field, a distinguished and current record for academic and extramural research excellence necessary for appointment as a tenured full professor, demonstrated leadership skills, management or supervisory experience, a successful record of fundraising efforts, and a strong interest in working with students and the community. Nominees and applicants must also demonstrate mentorship ability, professional service, ties to industry, with the ability to provide leadership and vision to a growing academic department with strong research potential.

**HOW TO APPLY:**

The Search Committee will accept applications and nominations until the position is filled. Candidate screening will begin immediately. For best consideration, applications should be submitted by January 15, 2011. An application should include a letter describing relevant experiences and interest in the position; a resume; and the names of five references with titles, addresses, business and home telephone numbers, and e-mail addresses. The submission of materials as PDF or Microsoft Word attachments is strongly encouraged. Individuals who wish to nominate a candidate should submit a letter of nomination, including the name, position, address, telephone number, and email address of the nominee. Greenwood/Asher & Associates, an executive search firm, is assisting the University in the search.

Applications should be submitted directly to the FIU J.O.B.S Link website at <http://www.fiujobs.org>  
Position # 45871

Letters of nominations should be submitted to:

Jan Greenwood or Betty Turner Asher  
Greenwood/Asher & Associates  
42 Business Center Drive, Suite 206  
Miramar Beach, FL 32550  
Phone: 850.650.2277  
Fax: 850.650.2272  
E-mail: [jangreenwood@greenwoodsearch.com](mailto:jangreenwood@greenwoodsearch.com)  
E-mail: [bettyasher@greenwoodsearch.com](mailto:bettyasher@greenwoodsearch.com)

The “government in the sunshine” laws of Florida require that all documents relating to the search process, including letters of application/nomination and reference, be available for public inspection.

FIU is a member of the State University System of Florida and is an Equal Opportunity, Equal Access Affirmative Action Employer.

For information about FIU, see <http://fiu.edu/>

**Florida International University  
School of Computing and Information  
Sciences**  
*Tenure-Track and Tenured Faculty Positions*

FIU is a multi-campus public research university located in Miami, a vibrant and globally connected 24/7 city. Miami’s captivating skyline, tasteful tropical cuisine, vivid arts, historically rich and diverse neighborhoods, trendy South Beach scene, bustling international trade, and youthful exuberance provide a perfect environment for our engaged university.

Serving more than 42,000 students, FIU offers more than 180 baccalaureate, masters, professional, and doctoral degree programs. As one of South Florida’s anchor institutions, FIU is worlds ahead in its local and global engagement, finding solutions to the most challenging problems of our times.

The School of Computing and Information Sciences seeks exceptionally qualified candidates for tenure-track and tenured faculty positions at all levels and in all areas of Computer Science. A Ph.D. in Computer Science or related disciplines is required. Preference will be given to candidates who will enhance or complement our existing research strengths in data and information management, informatics, operating systems, networking, programming languages, security, and software engineering. Ideal candidates for junior positions should have a record of exceptional research in their early careers. Candidates for senior positions must have an active and proven record of excellence in funded research, publications, and professional service, as well as a demonstrated ability to develop and lead collaborative research projects. In addition to developing or expanding a high-quality research program, all successful applicants must be committed to excellence in teaching at both graduate and undergraduate levels.

Florida International University (FIU), the state university of Florida in Miami, is ranked by the Carnegie Foundation as a comprehensive doctoral research university with high research activity. The School of Computing and Information Sciences (SCIS) is a rapidly growing program of excellence at the University, with 32 faculty members and over 1,400 students, including over 90 Ph.D. students. SCIS offers B.S., M.S., and Ph.D. degrees in Computer Science, an M.S. degree in Telecommunications and Networking, and B.S., B.A., and M.S. degrees in Information Technology. SCIS has received approximately \$8.4M in the last two years in external research funding, has six research centers/clusters with first-class computing infrastructure and support, and enjoys broad and dynamic industry and international partnerships.



**Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich**

**Assistant Professorships (Tenure Track) in Computer Science**

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

- Computer Systems
- Computational Science
- Human Computer Interaction
- Software Engineering

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

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

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

Please address your application together with a curriculum vitae, a list of publications, a statement of research and teaching interests and the names of at least three referees **to the President of ETH Zurich, Prof. Dr. Ralph Eichler, no later than February 15, 2011.** For further information, candidates may contact the Head of the Department, Prof. F. Mattern ([mattern@ethz.ch](mailto:mattern@ethz.ch)). With a view towards increasing the number of female professors, ETH Zurich specifically encourages qualified female candidates to apply. **In order to apply for one of these positions, please visit: [www.facultyaffairs.ethz.ch](http://www.facultyaffairs.ethz.ch)**



# Professional Opportunities

HOW TO APPLY:

Applications, including a letter of interest, contact information, curriculum vitae, and the names of at least three references, should be submitted directly to the FIU J.O.B.S Link website at <https://www.fiujobs.org>; refer to Position # 45534. The application review process will begin on January 17, 2011, and will continue until the position is filled. Further information can be obtained from the School website <http://www.cis.fiu.edu>, or by e-mail to [recruit@cis.fiu.edu](mailto:recruit@cis.fiu.edu).

FIU is a member of the State University System of Florida and is an Equal Opportunity, Equal Access Affirmative Action Employer.

**George Mason University**  
**Department of Computer Science**  
*Faculty Position*

The Department of Computer Science in the Volgenau School of Information Technology & Engineering at George Mason University invites applications for a faculty position at the rank of Full, Associate, or Assistant Professor beginning in Fall 2011 or until the position is filled.

The faculty position is in information security and assurance. Minimum qualifications for the position include a Ph.D. in Computer Science or a related field, demonstrated potential for excellence and productivity in research, and a commitment to high quality teaching. Applicants for a senior position need a well-established track record of substantial research contributions to their field, externally funded research, and leadership.

For full consideration please submit application and application materials on-line at <http://jobs.gmu.edu> (position number F9349Z). To apply, you will need a statement of professional goals including your perspective on teaching and research, a complete C.V. with publications, and the names of three references. The review of applications will begin immediately and will continue until the positions are filled. For more information on the department, visit our Web site: <http://cs.gmu.edu/>.

GMU is an equal opportunity/affirmative action employer. Women and minorities strongly encouraged.

**The George Washington University**  
**Department of Computer Science**  
*Four Faculty Positions*

The Department of Computer Science at The George Washington University is seeking applicants for four faculty positions in the areas of security, systems, and AI. The first is a tenured senior position in security, at the rank of Associate or Full Professor. The other three are tenure-track positions at the rank of Assistant or Associate Professor, one in security and the other two in systems and Artificial Intelligence. People with applied or theoretical research interests in those areas are encouraged to apply. Successful candidates may start as early as Fall 2011.

Basic Qualifications: All applicants must have a Ph.D. degree in Computer Science or a closely related field. Applicants for the Associate Professor rank must have well-established and well-funded research programs, and applicants for the tenured senior position in security must also be recognized scholars prepared to take on a leading research role within the department and in the field. Applicants for the Assistant Professor rank must demonstrate potential for developing a quality research program and for attracting research funding. ABD candidates for the junior positions may apply for the Assistant Professor rank, but they must complete their Ph.D. degree by August 15, 2011. All applicants must have demonstrated teaching excellence or potential at both undergraduate and graduate levels.

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

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

Application Procedure: To be considered, applicants must email an application to [csearch@gwu.edu](mailto:csearch@gwu.edu) containing (i) a brief cover letter that clearly indicates the position area and rank of interest, (ii) a curriculum vitae, (iii) a statement of research and teaching interests, (iv) complete contact information for at least three references, and optionally (v) other relevant supporting materials. If by regular mail, applications should be sent to:

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

Only complete applications will be considered. Inquiries about applying will be accorded the utmost discretion. Review of applications will begin on December 4, 2010, and will continue through the Spring 2011 semester, until the position is filled. For complete instructions on the application process, please visit the department faculty search website at:

<http://www.cs.gwu.edu/facsearch/>  
The George Washington University is an equal opportunity/affirmative action employer

**Georgia Institute of Technology**  
*Postdoctoral Positions*

Three postdoctoral positions are available in George Biros’s group in the School of Computational Science and Engineering. Each of the three positions will focus on a separate subject matter:

- (1) high-performance computing;
- (2) numerical algorithms for inverse problems; and
- (3) algorithms for medical imaging.

More information can be found at: [www.cc.gatech.edu/~gbiros/positions.html](http://www.cc.gatech.edu/~gbiros/positions.html)

Questions regarding these positions can be sent by email to George Biros at: [gbiros@cc.gatech.edu](mailto:gbiros@cc.gatech.edu)

**IBM T.J. Watson Research Center**  
**Mathematical Sciences**  
*Research Staff Member*

The Algorithms group at the IBM Thomas J. Watson Research Center

invites applications for the position of a Research Staff Member. The members of group pursue basic research in algorithms and also work on technical problems arising in industry.

The candidate should have a stellar academic record in theoretical computer science and have excellent communication skills. Given the industrial environment, the candidate should also be willing to apply his/her skills to practical problems and be able to code in C, C++ or Java.

The position is open to candidates at any level. The deadline for application is January 15, 2011.

Apply here:  
[https://jobs3.netmedia1.com/cp/job\\_summary.jsp?job\\_id=RES-0362481](https://jobs3.netmedia1.com/cp/job_summary.jsp?job_id=RES-0362481)

**Illinois Institute of Technology**  
**Department of Computer Science**  
*Tenure-Track Assistant Professor Position*

Applications are invited for a tenure-track assistant professor position in Computer Science beginning Fall 2011. Excellence in research, teaching and obtaining external funding is expected. While strong candidates from all areas of computer science will be considered, applicants from general data areas such as database, data mining, information security, information retrieval, and data understanding and processing are especially encouraged.

The Department offers B.S., M.S., and Ph.D. degrees in Computer Science and has research strengths in distributed systems, information retrieval, computer networking, intelligent information systems and algorithms. The Illinois Institute of Technology, located within 10 minutes of downtown Chicago, is a dynamic and innovative institution. The Department has strong connections to Fermi and Argonne National Laboratories, and to local industry, and is on a successful and aggressive recruitment plan. IIT is an equal opportunity/affirmative action employer. Women and Underrepresented Minorities are strongly encouraged to apply.

Evaluation of applications will start on December 1, 2010 and will continue until the position is filled. Applicants should submit a detailed curriculum vitae, a statement of research and teaching interests, and the names and email addresses of at least four references to:

Computer Science Faculty Search Committee  
Department of Computer Science  
Illinois Institute of Technology  
10 W. 31st Street  
Chicago, IL 60616  
Phone: 312-567-5152  
Email: [search@cs.iit.edu](mailto:search@cs.iit.edu)  
<http://www.iit.edu/csl/cs>

**Imperial College London—London, United Kingdom**  
**Department of Computing**  
*Lectureship Post (equivalent to Assistant Professor)*

Salary: GBP 42,500 to GBP 47,450 pa.  
Closing date: 10 January 2011.  
For more details, including how to apply, please visit:  
<http://www3.imperial.ac.uk/computing/vacancies#5>

**International Computer Science Institute**  
*Director*

The International Computer Science Institute (ICSI), an independent non-profit laboratory closely affiliated with the EECS Department, University of California, Berkeley (UCB), invites applications for the position of Director, beginning Fall 2011.

The ICSI Director’s primary responsibilities are to: oversee and expand ICSI’s research agenda; act as a high-level external evangelist for ICSI research; identify and pursue strategic funding

opportunities; and strengthen ICSI’s relationship with UCB. The Director reports directly to ICSI’s Board of Trustees.

ICSI is recognized for world-class research activities in networking, speech, language and vision processing, as well as computational biology and computer architecture. Several of ICSI’s research staff have joint UCB appointments, and many UCB graduate students perform their research at ICSI. In addition, ICSI places significant emphasis on international partnerships and visiting scholar programs.

ICSI is seeking a Director with sufficient breadth, interest, and professional connections to promote and augment ICSI’s ongoing research efforts. Applicants should have recognized research leadership, as well as a strong record in research management and demonstrated success at government and industrial fundraising. Experience with international collaboration and fundraising is a plus.

Applications should include a resume, selected publications, and names of three references. Review begins February 1, 2011; candidates are urged to apply by that date.

To learn more about ICSI, go to <http://www.icsi.berkeley.edu>.

To apply for this position, send the above material to [apply@icsi.berkeley.edu](mailto:apply@icsi.berkeley.edu). Recommenders should send letters directly to [apply@icsi.berkeley.edu](mailto:apply@icsi.berkeley.edu) by 2/1/2011. ICSI is an Affirmative Action/Equal Opportunity Employer. Applications from women and minorities are especially encouraged.

**Kansas State University**  
**Department of Computing and Information Sciences**  
*Faculty Position*

The department of Computing and Information Sciences at Kansas State University invites applications for a position beginning in Fall 2011 at the level of Associate or Full Professor from candidates working in the areas of high assurance computing, program specification and verification, and formal methods. Preference will be given to candidates who will compliment the existing areas of strengths of the department which include high assurance systems, tools for developing, testing and verifying software systems, static analysis, model-driven computing, programming languages, security, and medical device software. Applicants must be committed to both teaching and research, and have an excellent research and teaching track record. Applicants should have a PhD degree in computer science or related disciplines; salary will be commensurate with qualifications. Applications must include descriptions of teaching and research interests along with copies of representative publications

Kansas State University is committed to the growth and excellence of the CIS department. The department offers a stimulating environment for research and teaching, and has several ongoing collaborative projects involving researchers in different areas of computer science as well as other engineering and science departments. The department has a faculty of nineteen, more than 100 graduate students, and 250 undergraduate students and offers BS, MS, MSE, and PhD degrees. Computing facilities include a large network of servers, workstations and PCs with more than 300 machines and a Beowulf cluster with 1000+ processors. The department building has a wireless network and state-of-the-art media-equipped classrooms. The department hosts several laboratories for embedded systems, software analysis, robotics, computational engineering and science, and data-mining. Details of the CIS Department can be found at the URL <http://www.cis.ksu.edu/>.





# Professional Opportunities

(DFKI), and the Fraunhofer Institutes for Experimental Software Engineering and for Industrial Mathematics.

Qualified candidates should apply online at <http://www.mpi-sws.org/> application. The review of applications will begin on January 3, 2011, and applicants are strongly encouraged to apply by that date; however, applications will continue to be accepted through January 2011.

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

**Mississippi State University**  
Department of Computer Science  
and Engineering  
*Head*

Applications and nominations are being sought for the Head of the Department of Computer Science and Engineering ([www.cse.msstate.edu](http://www.cse.msstate.edu)) at Mississippi State University. This is a 12-month tenure-track position.

- The successful Head will provide:
- Vision and leadership for nationally recognized computing education and research programs
  - Exceptional academic and administrative skills
  - A strong commitment to faculty recruitment and development
- Applicants must have a Ph.D. in computer science, software engineering, computer engineering, or a closely related field. The successful candidate must have earned national recognition by a distinguished record of accomplishments in computer science education and research. Demonstrated administrative experience is desired, as is teaching experience at both the undergraduate and graduate levels. The successful candidate must qualify for the rank of professor.

Please provide a letter of application outlining your experience and vision for this position, a curriculum vita, and names and contact information of at least three professional references. Application materials should be submitted online at <http://www.jobs.msstate.edu/>.

Screening of candidates will begin February 15, 2011 and will continue until the position is filled. Mississippi State University is an AA/EOE institution. Qualified minorities, women, and people with disabilities are encouraged to apply.

Please direct any questions to Dr. Nicolas Younan, Search Committee Chair (662-325-3912 or [younan@ece.msstate.edu](mailto:younan@ece.msstate.edu)).

**NEC Laboratories America, Inc.**  
Multiple Positions

NEC Laboratories America, Inc. is a vibrant industrial research center, conducting research in support of NEC's U.S. and global businesses. Our research program covers many areas, reflecting the breadth of NEC business, and maintains a balanced mix of fundamental and applied research. We have openings in the following research areas:

- Research Staff Members
- The Large-Scale Distributed Systems group conducts advanced research in the area of design, analysis, modeling and evaluation of distributed systems. Our current focus is to create innovative technologies to build next generation large-scale computing platforms, and to simplify and automate the management of complex IT systems and services. The group is seeking research staff members in the area of distributed systems and networks. The candidates must have a PhD in CS/CE with strong publication records on the following topics:
- distributed systems and networks
  - operating systems and middleware
  - performance, reliability, dependability and security

- data centers and cloud computing
- virtualization and system management
- system modeling and statistical analysis

The Computing Systems Architecture department seeks to innovate, design, evaluate, and deliver parallel systems for high-performance, energy-efficient enterprise computing. The group is seeking senior and junior level research staff as follows. Candidates for Research Staff Member must have a PhD in CS/CE or EE with strong research record and excellent credentials in the international research community. Applicants must demonstrate competency in at least one of the following areas:

- heterogeneous cluster architectures
- parallel programming models and runtimes
- key technologies to accelerate performance and low power consumption of enterprise applications on heterogeneous clusters

The Storage Systems department engages in research in all aspects of storage systems with an emphasis on large scale reliable distributed systems. The group is seeking candidates with an interest in file and storage systems, cloud computing, or related areas. Applicants must have a PhD in CS and a strong publication record in the above topics. Required skills are:

- proactive and assume leadership in proposing and executing innovative research projects
- develop advanced prototypes leading to demonstration in industrial environment
- initiate and maintain collaborations with academic and industrial research communities

Postdoctoral Researchers

The Machine Learning group conducts research on various aspects of machine intelligence, from the exploration of new algorithms to applications in data mining and semantic comprehension. Ongoing projects focus on text and video analysis, digital pathology, and bioinformatics. The group is seeking postdoctoral researchers with PhD in CS and experience in bioinformatics (emphasis on genomics or proteomics a plus) or text analysis and/or text mining. Required skills and experience are:

Strong publication record in top machine learning, data mining or related conferences and journals

Solid knowledge in math, optimization, and statistical inference

Hands-on experiences in implementing large-scale learning algorithms and systems

Good problem solving skills, with strong software knowledge

Associate Research Staff Members

Candidates for Associate Research Staff Member in the Computing Systems Architecture department must have an MS in CS/CE or EE with strong motivation and skill set to prototype/transfer innovative research results into industry practice. Expertise in at least one of the above parallel computing areas is desirable.

The Storage Systems department is seeking applicants for an Associate Research Staff Member. The successful candidate will have an MS in CS or equivalent and the following skills:

- Solid understanding of operating systems
- Experience in systems programming under Linux/Unix
- Experience with performance evaluation and tuning
- Strong algorithms, data structures and multi-threaded programming experience

Good knowledge of C++ and OOD/OOP

Proactive with can-do attitude and work well in small teams

For more information about NEC Labs and these openings, access <http://www.nec-labs.com> and submit your CV and research statement through our career center.

EOE/AA/MFDV

**New Mexico State University**  
Computer Science Department  
*Tenure-Track Position*

The Computer Science Department at New Mexico State University invites applications for a tenure-track position at the assistant professor level, with appointment starting in the Fall 2011 semester. We are seeking strong candidates in any areas of Computer Science, although applications with expertise in areas that enhance the current research focus areas—i.e., knowledge representation and reasoning, software engineering, computer and wireless networks, databases/data mining/machine learning, bioinformatics, and interval computations—as well as applicants with focus on high-performance computing are particularly encouraged.

Applications from women and members of traditionally under-represented groups are strongly encouraged. Salary and start-up package will be competitive and commensurate with qualifications and experience.

For the full position announcement and information about qualifications and application procedures, please visit:

<http://www.cs.nmsu.edu/~epontell/job1.html>

**Northeastern University**  
Boston, Massachusetts  
College of Computer and Information  
Science  
*Tenure-Track Faculty Positions*


We invite applications for tenure-track faculty positions in computer science and information science, beginning in Fall 2011. Applicants at all ranks will be considered. A PhD in computer science, information science or a related field is required.

Candidates will be considered from all major disciplines in computer and information science. We particularly welcome candidates who can contribute to our strong research groups in software reliability (formal methods, programming languages, software engineering) and systems and networks.

The College maintains a strong research program with significant funding from the major federal research agencies and private industry. The College has a diverse full-time faculty of 30. Four faculty members have joint appointments with other disciplines, specifically, electrical and computer engineering, health sciences, physics and political science, and contribute to interdisciplinary initiatives in information assurance, network science and health informatics. The College has approximately 520 undergraduates, 350 Masters, and 65 Ph.D. students.

Northeastern University has made major investments over the course of the last several years in the broad areas of Health, Security and Sustainability. The College has been a major participant in the recruitment of faculty who can contribute to these themes and will continue to do so this year as well with an additional three interdisciplinary searches ongoing in Health Informatics, Information Assurance and Game Design and Interactive Media.

Northeastern University is located on the Avenue of the Arts in Boston's historic Back Bay. The College occupies a state of the art building opposite Boston's Museum of Fine Arts.



University of  
Massachusetts  
Lowell

Careers with **Mass Appeal**

## Computer Science Department

### Nontenure-Track Faculty Position at the rank of Lecturer

The University of Massachusetts Lowell is a comprehensive university with a national reputation in science, engineering and technology, committed to educating students for lifelong success in a diverse world and conducting research and outreach activities that sustain the economic, environmental and social health of the region. In February 2009, a campus-wide strategic planning initiative was launched to reposition UMass Lowell as a world-class institution over the next decade. A major component of that initiative is to ensure that diversity and inclusion are in every aspect of our strategic plan. We seek a diverse talented candidate pool to be part of our mission and achievements.

UMass Lowell is located about 25 miles northwest of Boston in the high-tech corridor of Massachusetts. The Computer Science Department has 15 tenured and tenure-track faculty, serving about 250 BS students, 110 MS students, and 55 PhD students. It also offers bioinformatics options at all levels, a robotics minor, and a PhD in computational mathematics. The Computer Science faculty received approximately \$6M in the last two years in external research funding from the NSF, DOD, NIH, and corporations. The department has four NSF CAREER Award Recipients. More information about the department can be found at [www.cs.uml.edu](http://www.cs.uml.edu).

The Computer Science Department at the University of Massachusetts Lowell invites applications for one full-time, nontenure-track faculty position at the rank of Lecturer to start September 1, 2011. Primary responsibilities are to provide high quality teaching and service to the Department. This position is annually renewable, potentially leading to an appointment as Senior Lecturer following six consecutive years of outstanding performance evaluations.

Review of applications will begin February 1, 2011 and continue until the position is filled. However, the position may close when an adequate number of qualified applications are received.

**Qualifications:** Applicants must hold Bachelor's and Master's degrees in computer science or a closely related discipline. Experience and demonstrated excellence teaching at the undergraduate level. An earned doctorate in computer science is preferred.

**How to apply:**

1. **Submit a cover letter, a current CV, and teaching statement, through the University of Massachusetts Lowell website at <http://jobs.uml.edu> under "Faculty Positions".**
2. **Arrange for at least three letters of recommendation to be included in your application.**
3. **Other optional documents:** Please attach to your application, summaries of teaching evaluations (if available). **SUBMISSIONS TO THE DEPARTMENT WILL NOT BE ACCEPTED.**

**Thank you for considering the University of Massachusetts Lowell as an employer of choice. We look forward to receiving your application.**

*The University of Massachusetts Lowell is committed to increasing diversity in its faculty, staff, and student populations, as well as curriculum and support programs, while promoting an inclusive environment. We seek candidates who can contribute to that goal and encourage you to apply and to identify your strengths in this area.*

# Professional Opportunities

Additional information and instructions for submitting application materials may be found at the following web site: <http://www.ccs.neu.edu/>. Screening of applications begins immediately and will continue until the search is completed.

Northeastern University is an Equal Opportunity/Affirmative Action Employer. We strongly encourage applications from women and minorities.

**Northeastern University, Boston, Massachusetts**  
*Full or Associate Professor—Health Informatics and Interfaces*

The College of Computer and Information Science and the Bouvé College of Health Sciences invite applications for a faculty position in Health Informatics. A Ph.D. level degree in Health or Medical Informatics, Computer Science, Information Science, or a health-related discipline, together with a proven ability to secure grant funding for research using advanced technology in the health domain, is required.

Building upon our successful joint Master of Science degree program in Health Informatics, and our many graduate and undergraduate degree programs in health sciences, nursing, pharmacy, computer science, and information science, we are interested in growing our faculty in the general area of health interfaces, which includes technologies that patients interact with directly, health informatics, and technology design for health and wellness systems. The candidate would play a key role in launching a new interdisciplinary Ph.D.-level degree program in this area. Faculty in our colleges are currently working on multiple NIH-funded research projects in consumer informatics, clinical informatics, behavioral informatics, and assistive technologies, and we are particularly interested in faculty candidates who can expand or complement our work in these areas. Topics of interest include the use of mobile technologies to monitor and manage health, the use of virtual agents for physical exercise and health management, the development of assistive communication aids, the use of artificial intelligence to study mental and physical health behavior, and the development and evaluation of other novel technologies to study health behavior and improve health outcomes. We are interested in candidates who create new tools and candidates who specialize in evaluation of new technologies in field research. Northeastern University is making a major investment in interdisciplinary health research, with several recent hires and additional open interdisciplinary faculty searches in Health Systems, Health Policy, Urban Environment and Health and Administration.

Additional Information

Recognizing the importance of multidisciplinary approaches to solving complex problems facing society, Northeastern is hiring faculty in several areas related to this search. Searches are currently underway in health care policy/management, health systems engineering, health law, and urban health. We will consider hiring a multidisciplinary group as a ‘cluster hire’. Candidates may choose to form a team and propose an innovative and translational research and educational direction and apply to more than one of the position announcements. Information on these positions and on cluster applications can be obtained from the <http://www.northeastern.edu/hrm/> web site.

Equal Employment Opportunity

Northeastern University is an Equal Opportunity, Affirmative Action Educational Institution and Employer, Title IX University. Northeastern University strongly encourages

applications from minorities, women and persons with disabilities.

How To Apply

Applicants should submit a letter of interest, curriculum vitae, and the contact information of at least five references. Submission is online via <http://www.ccs.neu.edu/>. Screening of applications begins November 30, 2010 and will continue until the position is filled.

Please direct inquiries to Professor Stephen Intille ([S.Intille@neu.edu](mailto:S.Intille@neu.edu)).

**Northeastern University**  
**Creative Industries**  
*Open Rank - interdisciplinary*

Responsibilities:

Northeastern University is seeking a faculty member at an open rank for an interdisciplinary appointment in the College of Computer and Information Science and the College of Arts, Media and Design to start in the Fall of 2011.

The successful candidate will contribute to shaping the research, academic, and development goals of the cross-disciplinary areas of Game Design and Interactive Media at both the undergraduate and the graduate levels.

Qualifications:

It is expected that the candidate for this position will possess an excellent track record in research/scholarship, publication, grant acquisition, and teaching. A terminal degree, either PhD or MFA depending on the candidate’s field, is required.

How to Apply:

[www.northeastern.edu/camd](http://www.northeastern.edu/camd) or [www.ccs.neu.edu](http://www.ccs.neu.edu)

Faculty Positions > Full Time > #113578

**Northwestern University/RIC**  
*Faculty Position In Engineering And Rehabilitation*

The Department of Electrical Engineering and Computer Science (EECS) at the McCormick School of Engineering and Applied Science at Northwestern University, together with the Department of Physical Medicine and Rehabilitation at the Feinberg School of Medicine are pleased to announce the availability of a joint faculty position for a joint tenure-track faculty position working in areas of interest to both departments.

This position seeks to facilitate the growth of one or more key areas of research enabling techniques and principles of computer and electrical engineering to be applied to enhance the rehabilitation of disabling neurological or musculoskeletal illness and disease.Areas of potential interest include (but are not limited to)

- Robotics for rehabilitation and assistance of disabled persons
- Novel controllers for advanced prostheses in amputees
- Brain machine interface research, enabling brain control of devices
- Advanced signal processing of biological signals (EMG, EEG)
- Novel multimedia-technologies (augmented/virtual reality, ultrasound, MRI, optical, etc)
- Informatics for tracking clinical status and outcomes in rehabilitation
- Sensors for diagnosis and tracking of illness severity and response to rehabilitation treatments

Successful candidates will be expected to carry out independent research and to perform academic duties associated with undergraduate and graduate programs of Northwestern University.

We anticipate that research programs will be undertaken in space provided by the Rehabilitation Institute of Chicago, the primary location of the department of Physical Medicine and Rehabilitation. Research laboratories will likely be based within one of the major research groups

housed in a research division of the RIC. The RIC is located in downtown Chicago, in an appealing Lakeside medical Campus.

Teaching and administrative services, and departmental committee service will be undertaken primarily in the MEAS facilities, located in Evanston.

Minimum qualifications include an earned doctorate in Electrical Engineering or related fields, outstanding academic credentials, a strong publication history, demonstrated ability to secure extramural funding, and the ability to teach effectively at both the graduate and undergraduate levels.

A senior level appointment is potentially available and highly encouraged for persons of international stature. Rank and salary will be commensurate with qualifications. Starting dates for these positions are negotiable.

Northwestern University is a world-class research institution that offers exceptional opportunities for innovative individuals to conduct collaborative research at the forefront of engineering and medicine, including possible affiliations with research groups on either the Evanston or Chicago campus. The candidate is expected to further strengthen these ties and establish interdisciplinary collaborations with other centers or groups.

To apply:

Current contact information including email address, curriculum vitae, statement of research goals, and the names of three or more references should be sent to the following email address:

[EECS-RIC-search@eecs.northwestern.edu](mailto:EECS-RIC-search@eecs.northwestern.edu)

To ensure full consideration, applications must be received by February 1, 2011. Interviews may take place during the application period, but a final decision will not be made until after the closing date.

Northwestern University is an equal opportunity, affirmative action employer. Qualified women and minorities are encouraged to apply. It is the policy of Northwestern University not to discriminate against any individual on the basis of race, color, religion national origin, sex, sexual orientation, marital status, age, disability, citizenship, veteran status or other protected group status. Hiring is contingent upon eligibility to work in the United States.

**Oregon State University**  
**School of Electrical Engineering and Computer Science**  
*Assistant Professor/Associate Professor/ Professor*

The School of Electrical Engineering and Computer Science at Oregon State University invites applications for two tenure-track professorial positions in Computer Science. Exceptionally strong candidates in all areas of Computer Science are encouraged to apply. We are building research and teaching strengths in the areas of open source software, internet and social computing, and cyber security, so our primary need is for candidates specializing in software engineering, database systems, web/distributed systems, programming languages, and HCI. Applicants should demonstrate a strong commitment to collaboration with other research groups in the School of EECS, with other departments at Oregon State University, and with other universities.

The School of EECS supports a culture of energetic collaboration and faculty are committed to quality in both education and research. With 40 tenure/tenure-track faculty, we enroll 160 PhD, 120 MS and 1200 undergraduate students. OSU is the only Oregon institution recognized for its “very high research activity” (RU/ VH) by the Carnegie Foundation for the Advancement of Teaching. The School of EECS is housed in the Kelley Engineering

Center, a green building designed to support collaboration among faculty and students across campus. Oregon State University is located in Corvallis, a college town renowned for its high quality of life.

For more information, including full position announcement and instructions for application, visit: <http://eecs.oregonstate.edu/faculty/openings.php>. OSU is an AAEOE.

**Penn State Harrisburg**  
**School of Science, Engineering and Technology**  
*Assistant Professor, Computer Science*

Penn State Harrisburg, School of Science, Engineering and Technology, invites applications for the tenure-track position of Assistant Professor of Computer Science effective Fall Semester 2011. The successful candidate will have experience and research interest in software engineering/software design, compilers, or programming languages. Candidates will be evaluated on teaching and research potential. Ph.D. in Computer Science is required. Faculty are expected to teach courses for the B.S. and M.S. degrees in Computer Science, pursue scholarly research and publications, contribute to curriculum development, participate in University and professional service activities, advise undergraduate and graduate students, and serve on graduate level degree committees. For information on Penn State Harrisburg, please visit our websites at [www.hbg.psu.edu](http://www.hbg.psu.edu) and [www.cs.hbg.psu.edu](http://www.cs.hbg.psu.edu).

Applicants are invited to submit current curriculum vitae, a list of three references with one reference addressing candidate’s teaching effectiveness, a personal statement of research and teaching objectives that includes a list of preferred courses to teach. Please submit credentials to:

Chair, Computer Science Search Committee  
c/o Mrs. Dorothy J. Guy  
Director of Human Resources  
Penn State Harrisburg  
Box: CRA-33389  
777 West Harrisburg Pike  
Middletown, PA 17057-4898

Application review will begin immediately and continue until the position is filled. Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.

**Purdue University**  
**Computer and Information Technology Department Head**

The College of Technology invites nominations and applications for the position of Department Head, Computer and Information Technology (CIT). The department head reports to the Dean of the College of Technology and is responsible for the strategic leadership of the department in academic, administrative, budgetary, and personnel decisions. Candidates must hold a terminal degree in a related discipline and have the credentials appropriate for appointment at the rank of full professor with tenure at Purdue University. Candidates will share the vision of the University and the department, and have demonstrated strategic and transformative leadership with a proven record of scholarship, external funding, and teaching.

A full description of the position and application process is available on line at: [www.tech.purdue.edu/cit/aboutus/positions.cfm](http://www.tech.purdue.edu/cit/aboutus/positions.cfm)

Purdue University is an equal opportunity, equal access, affirmative action employer.

**Purdue University**  
**Department of Computer Science**  
*Assistant Professor Position*

The Department of Computer Science at Purdue University invites applications



# Professional Opportunities

for tenure-track positions at the assistant professor level beginning August 2011. Outstanding candidates in all areas of Computer Science will be considered. Specific needs that have been identified include theory and software engineering. Candidates with a multi-disciplinary focus are encouraged to apply.

The Department of Computer Science offers a stimulating and nurturing academic environment. Forty-four faculty members direct research programs in analysis of algorithms, bioinformatics, databases, distributed and parallel computing, graphics and visualization, information security, machine learning, networking, programming languages and compilers, scientific computing, and software engineering. Information about the department and a detailed description of the open position are available at <http://www.cs.purdue.edu>.

All applicants should hold a PhD in Computer Science, or a closely related discipline, be committed to excellence in teaching, and have demonstrated potential for excellence in research. The successful candidate will be expected to teach courses in computer science, conduct research in field of expertise and participate in other department and university activities. Salary and benefits are highly competitive. Applicants are strongly encouraged to apply online at <https://hiring.science.purdue.edu>. Hard copy applications can be sent to:

Faculty Search Chair  
Department of Computer Science  
305 N. University Street  
Purdue University  
West Lafayette, IN 47907  
Review of applications will begin on November 10, 2010, and will continue until the positions are filled. Purdue University is an Equal Opportunity/Equal Access/Affirmative Action employer fully committed to achieving a diverse workforce.

**Rochester Institute of Technology**  
**Computing and Information Sciences**  
*Faculty Openings for Fall 2011*

Rochester Institute of Technology's B. Thomas Golisano College of Computing and Information Sciences (GCCIS) invites applications and nominations for the following positions:

A tenure-track faculty position in the Interactive Games and Media department ([igm.rit.edu/jobs](http://igm.rit.edu/jobs)) in the areas of computer animation (2D and 3D), rich internet applications, and/or computer games and interactive entertainment (IRC#41004):

A Ph.D., or a terminal degree (such as an MFA), in computing or a related field is required, as is a record of publicly disseminated scholarly and/or creative work, or demonstrated potential for future scholarship. Experience in games or interactive media industry, and/or publicly disseminated work related to games or interactive media.

A tenure-track faculty position in the Software Engineering department ([se.rit.edu](http://se.rit.edu)) (IRC#41000):

Applicants must have an interest in a workload balanced between a strong interest in teaching, including curriculum development at the undergraduate and graduate levels; discipline-based or pedagogical scholarship and research, with publications and the pursuit of external funding; and service commitments.

A tenured/tenure-track faculty position in the Ph.D. program supporting research in software engineering ([phd.gccis.rit.edu](http://phd.gccis.rit.edu)) (IRC#42615):

Applicants must have an outstanding research record in software engineering. Our user-inspired research program focuses on the theoretical and practical aspects of cyberinfrastructure as applied to specific problems across multiple domains. We

are looking to build research strength in software engineering to complement and support our growing strengths in biomedical imaging and computing, computational modeling and simulation, scientific computing, and services science. The responsibilities will include teaching software engineering courses including courses in the candidate's area of specialization, research, student advising, and service.

A Ph.D. in a related computing discipline is required for IRC#41000 and IRC#42615. Specialization in any area of software engineering will be considered.

The Golisano College of Computing and Information Sciences is home to the Computer Science, Software Engineering, Information Sciences and Technologies, Interactive Games & Media, and Networking, Security, and Systems Administration departments, as well as the Ph.D. program in Computer and Information Sciences. The college has 105 faculty and over 2400 undergraduate and 600 graduate students.

Candidates should visit <http://careers.rit.edu> and refer to the IRC number listed above for specific information about the positions and the application process. Refer to [www.rit.edu](http://www.rit.edu) for information about RIT and the B. Thomas Golisano College of Computing and Information Sciences.

R • I • T—Selected as one of the top colleges to work for by The Chronicle of Higher Education (2008, 2009)

**Samsung**  
*Computer Systems Researcher*

Samsung Electronic's US R&D Center, San Jose is looking for passionate researchers to join the newly formed Systems Research Group. Candidates should have a PhD with a track-record in one or more of the following technologies: compilers, parallel programming languages and run-times, micro-kernels, OS, RTOS, and other manycore/multicore related software technologies. Candidates should have a strong publication record. This is a great opportunity to be part of a team developing state-of-the-art technologies for the future business needs of Samsung Electronics.

By E-mail:  
[b.gilmore@sisa.samsung.com](mailto:b.gilmore@sisa.samsung.com)

**Southern Methodist University**  
**Department of Computer Science and Engineering**  
*Faculty Position in Computer Science and Engineering Position #053269*

The Department of Computer Science and Engineering in the Lyle School of Engineering at Southern Methodist University invites applications for a faculty position in computer engineering beginning Fall 2011. Individuals with experience and research interests in all areas of computer science and engineering are encouraged to apply. Priority will be given to individuals with expertise and research interest in computer security, including secure software and/or hardware architectures, information assurance, secure embedded systems and control, and related areas. The search is focused at the tenure-track assistant professor level. The successful candidates must have or expect to have a Ph.D. in computer science, computer engineering, or a closely related area by date of hire. Successful applicants will demonstrate a deep commitment to research activity in computer science and engineering and a strong potential for excellence in teaching.

The Dallas/Fort Worth area, one of the top three high-tech industrial centers in the country, has the largest concentration of telecommunications corporations in the US, providing abundant opportunities for industrial research cooperation and consulting. Dallas/Fort Worth

is a multifaceted business and high-tech community, offering exceptional museums, diverse cultural attractions, and a vibrant economy.

The CSE Department resides within the Bobby B. Lyle School of Engineering and offers BS, MS, and Ph.D. degrees in Computer Engineering and Computer Science, the Doctor of Engineering in software engineering, and the MS in Security Engineering and Software Engineering. The department currently has 15 faculty members with research concentrations in security engineering, software engineering, computer networks, telecommunications, data mining, database systems, VLSI and digital systems, computer arithmetic and bioinformatics. Additional information may be found at: [www.lyle.smu.edu/cse](http://www.lyle.smu.edu/cse).

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

[csesearch@lyle.smu.edu](mailto:csesearch@lyle.smu.edu)  
or  
CSE Faculty Search, Position #053269  
Department of Computer Science and Engineering  
SMU  
Dallas, TX 75275-0122

The committee will begin its review of the applications on or about December 1, 2010. To ensure full consideration, applications must be time and date stamped before December 1, 2010. However, the committee will continue to accept applications until all positions are filled.

SMU will not discriminate on the basis of race, color, religion, national origin, sex, age, disability, or veteran status. SMU is committed to nondiscrimination on the basis of sexual orientation. Hiring is contingent upon the satisfactory completion of a background check.

**Stony Brook University**  
*Faculty Position in Computational Science and Engineering*

Stony Brook University's Department of Computer Science and the New York Center for Computational Sciences (NYCCS) invites applicants for a joint tenure-track faculty position in the area of computational science and engineering, and high-performance computing and systems for Fall 2011. We are looking for faculty candidates with a demonstrable research record in these areas and a commitment to multidisciplinary research. The Department of Computer Science currently has more than 40 faculty members. There are five main research areas in the Department: computer systems, visual computing, logic programming/database, concurrency/verification, and algorithms, and is in the midst of a period of expansion. NYCCS, a joint venture of Stony Brook University (SBU) and Brookhaven National Laboratory (BNL), was formed in 2007 to advance scientific discovery in areas related to the missions of the partner institutions, and also in areas related to the broader scientific agenda and economic development of New York State. NYCCS hardware consists of an 18-rack IBM Blue Gene/L and a 2-rack Blue Gene/P supercomputer (100+25Tf total) owned by SBU and located at nearby BNL. Detailed information can be found at [www.cs.stonybrook.edu](http://www.cs.stonybrook.edu) and <http://www.newyorkccs.org>. Stony Brook University is a member of the prestigious Association of American Universities (AAU) and co-manager of BNL.

Applicants should hold a Ph.D. in computer science or a closely related discipline, be committed to excellence in research, and have demonstrated potential for excellence in teaching. To apply, submit a cover letter and resume/CV

(electronically preferred) to <https://hiring.cs.stonybrook.edu> or alternatively to:

Kathryn Germana  
Department of Computer Science  
2434 Computer Science Building  
Stony Brook University  
Stony Brook, NY 11794-4400

Women and minorities are encouraged to apply. Review of applications will begin immediately and will continue until the position is filled. A joint appointment with another department within the College of Arts and Sciences or the College of Engineering and Applied Sciences is likely for candidates with interdisciplinary research interests. For a full position description and/or application procedures, visit [www.stonybrook.edu/jobs](http://www.stonybrook.edu/jobs) (Ref. #F-6600-10-11).

Stony Brook University/SUNY is an equal opportunity, affirmative action employer.

**TCS Innovation Labs—(TRDDC)**  
**Software and Systems R&D**  
*Members of Research Staff*

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

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

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

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

**Towson University**  
**Department of Computer and Information Sciences**  
*Faculty Positions*

The Department of Computer and Information Sciences at Towson University invites applications for two tenure-track positions in its Computer Science (CS) and Information Technology (IT) programs. Selected candidates will be expected to teach undergraduate and graduate courses, participate in department activities, conduct research, and supervise graduate students.

Applicants should submit a letter of application, current resume, copies of graduate transcripts, a recent research paper, and the name, address, phone and e-mail address of three professional references to:

[cssearch@towson.edu](mailto:cssearch@towson.edu)  
[itsearch@towson.edu](mailto:itsearch@towson.edu)

The review of completed applications will begin January 15, 2011 and continue until the positions are filled.

Towson University is an equal opportunity/affirmative action employer. Full position announcements available at:

<http://www.new.towson.edu/odeo/employmentatTU/>

# Professional Opportunities

**Toyota Technological Institute at Chicago (TTIC)**  
**Computer Science**

*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. The Institute is expected to reach a steady-state of 12 traditional faculty (tenure and tenure track), and 12 limited term faculty. Applications are being accepted in all areas, but we are particularly interested in:

- Theoretical computer science
- Speech processing
- Machine learning
- Computational linguistics
- Computer vision
- Computational biology
- Scientific computing

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

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

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

Toyota Technological Institute at Chicago is an Equal Opportunity Employer

**Union College**  
**Computer Science**

*Visiting Assistant Professor*

Union College invites applications for a renewable two-year faculty position in Computer Science, at the rank of Visiting Assistant Professor, beginning September 2011, pending final administrative approval. Specialization is open though we are particularly interested in candidates who can teach in areas such as computer organization, graphics, and robotics. Applications received by Feb. 1, 2011, will receive full consideration. Union College is an equal opportunity employer and strongly committed to student and workforce diversity.

Application Instructions

For information, see <http://cs.union.edu/job>

**The University of Alabama at Birmingham**  
**Department of Computer and Information Sciences**

*Assistant/Associate Professor*

The Department of Computer & Information Sciences at the University of Alabama at Birmingham (UAB) is seeking candidates for a tenure-track/tenure-earning faculty position at the Assistant or Associate Professor level beginning August 15, 2011.

Candidates with leading expertise in Information Assurance, particularly Computer Forensics and/or Computer and Network Security are sought. The successful candidate must be able to participate effectively in multidisciplinary research with scientists in Computer and Information Sciences and Justice Sciences for advancing Information Assurance Research at UAB, including joint scientific studies, co-advising of students, and funding. Allied expertise in Artificial Intelligence, Knowledge Discovery and Date Mining, Software Engineering, and/or High Performance Computing is highly desirable. UAB has made significant commitment to this area of research and teaching. Candidates must consequently have strong teaching credentials as well as research credentials.

For additional information about the department please visit <http://www.cis.uab.edu>.

Applicants should have demonstrated the potential to excel in one of these areas and in teaching at all levels of instruction. They should also be committed to professional service including departmental service. A Ph.D. in

Computer Science or closely related field is required.

Applications should include a complete curriculum vitae with a publication list, a statement of future research plans, a statement on teaching experience and philosophy, and minimally two letters of reference with at least one letter addressing teaching experience and ability. Applications and all other materials may be submitted via email to [facapp.ia@cis.uab.edu](mailto:facapp.ia@cis.uab.edu) or via regular mail to:

Search Committee  
Department of Computer and Information Sciences  
115A Campbell Hall  
1300 University Blvd  
Birmingham, AL 35294-1170

Interviewing for the position will begin as soon as qualified candidates are identified, and will continue until the position is filled.

The department and university are committed to building a culturally diverse workforce and strongly encourage applications from women and individuals from underrepresented groups. UAB has a Spouse Relocation Program to assist in the needs of dual career couples. UAB is an Affirmative Action/Equal Employment Opportunity employer.

**University of California, Irvine**  
**The Henry Samueli School of Engineering**  
**Department of Electrical Engineering and Computer Science**

*Emulex Career Development Chair for Assistant Professor*

The Department of Electrical Engineering and Computer Science at the University of California, Irvine invites applications for one tenure-track faculty position at the Assistant Professor Level in the area of Cyber-Physical Systems (CPS). Cyber Physical Systems are systems that tightly couple their cyber (i.e. computation, communication and control), and physical components in the context of applications such as (but not limited to): automotive, medical, robotic, structures, or aeronautics. Applicants must have a Ph.D. in a related area, have demonstrated an outstanding record of achievements in their field of research, and have a strong commitment to teaching at the undergraduate and graduate levels. Most importantly, the candidate is expected to be a catalyst who can build upon traditional strengths in the EECS Department in computer engineering, communication, and devices and materials, and reach out to researchers in other departments who work on the application side of CPS and help the Department and School become a major player in the growing area of Cyber Physical Systems. The Emulex Career Development Chair is a prestigious position that provides a fixed annual scholarly allowance. The holder of the Emulex Career Development Chair will enjoy the benefits for three years, or the achievement of tenure, whichever comes earlier.

More information about the department can be found at:

<http://www.eng.uci.edu/dept/eecs>

The Henry Samueli School of Engineering at UC Irvine is one of the nation's fastest growing engineering schools, attracting talented faculty and students from across the nation and abroad. Its mission is to provide outstanding education to students through a combination of classroom learning and laboratory experience distinguishing itself through an emphasis on cross-disciplinary research and education.

Applications should include a detailed statement of research interests, a resume, and the names and addresses of three or more references. To submit your application to our on-line recruitment program, you will find the URL link at our

website at: <http://www.eng.uci.edu/eecs/employment/faculty>.

All qualified applicants, including women and minority applicants, are encouraged to apply. Selection will begin December 1, 2010, and continue until the position is filled. More details can be found by contacting Professor Michael Green ([mgreen@uci.edu](mailto:mgreen@uci.edu)) Department Chair.

UCI is an equal opportunity employer committed to excellence through diversity and strongly encourages applications from all qualified applicants, including women and minorities. UCI is responsive to the needs of dual career couples, is dedicated to work-life balance through an array of family-friendly policies, and is the recipient of an NSF ADVANCE Award for gender equity.

**University of California, Santa Barbara**  
**Media Arts and Technology Graduate Program**

*Tenure-Track Assistant Professor*

The Media Arts and Technology Program at the University of California, Santa Barbara, invites applications for a tenure-track position at the assistant professor level, starting July 1, 2011. The department seeks candidates who will establish a vigorous research and teaching program in computer graphics, scientific/information visualization, or a related field applicable to immersive, interactive, and distributed environments, working with high-dimensional data generated in scientific and artistic domains. The successful candidate will be expected to collaborate with artists, engineers, and scientists in an interdisciplinary environment of research, creative work, and teaching.

Media Arts and Technology (MAT) is a transdisciplinary graduate program at UCSB in both the College of Letters and Science (Division of Humanities and Fine Arts) and the College of Engineering. MAT offers Master's and PhD degrees and has approximately 40 graduate students and 10 faculty, several with joint appointments in engineering and arts departments. Areas of expertise include human-computer interaction, electronic music and sound design, computational visual and spatial arts, and multimedia signal processing. Offices and labs are housed in the new California Nanosystems Institute building at UCSB, which includes a unique research facility called the Allosphere, a three-story spherical immersive environment. Additional information about the department can be found at <http://www.mat.ucsb.edu>.

Applicants are expected to hold a doctoral degree in Media Arts and Sciences, Computer Science, or a closely related field, have demonstrated excellence in research, and have a strong commitment to teaching and interdisciplinary scholarship and/or creative activity.

The department is especially interested in candidates who can contribute to the diversity and excellence of the academic community through research, teaching, and service. Primary consideration will be given to applications received by February 1, 2011; however, the position will remain open until filled. Applications must include a CV, research and teaching statements, and at least three letters of reference. See <http://www.mat.ucsb.edu/> recruit for information on how to apply.

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

**University of the District of Columbia**  
**Computer Science and Information Technology**

*Tenure-Track Position*

The Department of Computer Science and Information Technology at the

University of the District of Columbia seeks applications for a tenure-track faculty position at the level of Assistant or Associate beginning in August 2011. We welcome all candidates in all areas of Computer Science and Information Technology. Applicants must hold a Ph.D. in Computer Science, IT, or closely related disciplines. We are particularly interested in candidates with practical research experience in Information Assurance and Systems (IA&S). NSA CAE-IAE/R experience is a plus.

Candidates who have strong practical expertise in Confidentiality, Integrity, and Availability in Technology, Policy & Practice, and Education & Awareness of information assurance and incorporating protection, detection, and reaction capabilities are encouraged to apply. Cloud computing or mobile computing specialization will be a plus.

Faculty duties include teaching undergraduate and graduate students, conducting high-quality research by collaborating closely with the department's IA team, developing externally funded research projects and IT curricula, and performing academic duties, university services, and professional services.

The University of the District of Columbia is a comprehensive urban land-grant institution and is classified as a Historically Black College and University. It is the only public university in the District of Columbia.

Application Instructions:

The applicant should submit, in electronic formats, a CV with three references (names and contact information) directly to Dr. Byunggu Yu at the address given below. Review will continue until the position is filled. The University of the District of Columbia is an Equal Opportunity/ Affirmative Action Employer.

Dr. Byunggu Yu, PhD  
Chair  
CSIT, UDC, <http://csit.udc.edu>  
4200 Connecticut Avenue, NW.  
Building 42, Suite 112  
Washington, DC 20008  
Telephone: (202) 274 6289  
Email: [byu@udc.edu](mailto:byu@udc.edu)

**University of Florida**  
**Department of Computer and Information Science and Engineering**

*Assistant/Associate/Full Professor*

The Department of Computer and Information Science and Engineering at the University of Florida invites applications for tenure track positions at any rank with appointment starting August 2011 or thereafter. While, exceptionally strong candidates in any area of computer science or computer engineering are encouraged to apply, we are especially interested in the following areas: bioinformatics, computational science and engineering, cyber-physical autonomous systems, database systems, energy-aware/green computing, exascale computing, human-centered computing, human-computer interaction, medical informatics, modeling, physics-based animation, security, and virtual reality.

All applicants should hold a PhD in Computer Science, Computer Engineering, or a closely related discipline, and should be committed to excellence in teaching and research. Salary and support are competitive and depend on background and experience. The CISE Department currently has 32 tenure track faculty and a student body of 548 graduate and 551 undergraduate students. The Department encompasses a wide range of research areas including computer graphics, simulation, and art; computer systems; computer vision and intelligent systems; database and information systems; high performance



# Professional Opportunities

computing and algorithms; and networks and security.

Applicants should submit online, a current curriculum vitae and a statement of career objectives to <http://www.cise.ufl.edu/employment/faculty>. Please make reference to position 00004236. Applicants are requested to have three letters of recommendation submitted electronically as explained in the aforementioned website. Applications will not be reviewed until all recommendation letters have been received. The search committee will accept applications until the positions are filled.

Please complete our Application Data Card located at: <http://www.hr.ufl.edu/job/datacard.htm>. Use position number 00004236. This information is returned directly to the Faculty Development Office. Submission of this information is entirely voluntary.

The University of Florida is an equal opportunity institution dedicated to building a broadly diverse and inclusive faculty and staff. Minorities, women and those from other underserved groups are encouraged to apply. For more information about the Department, please visit our website: University of Florida: Department of Computer and Information Science and Engineering (CISE)

**University of Georgia**  
Department of Computer Science  
*Lecturer*

The Department of Computer Science at the University of Georgia invites applications for the position of Lecturer, starting August 2011. The primary responsibilities of this position are to teach foundational courses in the undergraduate major and to provide leadership and coordination in the areas of undergraduate recruitment, retention, and placement. It is intended that the person holding this position will periodically teach a senior/beginning graduate level course in his/her specialty.

Successful candidates should hold the 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.

In the form of a single PDF file, please send an application letter, curriculum vitae, and a statement of teaching philosophy to [recruiting@cs.uga.edu](mailto:recruiting@cs.uga.edu). Under separate cover, applicants should also arrange for at least three letters of reference to be sent either via e-mail or ordinary mail at the address below.

Applications received by January 15, 2011, will receive full consideration. For more information about the department and the university, please see <http://www.cs.uga.edu>.

Lecturer Search Committee  
Department of Computer Science  
415 Boyd Grad Studies Research Building  
University of Georgia  
Athens, GA 30602

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 is an EEO/AA institution.

**University of Houston**  
Department of Computer Science  
*Faculty Position*

The Department of Computer Science at the University of Houston ([www.cs.uh.edu](http://www.cs.uh.edu)) invites applications for one tenure-track faculty position starting in August 2011. The Department is in a phase of significant growth in enrollments,

sponsored research, and faculty size. The current search is focused on the following areas: software design/engineering, computer security, human-computer interaction, and theory. However, outstanding candidates in other areas will also be considered. Preference will be given to candidates at the Assistant Professor level but exceptional senior candidates will get full consideration. Candidates should hold a Ph.D. in Computer Science, Computer Engineering, or a closely related field.

The Department has strong research programs in Computer Systems (high performance computing, networks, real-time systems, security), Data Analysis (information retrieval, data mining, machine learning) and Computational Life Sciences (biomedical image analysis, bioinformatics, biometrics, graphics). The Department's research is the epitome of innovation, mixing advances in core computer science areas with pace-setting multi-disciplinary programs in computational medicine, biology, and psychology. The combination of fundamental research and innovations has led to numerous local, national and international collaborations, the strongest of which are with the Texas Medical Center.

The University of Houston, one of the largest in the nation with over 36,000 students, is located in one of the most vibrant metropolitan areas. Houston, the 4th largest U.S. city, is the epicenter of the energy industry, features the largest medical center in the world, and hosts the Johnson Space Center. The Department's research laboratories have joint programs with laboratories from the local medical schools and hospitals, NASA, and the high-tech industry.

Applicants should submit their Curriculum Vitae, a statement of research and teaching goals, and up to two representative publications. Junior candidates should arrange for at least three professional references while senior candidates should provide at least five. For full consideration all application material must be submitted by January 31, 2011. More information and instructions are available on-line at: <http://www.cs.uh.edu/faculty-search>

The University of Houston is an equal opportunity/affirmative action employer. Minorities, women, veterans, and persons with disabilities are encouraged to apply.

**The University of Iowa**  
Computer Science Department  
*Assistant/Associate Professor Position, Fall 2011*

The Computer Science Department seeks applications for a tenure-track assistant or associate professor position commencing August 2011.

This position is in support of a new institution-wide cluster hire initiative to study the aging mind and brain. Fourteen new faculty with expertise in biology, computer science, human systems integration, neuroimaging, neuropsychology, cognitive science, psychology, neurodegenerative disease, community and public health, and public policy will complement the University's considerable existing expertise in these areas to form the core of this new multidisciplinary center. Areas of particular interest include human-computer interaction, ambient computing, social network analysis or other areas at the interface of man and machine.

Candidates must hold a PhD in computer science, informatics, or a closely related discipline. Appointments will be made within the Computer Science Department, which offers BA, BS, MCS, and PhD degrees in computer science, and BA and BS degrees in Informatics. Successful applicants must demonstrate potential for research and teaching excellence

in the environment of a major research university. Applicants are also expected to participate actively in collaborative research as part of the multidisciplinary aging mind and brain initiative.

Applications received by January 31, 2011 are assured of full consideration. Applications should contain a CV, research and teaching statements, and three letters of recommendation.

Duties include teaching undergraduate and graduate courses in a specialty area, conducting externally funded research in their area of expertise, and making service contributions to the Department, the University, and the discipline.

Both the Department and the College of Liberal Arts and Sciences are strongly committed to gender and ethnic diversity; the strategic plans of the University, College, and Department reflect this commitment. Women and minorities are encouraged to apply.

For additional information and to apply visit: <http://www.cs.uiowa.edu/hiring/>

The University of Iowa is an equal opportunity/affirmative action institution.

**University of Maryland, College Park**  
*Dean, College of Computer, Mathematical, and Natural Sciences*

The University of Maryland, College Park invites applications and nominations for the position of Dean of the recently formed College of Computer, Mathematical, and Natural Sciences ([www.cmns.umd.edu](http://www.cmns.umd.edu)). A member of the Association of American Universities (AAU) and the flagship of the University System of Maryland, the University is located in the Baltimore-Washington corridor within nine miles of the nation's capital. The University ranks among the top 20 public universities, with nationally-ranked programs and innovative undergraduate programs.

The search for new knowledge, with its transformative effect on society, is increasingly becoming an interdisciplinary endeavor. For this reason, the University established the College of Computer, Mathematical, and Natural Sciences (CMNS) by integrating the former colleges of Chemical and Life Sciences (CLFS) and Computer, Mathematical, and Physical Sciences (CMPS). This integration will facilitate and encourage the rapid development of collaborations among faculty from across the two former colleges. This newly formed College includes the following Departments: Astronomy, Atmospheric and Oceanic Science, Biology, Cell Biology and Molecular Genetics, Chemistry and Biochemistry, Computer Science, Entomology, Geology, Mathematics, and Physics. CMNS also has a number of prestigious research Institutes and Centers that are highly interdisciplinary.

Nationally recognized for education and research, many programs in CMNS are ranked among the top ten of US public research universities. The College offers every student a high quality, innovative and cross-disciplinary educational experience, and a degree that commands respect around the world.

The Dean reports to the Senior Vice President for Academic Affairs and Provost, and is the chief academic officer and executive officer of the College, which has a full-time tenured/tenure-track faculty of 340 who are internationally respected and highly accomplished scholars. The College also employs more than 400 non-tenure-track research faculty and postdoctoral fellows. The College has over 5,000 undergraduate students and over 1,500 master and doctoral students. In addition, research awards for fiscal 2010 exceeded \$200M.

We seek a leader who, in collaboration with the College chairs and directors,

will play a major role in fostering continuous improvement in the standards, accomplishments, and international prestige of the faculty and students in the College. This includes strengthening the strong partnerships that exist between the College and nearby federal agencies and laboratories, as well as encouraging engagement with other regional, national, and international organizations. The Dean is expected to provide dynamic leadership toward achieving excellence in research, teaching, and service to the community and profession, in strategic planning, and in fundraising. The Dean must be able to lead a complex organization, and be dedicated to fostering the goals of diversity and affirmative action to enhance the College's integrative and intellectual mission. The Dean must demonstrate an understanding of contemporary issues in computer, mathematical, and natural sciences research and education, and must possess the ability to anticipate and address future challenges and opportunities. Qualified applicants must merit appointment at the rank of Professor with tenure in a CMNS unit, and have successful administrative experience. Salary will be competitive and commensurate with experience. The appointment date is open, with a start date of July 2011 preferred.

Applicants and nominees should submit a letter of interest; curriculum vitae; and the names, addresses, and telephone numbers of at least four persons who can be contacted by the search committee for reference. Nominations are encouraged and will be received at any time. Confidential review of nominations and applications for this position will begin December 1, 2010, and continue until the position is filled. Please send all materials to:

Search Committee for Dean,  
College of Computer, Mathematical, and Natural Sciences  
Attention: Ms. Sandra Davis  
1119 Main Administration Building  
University of Maryland  
College Park, MD 20742-5031  
Tel (301)405-6813 Fax (301)405-8195  
Electronic applications should be emailed to: [sandyd@umd.edu](mailto:sandyd@umd.edu) followed by hard copies mailed to the above address. The University of Maryland, College Park is an equal opportunity employer; women and minority candidates are encouraged to apply.

**University of Maryland, College Park**  
Department of Computer Science  
*Research Software Engineer Position*

We seek a research software engineer to implement an advanced machine learning software package to support cutting-edge research. The prospective candidate will be responsible for all aspects of the package development: conceptualization, design, implementation, documentation, testing, debugging, external software integration and user-support.

For more details on qualifications, application instructions, and salary, please refer to the following URL:

<http://www.cs.umd.edu/projects/linqs/psl/softwareEngineerAd.html>  
For full consideration, please apply by December 1, 2010.

The University of Maryland is an equal opportunity, affirmative action employer. Women and minorities are encouraged to apply.

**University of Massachusetts Boston**  
Department of Computer Science  
*Assistant Professor*

The Computer Science Department at the University of Massachusetts Boston invites applications for fall 2011 for a tenure-track Assistant Professor position in Databases. We offer an

Professional Opportunities

ABET-accredited BS in Computer Science, a BS in Information Technology, an MS with an emphasis on Software Engineering, and a PhD in Computer Science. Current faculty interests include bioinformatics, computer and human vision, data mining, databases, information technology, networks, software engineering, system modeling, and theoretical computer science.

Evidence of significant research potential and a PhD in computer science or a related area are required. We offer a competitive salary and start-up package. A complete application consists of a cover letter, curriculum vitae, statements about research and teaching, and the names and email addresses of three references. Please submit your application at:

<http://umb.interviewexchange.com/candapply.jsp?JOBID=22098>  
Our campus overlooks Boston harbor; our faculty and students enjoy professional life in a center of academia and the software industry. For more information, visit us at <http://www.cs.umb.edu>.

Review of applications has begun and will continue until the position is filled. UMass Boston is an Affirmative Action, Equal Opportunity, Title IX Employer.  
Apply Here: <http://www.Click2Apply.net/rbdhphn>

University of Miami  
Computer Science  
*One Open-Rank, Tenure-Track or Tenured Faculty Position*

University of Miami invites applications and nominations for one open-rank, tenure-track or tenured faculty position in the department of Computer Science (<http://www.cs.miami.edu>) starting August 2011. Applicants must possess a Ph.D. in Computer Science or in a closely-related discipline with strong research and teaching experience in areas that pertain to high performance computing, data visualization, and graphics. Applicants must have a proven record of or a strong potential for interdisciplinary collaboration with areas in the arts or sciences outside of Computer Science. At least three years of post-doctoral experience is required.

The successful candidate will have the opportunity to serve as the Program Director of Visualization in the University of Miami Center for Computational Science (<http://ccs.miami.edu>). The Center for Computational Science, a new initiative with a multi-million-dollar budget, aims at providing research and support for researchers across the University that are engaged in large-scale computational analysis/exploration. The Center is expected to have a number of core research programs that interface with the university community. The Director will lead the visualization efforts, whose missions are to enable visual understanding of data and to help the university researchers to disseminate their scientific work.

Applicants should submit curriculum vitae, sample preprints or reprints, their research and teaching plans with emphasis on their interdisciplinary expertise. Applicants should provide names and contact information for at least four references. Applications must be submitted online to:

<http://www.cs.miami.edu/search>  
Applications will be accepted until the position is filled.

The University of Miami is an Affirmative Action/Equal Opportunity University that values diversity and has progressive work-life policies. Women, persons with disabilities, and members of other underrepresented groups are encouraged to apply.

University of Mississippi  
(Ole Miss)  
Department of Computer and Information Science  
*Chair*

The Department of Computer and Information Science at the University of Mississippi (Ole Miss) invites applications for the position of Chair. The Chair provides leadership and overall strategic direction for the instructional and research programs. Requirements include a PhD or equivalent in computer science or a closely related field, evidence of excellence in teaching and research in one or more major areas of computer and information science, and administrative experience relevant to the management of an academic computer science department. The Department has an ABET/CAC-accredited undergraduate program and MS and PhD programs. See the website <http://www.cs.olemiss.edu> for more information about the Department and its programs. The University is located in the historic town of Oxford in the wooded hills of north Mississippi, an hour drive from Memphis. Oxford has a wonderful small-town atmosphere with affordable housing and excellent schools.

Individuals may apply online at <http://jobs.olemiss.edu>. Applicants will be asked to upload a cover letter, curriculum vitae, names and contact information for five references, and a statement of department administrative philosophy, objectives, and vision. Review of applications will begin immediately and will continue until the position is filled or an adequate applicant pool is reached.

The University of Mississippi is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA employer.

University of North Carolina  
at Chapel Hill  
School of Information and Library Science  
*Assistant Professor*

The School of Information and Library Science at the University of North Carolina at Chapel Hill invites nominations and applications for a tenure-track faculty position at the Assistant Professor rank.

Candidates with interest in: Human computer interaction and social computing; information retrieval, synthesis and analysis are encouraged to apply.

Candidates should provide evidence of research and teaching excellence, or potential for excellence, in their area of expertise.

Review of applications begins 1 Dec. 2010. For details and instructions on how to apply, please visit: [jobs.unc.edu/2500389](http://jobs.unc.edu/2500389) or contact Dr. Diane Kelly, at [dianek@email.unc.edu](mailto:dianek@email.unc.edu) or 919-962-8065.

UNC at Chapel Hill is an equal opportunity employer. Minorities and women are encouraged to apply.

University of North Carolina  
at Charlotte  
College of Computing and Informatics  
*Multiple Faculty Positions*

CCI is one of the few college-level organizations in computing and informatics among major research universities in the US, with close to 60 faculty, 30 staff, and 1200 students, including 130 Ph.D. students. The college has a vibrant and cutting edge research enterprise, most notably: Charlotte Visualization Center is one of the leading centers in the nation sponsored by the Department of Homeland Security in visual analytics; Cyber DNA Center is a National Center of Excellence in Information Assurance Research and Education designated by the National Security Agency; the Bioinformatics Research Center leads the University in structural bioinformatics, molecular biophysics, plant genomics, and metagenomics research. For fiscal year

2009-2010 the College received over \$15 million in external research funding.

UNC Charlotte is a rapidly growing urban research university with 900 faculty, over 25,000 students, including 5,400 graduate students, with a projected enrollment of 35,000 by 2020. It is ranked among the top 10 of up-and-coming national universities by the US News and World Report. Charlotte is a dynamic and diverse region of 1.8 million people and is one of the most livable major urban areas in the nation, with outstanding cultural and recreational amenities. It is the second largest banking center in the country, and a leading center for energy, healthcare, retail, and logistics industries.

The College of Computing and Informatics is embarking on an exciting venture to develop a new class of leading computing and informatics programs for the 21st Century talent and innovation needs. Our strategy emphasizes the interplay between developing critical mass in analytics, security, and informatics, and building strong connections with banking, healthcare, energy, life science, and biotechnology. We invite outstanding entrepreneurial, thought leaders to join our faculty in the following positions:

1. Department of Computer Science: tenure-track full professor. The successful candidate should have demonstrated skills in working across college and departmental boundaries and is experienced in building and managing large-scale, interdisciplinary research and educational efforts. The candidate's research can lie in serious games, data warehousing, data analytics, or knowledge systems and discovery.
2. Department of Software and Information Systems: two tenure-track faculty positions at all levels, with strong preference given to full and associate professor ranks. A successful candidate must have an excellent research record that can attract substantial research funding. The Department is particularly interested in faculty with research expertise in health informatics, information and network security, modeling, and simulation of complex systems.
3. Department of Bioinformatics and Genomics invites applications for the Carol Grotnes Belk Distinguished Professorship of Bioinformatics and Genomics with tenure.

Salaries for the above positions will be highly competitive. All candidates must have a Ph.D. degree in relevant areas. For application details, please visit (<https://jobs.unc.edu>) and click on faculty. Review of applications will start in September 2010 and continue until positions are filled. The University of North Carolina at Charlotte is an EOE/AA employer and an NSF ADVANCE Institution.

University of North Texas  
Department of Computer Science and Engineering  
*Department Chair*

Applications are invited for the Chair position in the Department of Computer Science and Engineering at the University of North Texas. UNT is one of seven universities designated by the state as an "Emerging Research University." Candidates must have an earned doctorate in Computer Science and Engineering or a closely related field with a record of significant and sustained research funding and scholarly output that qualifies them to the rank of full professor. Preferred: Administrative experience as a department chair or director of personnel working in computer science and engineering; experience in curriculum development; and demonstrated experience mentoring junior faculty. The committee will begin its

review of the applications on December 1, 2010 and the position will close on April 4, 2011. All applicants must apply online to: <https://facultyjobs.unt.edu>. Nominations and any questions regarding the position may be directed to Dr Bill Buckles ([bbuckles@cse.unt.edu](mailto:bbuckles@cse.unt.edu)). Additional information and about the department is available at [www.cse.unt.edu](http://www.cse.unt.edu). UNT is an AA/ADA/EOE.

University of Pennsylvania  
Department of Computer and Information Science  
*Lecturer Positions*

The University of Pennsylvania's Department of Computer and Information Science invites applicants for two Lecturer positions. The department seeks individuals with exceptional promise for, or a proven record of, excellence in teaching undergraduate courses. Applicants should hold a graduate degree (preferably a Ph.D.) in Computer Science or Computer Engineering, and have a strong interest in teaching with practical application.

Duties for the Lecturer position include introductory programming courses for majors and non-majors, and other courses within the Computer Science program. The position starts July 1, 2011; applications are due by February 15, 2011.

Lecturer positions are for one year, renewable annually up to three years, at the end of which a promotion to Senior Lecturer can be considered. Successful applicants will find Penn to be a stimulating environment conducive to professional growth in both teaching and research.

To apply, please complete the form located on the Faculty Recruitment Web Site at:

<http://www.cis.upenn.edu/departamental/facultyRecruiting.shtml>  
Electronic applications are strongly preferred, but hard-copy applications (including the names of at least four references) may alternatively be sent to:

Chair, Faculty Search Committee  
Department of Computer and Information Science  
School of Engineering and Applied Science  
University of Pennsylvania  
Philadelphia, PA 19104-6389

Applications should be received by each date listed above to be assured full consideration.

Applications will be accepted until positions are filled.  
Questions can be addressed to [faculty-search@central.cis.upenn.edu](mailto:faculty-search@central.cis.upenn.edu).

The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, sex, sexual orientation, gender identity, religion, color, national or ethnic origin, age, disability, or status as a Vietnam Era Veteran or disabled veteran in the administration of educational policies, programs or activities; admissions policies; scholarship and loan awards; athletic, or other University administered programs or employment.

The Penn CIS Faculty is sensitive to "two-body problems" and would be pleased to assist with opportunities in the Philadelphia region.

University of Pennsylvania  
Radiology  
*Postdoctoral Positions in Facial Expression Analysis applied to Neuropsychiatry*

Postdoctoral positions in facial expression analysis applied to neuropsychiatric disorders, are available at the Section of Biomedical Image Analysis (SBIA), Department of Radiology, University of Pennsylvania. The successful candidates must have actively worked in facial analysis in the



# Professional Opportunities

past. The project involves work on face detection, tracking, expression/ emotion detection and analysis with application to neuropsychiatric disorders. SBIA is a group of engineers and mathematicians working in active collaboration with doctors.

For details please contact, Ragini Verma, Asst Prof. Radiology, University of Pennsylvania at Ragini.Verma@uphs.upenn.edu.

**University of Prince Edward Island (Canada)**  
**Department of Computer Science and Information Technology**  
*Postdoctoral Fellow (Wireless Sensor Networks)*

Applications from qualified postdoctoral candidates are invited for a research position in wireless sensor networks for patient monitoring. The details about this position are available here:

<http://cms.upei.ca/csit/postdoctoral-fellowship-wireless-sensor-networks-patient-monitoring>

**University of Rochester**  
**Computer Science Department**  
*Assistant to Full Professor of Computer Science*

The UR Department of Computer Science seeks researchers in computer vision and/or machine learning for a tenure-track faculty position beginning in Fall 2011. Outstanding applicants in other areas may be considered. Candidates must have a PhD in computer science or related discipline. Senior candidates should have an extraordinary record of scholarship, leadership, and funding.

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

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

Candidates should apply online at <http://www.cs.rochester.edu/recruit> after November 1, 2010. Review of applications will begin on December 1, and continue until all interview openings are filled. The University of Rochester has a strong commitment to diversity and actively encourages applications from candidates from groups underrepresented in higher education. The University is an Equal Opportunity Employer.

**University of South Carolina Beaufort**  
**Computational Science**  
*Assistant Professor, Tenure Track Faculty*

The Department of Science and Mathematics at the University of South Carolina Beaufort (USCB) invites applications for a tenure-track faculty position in Computational Science beginning August 2011. Requirements include an earned doctorate in Computer/Computational Science with advanced training in Mathematics or an earned doctorate in Applied Mathematics with considerable experience in

Computer Science. Preferred candidate should have the ability to establish and maintain an externally-funded research program, a strong commitment to undergraduate teaching, and excellent communication skills. Start-up funds are available along with a shared supercomputing research core facility. Salary is competitive and commensurate with qualifications and experience.

Applicants must complete the Academic Personal Information form on-line at <https://uscjobs.sc.edu>. Application deadline is February 1, 2011.

For more information go to [http://www.uscb.edu/Employment\\_Opportunities](http://www.uscb.edu/Employment_Opportunities)

USC Beaufort is an Affirmative Action/Equal Opportunity Institution.

Women and minorities are encouraged to apply.

**University of Southern California**  
*USC CEI Post Doctoral Research Associate*

The Center for Energy Informatics (cei.usc.edu) at the Viterbi School of Engineering, University of Southern California, invites candidates to apply for the position of Postdoctoral Research Associate. The position is intended to accelerate the research aims of the recently formed center, an Organized Research Unit within the Viterbi School of Engineering. This position is available immediately.

We invite candidates with a research background in the areas of information integration, data management, semantic Web, and software systems integration. Experience and insight into social and/or scalable computing is a plus. The postdoctoral associate will perform research that will apply principles from the above areas to the emerging domain of energy informatics. Our current research is focused on the application areas of Smart Oil Fields and Smart Grids, sponsored by Chevron and the Department of Energy; this position is directed towards Smart Oil Fields.

Applicants must have earned a Ph.D. or foreign equivalent in a relevant field at the time of appointment. This position will offer excellent opportunities to define cutting edge research problems, work closely with doctoral students, and interact with domain experts from leading industries to conduct innovative and exploratory research in this emerging area. It will also offer additional opportunities for research oriented career advancement.

The successful candidate will develop and maintain technical expertise required to perform original research, both through self-direction and as part of a research team, and will tailor his/her research efforts to support the needs of our sponsors from industry and/or government. In addition to technical skills, applicants must also have demonstrated written and oral communication skills (publications, presentations, talks, etc.). The candidate will work under the guidance of Prof. Viktor Prasanna. We invite applicants to submit their detailed CV, list of references, representative publications, and research statement to [ceiucjobs@gmail.com](mailto:ceiucjobs@gmail.com).

**The University of Texas at Arlington (www.uta.edu)**  
**Computer Science and Engineering Department**  
*Faculty Openings for 2011-2012*

The University of Texas at Arlington (UT Arlington), Computer Science and Engineering (CSE) Department (<http://www.cse.uta.edu>) has one tenure track faculty position at the assistant professor level starting Fall 2011. We invite applications from exceptional candidates in all areas of computer science, especially in areas of applied computer science and computer engineering. Duties include

teaching/mentoring undergraduate and graduate students, research/grant activities, interdisciplinary and team-building collaborations, and departmental and university service. Salary is competitive.

The University of Texas at Arlington (UTA) sits in a telecommunications high-tech “corridor,” in one of the nation’s fastest growing regions, with DFW airport about 20 min. north of campus. UT Arlington’s College of Engineering is one of the most comprehensive engineering programs in the nation with 8 baccalaureate programs, 13 masters and 9 doctoral. The CSE Department offers BS, MS and PHD degrees in Computer Science and Computer Engineering as well as BS and MS in Software Engineering. It has 37 faculty members who are committed to excellence in research and teaching.

Applicants must have an earned doctorate in computer science or computer engineering, have demonstrated a commitment to quality undergraduate and graduate teaching and have a strong record of scholarly research. Interested persons should submit a letter of application, a resume, 3 of your best papers, research and teaching statements, and 3 reference letters ONLINE at: <http://www.cse.uta.edu/recruiting/>. Inquiries can be sent to [search@cse.uta.edu](mailto:search@cse.uta.edu).

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

This is a security sensitive position; a criminal background check will be conducted on finalists. The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, sex, religion, age, disability, veteran status or sexual orientation in employment or in the provision of services.

Effective August 1, 2011, the use of tobacco products (including cigarettes, cigars, pipes, smokeless tobacco and other tobacco products) by students, faculty, staff, and visitors are prohibited on all UT Arlington properties.

**University of Texas at El Paso**  
**Computer Science**  
*Tenured/Tenure-Track Position*

UTEP is seeking applicants for a faculty position to support the growth of the CyberShARE Center’s STEM-centered research efforts in Cyberinfrastructure. For information about this position including required qualifications and application instructions, please visit the Faculty Opportunities website.

The University of Texas at El Paso is an Equal Opportunity/Affirmative Action employer. The University does not discriminate on the basis of race, color, national origin, sex, religion, age, disability, genetic information, veteran status, or sexual orientation in employment or the provision of services.

**University of Texas-Pan American**  
**Computer Science Department**  
*Assistant Professor Faculty Position*

The Department of Computer Science at the University of Texas-Pan American (UTPA) seeks applications for a tenure-track Assistant Professor position in Computer Engineering (F10/11-24). All candidates must have a potential/proven record in teaching and active research. The Assistant Professor position in Computer Engineering requires a Ph.D. in computer science or computer engineering. Highest priority will be given to candidates with research expertise in areas of Computer Networks, Cybersecurity/Forensics, Data Management, Scientific Workflows, and/or Semantic Web.

The program in Computer Engineering leading to BS degree in Computer Engineering is administered jointly by

the Computer Science Department and the Electrical Engineering Department. The Computer Science Department (<http://www.cs.panam.edu>) also offers the BSCS (ABET/CAC Accredited) and BS undergraduate degrees, MS in Computer Science and MS in Information Technology.

UTPA is situated in the lower Rio Grande valley of south Texas, a strategic location at the center of social and economic change. With a population of over one million, the Rio Grande Valley is one of the fastest growing regions in the country. The region has a very affordable cost-of-living. UTPA is a leading educator of Hispanic/Latino students, with enrollment of over 18,500.

The position starts in Fall 2011. The salary is competitive. A complete application should include: (1) a cover letter, specifically stating an interest in the Assistant Professor in Computer Engineering position, noting your specialization, (2) vita, (3) statements of teaching and research interests, and (4) names and contact information of at least three references. Applications can be mailed to Dean’s Office, Computer Engineering Search, College of Engineering and Computer Science, The University of Texas-Pan American, 1201 W. University Drive, Edinburg, Texas 78539 or emailed to [coec@utpa.edu](mailto:coec@utpa.edu). Review of materials will begin on November 1, 2010 and continue until the position is filled.

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

**University of Wisconsin—Eau Claire**  
**Computer Science**  
*Tenure-Track Assistant Professor*

The University of Wisconsin-Eau Claire’s Department of Computer Science is seeking a tenure track faculty member at the rank of Assistant Professor beginning August 22, 2011. Applicants must have a Ph.D in Computer Science or a closely-related field by August 1, 2011. We offer an ABET-accredited bachelors degree in computer science as well as emphases in software engineering and computer engineering, and currently have approximately 200 students pursuing a bachelor’s degree.

For more information, go to: <http://www.uwec.edu/Employment/faculty.htm>

**University of Wisconsin-Madison**  
*Faculty Positions in Computational Systems Biology*

The University of Wisconsin-Madison is seeking applicants for faculty positions in the area of Systems Biology. These positions will be part of the Systems Biology Theme of the recently-founded Wisconsin Institute for Discovery. The Wisconsin Institute for Discovery (WID) and the Morgridge Institute for Research are a unique public/private research and educational venture at the University of Wisconsin-Madison.

Each successful candidate will be appointed to the department of the University that most appropriately matches her/his experience and interests. The Department of Biostatistics and Medical Informatics would be an appropriate home department for those candidates who develop statistical and/or algorithmic



Professional Opportunities

methodology for addressing problems in systems biology.

The Mission of the Systems Biology Theme is to advance the frontiers of knowledge by promoting synergistic research and education at the interfaces of quantitative, computational and evolutionary biology.

For full consideration, applicants should submit their application by January 3, 2011.

Applications should be submitted to the following web site:

<http://newfac.sysbio.discovery.wisc.edu>

University of Wisconsin—Milwaukee  
Department of Computer Science  
Research Assistantship

1-2 Research assistantships are available for PhD Students in the area of algorithms and computational geometry in the department of Computer Science at the University of Wisconsin-Milwaukee. These appointments are for a duration of one year, extendible after the first year. These assistantships are to work towards PhD degrees under the supervision of Prof. Adrian Dumitrescu.

Position start: Spring 2011 or Fall 2011

The position is subject to the candidate being accepted in the PhD program in Computer Science at the University of Wisconsin-Milwaukee.

Students must apply to the PhD program and comply with the graduate school application requirements provided at:

<http://www.cs.uwm.edu/html/csAcadPhD.html>

For more information visit <http://www.cs.uwm.edu/>

To apply, contact Prof. Adrian Dumitrescu; the e-mail address is listed at <http://www.cs.uwm.edu/faculty/ad/>

USC Viterbi School of Engineering—Computer Science  
Tenure Track Faculty Positions

The Computer Science Department of the USC Viterbi School of Engineering seeks to hire two tenure-track faculty this year. We are interested in outstanding faculty candidates at the junior faculty level, with priority in the areas of:

Networking, cloud computing, and computer security

Theory and algorithms, computational economics and computational social sciences

In addition, the department will also consider exceptional candidates in all areas of computer science.

Applicants should submit their applications online at: <http://www.cs.usc.edu/Jobs/>

Applications must include a letter indicating the area of specialization, a detailed curriculum vitae, a statement on current and future research directions, and names of at least three professional references. Evaluation of all dossiers will start in early December 2010, but later applications will also be considered.

We are also interested in exceptional senior candidates who can be transformational faculty members. They should contact the Department Chair, at [cschair@usc.edu](mailto:cschair@usc.edu). Outstanding senior applicants who have demonstrated academic excellence and leadership, and whose past activities document a commitment to issues involving the advancement of women in science and engineering may be also considered for the Lloyd Armstrong, Jr. Endowed Chair, which is supported by the Women in Science and Engineering Program endowment.

We expect all candidates to have a strong commitment both to research and to teaching. All applicants must have earned a doctorate in computer science or a closely related field by the date of appointment.

The USC Viterbi School of Engineering is among the top tier engineering schools in the world. It counts 168 full-time, tenure-track faculty members, and it is home to the Information Sciences Institute, two National Science Foundation Engineering Research Centers, a Department of Energy EFRC (Energy Frontiers Research Center), and the Department of Homeland Security's first University Center of Excellence, CREATE. The school is affiliated with the Alfred E. Mann Institute for Biomedical Engineering, the Institute for Creative Technologies and the USC Stevens Institute for Innovation. Research expenditures typically exceed \$160 million annually.

USC values diversity and is committed to equal opportunity in employment. Women and men, and members of all racial and ethnic groups, are encouraged to apply.

Virginia State University  
Department of Mathematics and Computer Science  
Assistant/Associate Professor of Computer Science, Tenure-track  
Tenure-track Assistant/Associate Professor of Computer Science

The Mathematics & Computer Science Department at Virginia State University invites applications for fall 2011 for a tenure-track Assistant/Associate Professor of Computer Science position in Data Mining. Candidates must possess an earned doctorate in Computer Science with research interest in the area of Data Mining, an established record of excellence in teaching at a college level with evidence of new and advancing research and scholarly achievement, and considerable knowledge and skill in the use of automated systems. The appointed individual also must possess excellent oral and written communication skills and an ability to work with persons with culturally diverse backgrounds. Recent Ph.D. graduates are encouraged to apply.

Application Instructions

For the full position announcement and information about qualifications and application procedures, please visit: <http://www.vsu.edu/pages/6402.asp> or <http://www.sysnetgrp.net/jobs/FO345.php>

Virginia Tech  
Department of Computer Science  
Tenure-Track Assistant Professor Position in Compilers

The Department of Computer Science at Virginia Tech ([www.cs.vt.edu](http://www.cs.vt.edu)) invites applications for hiring at the Assistant Professor rank from candidates with primary research focus in compilers, including but not limited to (a) compilers that support programming languages and models for emerging architectures such as many-core processors and GPGPUs, (b) program analysis, (c) optimizing and parallelizing compilers, and (d) compiler-driven runtime systems. The position is part of a cluster hire of a total of five positions on both the Blacksburg and National Capital Region campuses of Virginia Tech in computer systems, security, and cybersecurity by the Department of Computer Science and the Bradley Department of Electrical and Computer Engineering (ECE). The successful candidate will join the department on the Blacksburg campus.

Candidates should have a doctoral degree in Computer Science or a cognate area, a record of significant research achievement and publication, a coherent research and teaching plan showing the potential to secure research funding, build a research program in their area of specialty, and contribute to the department's graduate/undergraduate teaching mission in compilers and related areas, and sensitivity to issues of diversity in the campus community.

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

Applications must be submitted online to <https://jobs.vt.edu> for posting #0100838. Applicant screening will begin December 15, 2010 and continue until the position is filled. Inquiries should be directed to Godmar Back, Hiring Committee Chair, [gback@cs.vt.edu](mailto:gback@cs.vt.edu).

Virginia Tech  
Department of Computer Science  
Cybersecurity Senior Position

The Department of Computer Science (CS@VT) at Virginia Tech seeks applicants for a tenure-track faculty position in the area of cybersecurity, at Associate Professor or Professor rank, located on the campus of Virginia Tech in the National Capital Region (NCR, [www.ncr.vt.edu](http://www.ncr.vt.edu)). The successful candidate will contribute to the research and graduate programs in the NCR and collaborate with faculty at Virginia Tech's campus in Blacksburg, VA. This position is part of a cluster hire of a total of five positions on both campuses in computer systems, security, and cybersecurity by the Department of Computer Science and the Bradley Department of Electrical and Computer Engineering (ECE) at Virginia Tech.

Candidates should have research interests in information security, trustworthy systems, and other topics relevant to national security and national critical infrastructure. Ideal candidates combine cybersecurity with existing department strengths in software engineering, high performance computing, systems and networks, data mining, and human-computer interaction. Candidates should have a record appropriate to a tenured position in scholarship, leadership, and interdisciplinary collaboration in cybersecurity; demonstrated ability to contribute to teaching at the graduate level in cybersecurity and related subjects; sensitivity to issues of diversity in the campus community; established professional network and experience in working with cybersecurity-related government agencies and industry, potentially including classified research, and the skills needed to establish and grow a geographically distributed research group.

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

Applications must be submitted online to <https://jobs.vt.edu> for posting #0100818. Applicant screening will begin December 15, 2010 and continue until the position is filled. Inquiries should be directed to Chris North, Hiring Committee Chair, [north@cs.vt.edu](mailto:north@cs.vt.edu).

Virginia Tech  
Department of Computer Science  
Machine Learning/Artificial Intelligence

The Department of Computer Science at Virginia Tech ([www.cs.vt.edu](http://www.cs.vt.edu)) invites applications from candidates in artificial intelligence with particular interests in machine learning for a full-time tenure-track position at any rank, with preference for hiring at the Professor or Associate Professor rank. The department plans on making multiple hires over multiple years in this area. Candidates should have an established record appropriate to the desired rank of scholarship, leadership, and collaboration in a variety of computing and interdisciplinary areas; demonstrated ability to contribute to our department's teaching mission at the undergraduate and graduate levels in AI and related subjects; and the

organizational skills needed to establish and grow a multidisciplinary research center.

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

Applications must be submitted online to <https://jobs.vt.edu> for posting #0100774. Applicant screening will begin December 15, 2010 and continue until the position is filled. Inquiries should be directed to Dennis Kafura, [kafura@cs.vt.edu](mailto:kafura@cs.vt.edu).

York College of Pennsylvania  
Physical Sciences Department  
Tenure Track Faculty Computer Science/Computer Engineering

York College of Pennsylvania invites applications for a tenure-track position beginning in August 2011 to teach courses in both Computer Engineering and Computer Science. Applicants must have a Ph.D. in either Computer Engineering, Computer Science & Engineering, Computer Science or in a closely related field and have a commitment to excellence in undergraduate teaching.

Interests in teaching a broad range of computer science and computer engineering courses are valued, including one or more of the following: real-time embedded systems, operating systems, and network security. Candidates are expected to demonstrate the potential for: outstanding teaching/advising, college service, and scholarly activity; developing undergraduate laboratories, and work with industry and students in applied research. Preference will be given to candidates who have industrial work experience.

York College <http://www.ycp.edu> is an independent college with 4600 full-time and 800 part-time undergraduate students where dedication to teaching excellence and interest in the individual student are primary. Located in South-Central Pennsylvania within a two-hour drive from both Philadelphia and Washington DC, the college offers over 50 baccalaureate degree majors in the arts, sciences and professional programs.

Applicants should send a cover letter with a description of relevant experience, curriculum vitae, a teaching statement, a professional/scholarly objectives statement, and names of references to Dr. Wayne Blanding, Co-Chair Search Committee, via email to [employment@ycp.edu](mailto:employment@ycp.edu). Review of materials will begin immediately and the deadline for applications is 15 January 2011. Information on the ECE program can be found at <http://www.ycp.edu/engineering> and on the CS program at <http://depts.ycp.edu/compsci/>.

York College of Pennsylvania is an Equal Opportunity Employer. For a copy of York College's Annual Security Report, you may contact the Office of Campus Safety or the Web at <http://www.ycp.edu/security/844.htm>.

Colby College  
Computer Science Department  
One Year Visiting Faculty Position

Colby College invites applications for a one-year, full time visiting faculty position in computer science, beginning September 1, 2011. Teaching responsibilities will include a mix of core CS courses and upper level electives.

For more information and required materials, see <http://cs.colby.edu/>. Review of applications will begin January 10, 2011 and continue until the position is filled.

Colby is an Equal Opportunity/Affirmative Action employer, committed to excellence through diversity, and strongly encourages applications and nominations of persons of color, women, and members of other under-represented groups.