## Computing Research News

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Computing Research Association

COMPUTING RESEARCH ASSOCIATION, UNITING INDUSTRY, ACADEMIA AND GOVERNMENT to advance computing research and change the world.

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# Congress Avoids Shutdown; Boehner Quits; Budget Still Unsettled 

By Peter Harsha, CRA Director of Government Affairs

A last-minute agreement hammered out September 30th, just hours before the start of the new Federal fiscal year, between the House and Senate averted a government shutdown at least through mid-December. But the agreement spelled the end of Rep. John Boehner's (R-OH) term as Speaker, as he announced his resignation - citing the difficulties of working with an increasingly fractured GOP from both the Speakership and his seat in Congress, effective October 30th. While the move quiets debate temporarily about the final budgets for Federal agencies, including Federal science agencies in FY 2016, and keeps them open, it casts very little light about how funding will ultimately be resolved by the Congress.


The agreement struck by both chambers and signed by the President, called a Continuing Resolution (CR), will keep the Federal Government operating through December 11, 2015. In the meantime, Congress must decide how to complete work on all twelve unfinished annual appropriations bills necessary to fund the operations of government in the new fiscal year, which began October 1st. In lieu of passing the appropriations bills - which are mired in arguments over Republican adherence to strict spending caps - the CR will keep Federal agencies and programs running at their current rates of spending until December llth or Congress passes and the President signs the unfinished bills, whichever comes first. If Congress fails to resolve the outstanding appropriations bills by December llth, it will either have to pass another stopgap CR or the government will shut down as it did last in 2013.

House Speaker Boehner came under extreme pressure in advance of the October 1st funding deadline from conservative members of his party over the nature of the CR they were willing to approve. Central to the dispute was Federal funding for Planned Parenthood. Conservative Republicans, particularly those members of the Tea Party Caucus in the House, sought to target funding for Planned Parenthood after controversy emerged surrounding money received for the donation of fetal tissue obtained through abortions performed by the organization. Tea Party representatives sought to include provisions in the CR that would strip Federal funding for Planned Parenthood - provisions that would not be approved in the Senate or signed into law by the President.

Though the Tea Party does not represent a majority of the GOP in the House, they represent a significant enough percentage of the party that their opposition to a bill would require the Speaker to find Democratic votes to pass it, a difficult ask on controversial votes like appropriations measures. Boehner, realizing that the Planned Parenthood gambit in the CR would doom its chances of passage and lead to a shutdown of the government, argued strenuously within his own party about pursuing it. In the Senate, Majority Leader

Mitch McConnell (R-KY) had already reached an agreement with his caucus to pass a so-called "clean CR," without funding prohibitions for Planned Parenthood, arguing that a CR wasn't the right legislative vehicle for this particular issue. Boehner faced a less receptive crowd among the Tea Party members in the House. Instead of arguing the point, Boehner apparently bought support for a "clean" CR by indicating he planned to leave the speakership, and the Congress, at the end of the month. The House approved the clean bill on September 30th, and the Senate followed quickly thereafter and sent it on to the President, who signed it before the October lst deadline.

The move signals a rightward power-shift in the House caucus. But ironically, the prohibitive favorite to take over the reins of leadership in the House is current House Majority Leader Kevin McCarthy (R-CA), who has been more politically moderate than Boehner in the recent past. Whether he can broker an agreement with the Tea Party faction in the GOP to allow spending bills to go forward by the December llth expiration of the CR remains to be seen. As this goes to press, it appears the both the moderate wing and the conservative wing of the House GOP are pressing for rule changes in the party leadership structure to give their constituencies more of a voice in the leadership of the party before they will allow a vote on certain key leadership positions that will change with Boehner leaving. It is not yet clear whether they will get those changes or if the House will vote on new leadership, as planned, by October 15th.

Whoever constitutes the leadership of the House GOP will have to contend with the influence of the Tea Party caucus going forward, and several key votes will serve as bellweathers for their effectiveness. The first is the December llth spending deadline. If McCarthy cannot find a way to build a majority using a block of more fiscally-conservative Democrats, then he may have to acquiesce to Tea Party demands for tighter budget controls, which will likely mean cuts at Federal science agencies in FY 2016. Future votes include the renewal of the Federal Import-Export Bank and an approval of an increase to the Federal debt limit.

In the Senate, McConnell may propose a bipartisan two-year budget agreement as a way of avoiding the impasse. Details of the plan have not yet been released, but conversations with Senate staff indicate that McConnell is pushing for a plan that
would hold all Federal spending to an across-the-board 0.2 percent cut for the next two years as a way of providing some certainty to those involved in Federal programs. While a 0.2 percent government-wide cut does not sound like a positive development, it represents an improvement over cuts required to meet the budget caps mandated for Federal spending by the Budget Control Act of 2011, which is current law.

Yet another possibility is that Congress will just punt on FY 2016 appropriations and pass a CR that covers the entire year, holding agency funding flat - prohibiting new hiring or new program starts. While this in many ways would be a bad outcome for the research community - it hamstrings Federal science agencies somewhat in deciding what they can fund in the coming year - it may not actually be the worst case scenario. If Congress does manage to pass FY 2016 appropriations, funding for key agencies like the National Science Foundation and the Department of Energy's Office of Science could see even greater cuts to their budgets than the 0.2 percent across-the-board cuts in McConnell's twoyear plan.

We expect to get further clarity on how this budget process for FY 2016 and beyond will shake out after the October 15th leadership elections and, hopefully, before the December llth expiration of the current CR. As always, we will have all the details in the Computing Research Policy Blog at cra.org/blog and in the next issue of CRN.


## CRA-E Undergraduate Research Faculty Mentoring Award



CRA is pleased to announce a new award program that honors faculty members in computing who have made a significant impact on students they have mentored. The CRA-E

CRA-E
Computing Research Association
Education Undergraduate Research Faculty Mentoring Award recognizes faculty members who have provided exceptional mentorship and undergraduate research experiences, and, in parallel, guidance on admission and matriculation of these students to research-focused graduate programs in computing.

Eligible nominees are full-time faculty members at North American academic institutions. Faculty members include tenured and tenure-track faculty, instructors, and professors of the practice. Current members of CRA-E are not eligible to be a nominee or to serve as a nominator. A nominee must be nominated by a faculty member or a researcher in the computing field. Nominations are due Monday, November
30, 2015 by midnight (ET). Winners will be notified by early February 2016.

The award will be given annually and multiple recipients may be awarded. The selection committee will give appropriate consideration to different types of schools and mentors at different stages of their careers.

This year's award(s) will be presented at the 2016 CRA Conference at Snowbird. Awardees also have the option to receive the award at another venue, and will receive travel support to attend the meeting at which they accept the award.

## Evaluation criteria

The selection committee will evaluate the evidence of: undergraduate student mentoring (being sensitive to the size of the program), professional development of the mentored students, impact and success of the students' research, and the number of students enrolling in research-oriented graduate programs in computing.

## The 2016 selection committee includes:

Dancy Amato, Texas A\&M University, committee chair
Dric Aaron, Vassar College
Dat Morreale, Kean University
Darbara Ryder, Virginia Tech

## Click here to view the <br> Frequently Asked Questions.

 Nomination deadline: November 30, 2015Questions and inquiries should be directed to:
mentoring_awards@cra.org

## Start a

Nomination

# Nominations Open for CRA Distinguished Service and A. Nico Habermann Award 



CRA
Computing Research Association

The Computing Research Association invites nominations for the 2016 CRA Distinguished Service Award and A. Nico Habermann Award.

## Distinguished Service Award

 CRA makes an award, usually annually, to a person who has made an outstanding service contribution to the computing research community. This award recognizes service in the areas of government affairs, professional societies, publications or conferences, and leadership that has a major impact on computing research.Guidelines for Nominators
The quality and extent of computing research conducted by the candidate is not taken into consideration in making this award, and material about the candidate's research accomplishments should not be included in the nomination material. Service considerations are limited to those that relate to the computing research community. Thus, for example, government service on behalf of the computing research community or educating graduate students for research careers would count. However, the selection committee will not give consideration to service in undergraduate education, except for where it relates directly to computing research.

Viable candidates are likely to be senior members of the profession who already have a number of professional experiences as members of editorial boards and planning or programming committees. While it is not objectionable to mention this kind of service in the nomination, it is not likely to be a key factor in the selection process unless this kind of service is well above and beyond that of other senior members.

Longevity, effectiveness, breadth, and community-wide scope of service are all important in the award selection. The nomination letter must make an argument why the candidate deserves the award, focusing on a few key contributions and providing evidence for these claims. The nomination should not simply consist of a list of accomplishments.

Nominators must obtain three to four letters of support from distinguished members of the computing research
community who are familiar with the candidate's service accomplishments and must include a current copy of the candidate's curriculum vitae. Submit nominations here.

## A. Nico Habermann Award

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

## Guidelines for Nominators

Longevity, effectiveness, breadth, and community-wide scope of service, rather than great contributions within one institution, are important in the award selection. The nomination letter must make an argument for why the candidate deserves the award, focusing on a few key contributions and providing evidence for these claims. The nomination should not simply consist of a list of accomplishments. Nominators must obtain three to four letters in support of the nominee from distinguished members of the computing research community who are familiar with the candidate's service, with particular emphasis on its communitywide scope. The nomination must include a current copy of the candidate's curriculum vitae. Submit nominations here.

Questions or comments may be addressed to awards@cra.org.
The deadline for receipt of nominations is December Il, 2015.
Current members of the CRA Board of Directors are not eligible for these two awards.

# Nominees Sought for CRA Board of Directors 



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

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

The Board, as a whole, meets twice a year, with travel and hotel costs paid by the individual members. Board members serve staggered three-year terms. At the discretion of the Elections Committee and based upon a member's proactive service record during the expiring term, members wishing to stand for re-election may be included on the draft ballot. There is a three term limit. Candidates do not need to be affiliated with CRA member organizations. New this year, we are allowing self-nominations from candidates. Use the nomination form to nominate yourself or submit a candidate for nomination. Candidates must agree to be nominated.

## Recent board activities include:

- Working with the computing research community to envision the future of computing research

D Increasing the participation of women and minorities in computing research

D Thinking strategically about computing education and its impact on the research enterprise

D Testifying before Congress and meeting with policymakers to explain the role of computing and computing research

Developing workshops on critical policy issues
D Planning the biennial CRA conference at Snowbird

- Conducting the annual CRA Taulbee Survey

D Monitoring CRA's budget and expenses

## Important dates and events:

- The deadline for receipt of nominations is December 4, 2015. The Elections Committee will carefully consider all nominations, with the aim of a final ballot containing about twice as many candidates as there are open slots. Important criteria considered by the committee will include distribution of candidates and current Board members among member institutions, distribution among types and sizes of institutions, evidence of leadership, and evidence of interest in and capacity for service beyond that expected of all faculty members and researchers

D On January 15, 2016, the Elections Committee will announce the draft ballot. Additional names may be added by the CRA community (as described below)

D On February 5, 2016, nominations by petition are due. Each such nomination must be signed by the heads of at least 10 constituent member organizations that are current in dues payment. Current CRA members are listed at http://cra.org/ about/membership/member-list/

D On February 12, 2016, final ballots will be distributed to all CRA department chairs and lab directors. Each will have one vote for each open slot on the board

D On February 26, 2016, completed ballots must be returned to CRA

Click here to fill out the nomination form.

> Additional information on CRA and its activities
> is available at http://cra.org/about/. Questions can be sent to elections [at] cra.org.

# Save the Date: 2016 CRA Career Mentoring Workshop 



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The biennial Career Mentoring Workshop will be offered by the Computing Research Association on February 22 and 23, 2016 at The Westin Arlington Gateway in Arlington, Va.

The workshop provides career advice and mentoring activities for post-docs, assistant professors, and individuals starting as industrial researchers in computer science. The workshop will include a series of panels, plus opportunities to network with senior researchers and representatives from government agencies. This year's workshop will also feature a session held at the National Science Foundation (NSF). Participants will have the opportunity to visit NSF and discuss one pagers on their research with NSF CISE Program Directors.

In the next few months, we will be announcing the full agenda and registration information. Click here to subscribe to updates on the Career Mentoring Workshop.


## CRA Welcomes its Newest Staff Member

Jill Hallden is CRA's part-time accounts payable specialist. She works closely with Sandra Corbett, program associate, to ensure that the organization's bills get paid on time and reimbursements for participants in CRA-sponsored events are processed expeditiously. Prior to joining CRA, Jill retired from a 12-year career as an assistant professor of geography at George Mason University, where she focused on digital


# Baccalaureate Origins of Women Ph.D.s in Computing, 1990-2013 

By Betsy Bizot and Stu Zweben

## Background

As part of a larger project examining trends in the representation of women in computing from 1990-2013, we licensed data from the National Science Foundation's Survey of Earned Doctorates (SED). The SED is sent each fall to every individual who received a research doctorate from an accredited U.S. institution in the previous academic year. It asks about the respondent's educational background, demographics, and postgraduation plans. In 2013, 92 percent of doctoral recipients completed the survey. We included data on SED respondents whose field of doctoral program was in the disciplines of (SED codes are listed in the parenthesis): Computer Science (400), Computer Engineering (321), Information Science \& Systems (410), Robotics (415), and Computer \& Information Systems, Other (419).

This article looks at trends in the source of the baccalaureate for women who completed doctorates in computing between 1990-2013. Future CRN articles will report on other aspects of the SED data.

We categorized respondents' baccalaureate institutions into one of five groups. For baccalaureates inside the U.S., we used a $2 \times 2$ split of public/private and research/nonresearch; baccalaureate institutions outside the U.S. are categorized as "foreign." For the U.S. schools, we defined "research" institutions as those in the Carnegie classifications of "Doctoral/Research Universities," "Research UniversitiesHigh Research Activity," and "Research Universities-Very High Research Activity." All other institutions were classified as "non-research."

For baccalaureates from outside the U.S., the country or region of baccalaureate was coded for locations that were the baccalaureate origin of 5 percent or more of Ph.D.s over the entire 1990-2013 period. Those locations were India, China, South Korea, and the Middle East.

## Results

Figure 1 shows, of SED respondents whose origin is each type of baccalaureate institution, what percent are female. For-profit institutions are omitted; only 37 doctoral recipients received their baccalaureate degrees from that type of institution over the period 1990-2013. There is substantial fluctuation from year to year; Figure 1 groups data in threeyear bins to reduce the fluctuation. There is no clear trend except for the foreign institutions, from which there is a steady increase in the percent of women (alpha $=.01$ by Spearman rank correlation coefficient, with year and percent of women participation as the two variables whose ranks were being examined). In general, the non-research institutions had a higher percentage of women than the research institutions, and public research institutions had a higher percentage of women than private research institutions.


Figure l. \%F of doctoral recipients by type of baccalaureate institution

Figure 2 looks at the same data from a different direction. It asks, Of the women who received a Ph.D. in each year, what fraction came from each type of baccalaureate institution? In this view, the increasing role of foreign institutions as
the baccalaureate source for women Ph.D.s is even clearer, dwarfing the differences between types of domestic institutions. Within the domestic institutions, the public research institutions are consistently the largest source of women Ph.D.s. Although women have been a smaller percent of the baccalaureate recipients from these institutions than they have been from non-research institutions, because these departments are larger on average, they produce larger total numbers of women who continue to a Ph.D.

For comparison, Figure 3 shows the percent of male and female doctoral recipients whose baccalaureate degrees came from foreign institutions. This demonstrates that the increase in women from foreign institutions is not simply proportional to an overall increase in foreign students. The increase in the


Figure 2. Of women completing Ph.D., \% from each type of baccalaureate institution


Figure 3. \% of doctoral recipients whose baccalaureate was foreign, by gender
percent of foreign baccalaureates among Ph.D. recipients has increased significantly for both genders (alpha $=.01$ for each) but, as the graph illustrates, there has been greater increase in this percentage among women.

Because the growth in foreign students is so strong, we were also interested in the source of these students by country or geographic region. Figure 4 shows, among Ph.D. recipients who earned their baccalaureate in selected geographic areas, the percent who are women. (This does not necessarily reflect the citizenship of the student.) The areas were selected as those with 5 percent or more of the total Ph.D. recipients, male and female, who earned U.S. doctorates in 1990-2013. Because of fluctuation from year to year, the figure shows data grouped into three-year bins.

There are significantly increasing percentages of women from India, the Middle East, and South Korea (alpha =. 01 for each). There also is an increasing percentage of women from China $(p=.06)$. Both China and South Korea showed a downturn in percent of women in 2011-2013. From 1990-2013 there was no significant change in the percentage of women among Ph.D. recipients who earned their baccalaureate in the U.S.


Figure 4. \%F of Ph.D.recipients who earned baccalaureate in countries or regions

## Conclusions

The high representation of foreign students among U.S. doctoral women is not a surprise. These findings do, however, have implications for those who are interested in the recruitment and retention of women graduate students. First, there is not a single pipeline from undergraduate through doctoral study; therefore, a direct comparison of the percentage of women at the undergraduate level with the percentage of women at the graduate level oversimplifies the
issue. This means, among other things, that the recruitment of domestic women undergraduate students is not the only source of women in graduate programs, but is particularly important, because they are even less well represented than the overall statistics suggest. Second, it is a reminder that activities at the institutional or cross-institutional level supporting women in graduate computing need to keep in mind the dual nature of their participants and the fact that their needs may differ.

## Acknowledgements

This work was supported by grant B2014-12 from the Alfred P. Sloan Foundation.

Data from the Survey of Earned Doctorates was licensed through the National Center for Science and Engineering Statistics at the National Science Foundation. The use of NSF data does not imply NSF endorsement of the research methods or conclusions contained in this report.

# October 2015, CERP Info-graphic 

Burçin Tamer, CERP Research Scientist

Ph.D. recipients in computing fields are primarily non-U.S. residents in most states in the US.


Overall, non-US residents received 1,210 ( $54 \%$ ) of the 2,244 computing related Ph.D. degrees awarded in the U.S. in 2013 . This map illustrates that while non-U.S. residents received more than $50 \%$ of the Ph.D.s awarded in the majority of states, there was considerable variation across the states. Interestingly, a Pearson correlation test indicates that the proportion of computing Ph.D. degrees awarded to non-residents in each state was not related to the number of Ph.D. programs available in each state, $r=.03, p=.83$.

Notes. Due to space limitations, Alaska and Hawaii are not shown in the map above. Hawaii had $0 \%$ non-U.S. residents receive computing Ph.D.s in 2013, from five Ph.D. granting institutions, and Alaska granted no computing Ph.D.s in 2013 , from four Ph.D. granting institutions. Data were obtained from the Integrated Postsecondary Education Data System, made available by the U.S. Department of Education's National Center for Education Statistics. Percentages were calculated by dividing the number non-U.S. resident computing Ph.D. recipients in 2013 by the total number of computing Ph.D. recipients awarded in 2013. "Computing" programs included the following: Computer and Information Sciences and Support Services, Computer Engineering, Computer Engineering Technologies/Technicians, Accounting and Computer Science, Computational Science, and Human Computer Interaction (Classification of Instructional Programs, 2010).

CERP
Computing Research Association Evaluation

This info-graphic is brought to you by the CRA's Center for Evaluating the Research Pipeline (CERP). CERP provides social science research and comparative evaluation for the computing community. To learn more about CERP, visit our website at http://cra.org/cerp/.

## Computing Researchers Fly-in to D.C. to Make the Case for Computing

By Brian Mosley, CRA Policy Analyst

On September 17, 20 computing researchers from across the country visited Washington, D.C. to make the case before Congress for federally funded computing research. The volunteers, traveling from as near as Virginia and Pennsylvania, and as far away as Indiana and Washington, participated in 57 House and Senate meetings on Thursday, September 17. Their message to Congress was very simple: Federally supported computing research is vital to the nation's future. Using their own research and individual stories as support, and supported with additional information from CRA, they made the "Federal case" for computing to Members of Congress and their staff. Just as important as the message they presented, they also made valuable connections with the officials who represent them in D.C. Those Members now know more about the expertise and interesting (and important) computing work that occurs in their districts and states, and our participants have a sense of just who represents them in Congress. And they've hopefully started a lasting dialogue on both sides.

## How You Can Help

As a reminder, if you would like to participate in a future Congressional Visit Day or are in Washington, D.C. and would like to visit your representative's office, please contact Brian Mosley (bmosley@cra.org) in the CRA Government Affairs Office. CRA can provide expert training, messaging, and materials, and we would also be happy to accompany you to your Congressional meetings.


# Postdoc Best Practices Program 



The week of September 21-25 was the sixth annual National Postdoc Appreciation Week (NPAW), sponsored by the National Postdoctoral Association (NPA).
CCC Consortium Catalyst

NPAW, the nation's largest celebration of postdoctoral scholars, was established with the goal of increasing awareness
of postdoctoral researchers (postdocs). Institutions are encouraged to plan activities that honor postdocs and recognize the contributions they make to research and development in the United States.

The Postdoc Best Practices (Postdoc BP) program is coming into its second year. This project is a joint effort of the Computing Community Consortium (CCC) and the National Science Foundation (NSF), designed to create a set of best practices for postdocs in computer science.

The Postdoc BP program has given grants to three different universities/university groups:

- University of Washington (UW)
- Arizona, made up of Arizona State, University of Arizona, and Northern Arizona University

D and NYC ASCENT, made up of Columbia University, New York University, Cornell University, and The City University of New York

NPAW, the nation's largest celebration of postdoctoral scholars, was established with the goal of increasing awareness of postdoctoral researchers (postdocs). Institutions are encouraged to plan activities that honor postdocs and recognize the contributions they make to research and development in the United States.

Each group in the Postdoc BP program has a number of important commonalities. Each of the programs has a major focus on career counseling and professional skills development - more than you would see in most traditional post-graduate programs. Both the NYC ASCENT and UW programs emphasize the creation of an Individual Development Plan (IDP), and Arizona is looking to add it to its program.

The Individual Development Plan seeks to provide:
a planning process that identifies both professional development needs and career objectives. Furthermore, IDPs serve as a communication tool between individuals and their mentors. While IDPs have been incorporated into performance review processes in many organizations, they have been used much less frequently in the mentoring of postdoctoral fellows. An IDP can be considered one component of broader mentoring program.
.. a planning process that identifies both professional development needs and career objectives. Furthermore, IDPS serve as a communication tool between individuals and their mentors. While IDPs have been incorporated into performance review processes in many organizations, they have been used much less frequently in the mentoring of postdoctoral fellows. An IDP can be considered one component of broader mentoring program.

The Postdoc BP programs are also invested in ensuring a connection between the postdocs and the broader department. For instance, the Arizona program hosts monthly lunches with the department and postdocs. Meeting informally like this is a great way to establish a deeper connection between members of the computing research program.
Additionally, the programs give the postdocs an opportunity to receive grant money. For example, the UW program offers one year, mini-grants (less than $\$ 10,000$ ) that come from the department for the postdocs to conduct and manage their own research, and the NYC ASCENT program offers travel awards so that postdocs can attend conferences.
Learn more about the Postdoc BP program on the CCC website and stay tuned to the CCC blog as we begin to share the impact of the best practices on postdoc researchers during the coming months.

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## Cache or Scratchpad? Why Choose?

From the CCC Blog

The following is a special contribution to this blog by CCC Executive Council Member Mark D. Hill of the University of Wisconsin-Madison. Full disclosure: He had the pleasure of working with one of the authors of the discussed paper - Sarita Adve - on her 1993 Ph.D.

Great conundrums include:
D Will I drink coffee or tea?
Dhall I have cake or ice cream?
Dhould I use a cache or scratchpad?
While most readers will not face the last choice, it is important for saving time and energy in the devices we love by keeping frequently used information close at hand.

Caches are the workhorse of modern computers, feeding the processor with data about 100X faster than main memory. Decades of hardware research has found clever ways to determine what data to keep in the cache, how to find it, and when to throw it out. The magic of caches is that this cleverness has been hidden almost entirely from software.

But this cleverness costs energy. On every load and store. And it is not always successful.

A scratchpad moves the burden of managing fast accesses to software. Its hardware memory structure is simple and efficient. But its software use is not. Software must explicitly move data in and out of a different scratchpad address space and take responsibility for keeping coherent multiple copies in different address spaces. In practice, this is inefficient, and scratchpads have remained an enticing but niche solution.

Researchers at Illinois and École Polytechnique Fédérale de Lausanne address this conundrum in a paper presented at the International Symposium of Computer Architecture titled "Stash: Have Your Scratchpad and Cache It Too." Besides offering the proverbial cake as an audience prize, the paper described a new memory organization called stash that gets the best of caches and scratchpads. Stash redistributes the hardware-software burden - software determines what data should go into the stash, but relies on hardware smarts for address space conversion and coherence. Hits in the stash are as efficient as a scratchpad, but (infrequent) misses incur a small hardware penalty. By empowering hardware and software to do what each does best, stash improves both performance and energy.

Stash may not be the final answer, but the paper asks the right question. It also adds to a growing body of recent work imploring hardware and software designers to rethink their distribution of work.


# Excitement Around K-12 CS Education, but There's Work to be Done by the CS Community 

From the CCC Blog

The following blog post is by Ran LibeskindHadas, R. Michael Shanahan Professor and Computer Science Department Chair at Harvey Mudd College, Co-Chair of CRA's Education subcommittee (CRA-E), and former Computing Community Consortium (CCC) Council Member and Debra Richardson, founding dean of the University of California, Irvine Donald Bren School of Information and Computer Sciences and CCC council member.

Mayor Bill de Blasio announced this week that every public school in New York City, from elementary through high school, must offer computer science (CS) courses to all students within 10 years. It is estimated that fewer than 10\% of schools in New York City currently offer a CS course, and only $1 \%$ of students take such a class. Computer science will not be required of all students, but the opportunity to take a CS course will be available in every school.

Likewise, San Francisco Unified School District announced last month that it would add CS instruction for all students at every grade level, beginning as early as preschool. And the Chicago Public Schools are implementing a $\mathrm{K}-12 \mathrm{CS}$ curriculum and will make CS a graduation requirement by 2019.

It seems inevitable that these initiatives by New York, San Francisco, and Chicago will encourage other cities to follow suit.

According to an article in The New York Times, about 5,000 New York City teachers will need to be trained to meet Mayor de Blasio's initiative. As similar initiatives are adopted elsewhere, the demand for curricula and pre- and in-service teacher training will grow dramatically.

The CS community must be proactive in developing curricula and training teachers for these initiatives. Good curricula and teacher training can showcase the intellectual beauty of our field, demonstrate its relevance to society, and provide students with valuable skills that they can leverage in their other academic subjects and use to express their creativity.

Getting this right requires that we invest seriously in CS education research at the university level. We need high-quality research in CS pedagogy and best teaching practices. We need excellent pre-service and in-service teacher training. We need to take a close look at what physics, mathematics, and other fields have done in education research and teacher training.

The Computing Community Consortium (CCC) will release a whitepaper later this fall making the case for CS departments to invest in education research, describing some of the major intellectual challenges in the field, and proposing strategies for building strength in this vitally important field. Stay tuned!

# Expanding the Pipeline 

## Exploring Computer Science: Active Learning for Broadening Participation in Computing

By Jane Margolis, Joanna Goode and Kevin R. Binning

An opinion piece published in The New York Times entitled "Are College Lectures Unfair?" provides a clue to the persistent gender and race gaps in computer science [1]. The author, Annie Murphy Paul, poses several provocative questions: "Does the college lecture discriminate? Is it biased against undergraduates who are not white, male, and affluent?" She proceeds to explain how a growing body of research shows that "the lecture is not generic or neutral, but a specific cultural form that favors some people while discriminates against others, including women, minorities, and low-income first generation college students." Paul then contrasts the lecture with active learning, where students construct knowledge through hands-on problem solving, engaging with the material through group work, collaborative thinking, and where students anchor their learning in knowledge they possess and cultural references with which they are familiar. For educators of computer science, a field that has been largely taught through lecture and direct instruction, research supporting active inquiry-based learning should give everyone pause to reflect and discuss $[2,3]$.

Our program, Exploring Computer Science (ECS), was designed to democratize computer science knowledge at the high school level, making computer science available and engaging for all students $[4,5]$. ECS is very much based on active inquiry-based instructional philosophy. ECS classrooms are lively, noisy places where students are actively investigating the problem solving of computational thinking and the societal implications of computing. Projects in human-computer interaction, problem solving, Web design, introduction to programming (using Scratch), computing and data analysis, and robotics are contextualized in issues that are meaningful for students. They are tasked with activities such as finding the shortest carpool route for a group of students after school (introducing the concept of optimization and the use of minimal spanning trees for an approximate solution) and programming animations and websites that address community issues in the school neighborhood. ECS

is committed to bringing rigorous and engaging computer science to schools with high numbers of students of color in underserved communities. We are committed to assuring all students, of all genders and races, are enrolled and feel they have a place in the computer science learning community.

Key to our ECS program are teachers. The ECS program combines instructional curricular materials with an ECS teacher's professional development program. The two-year program immerses teachers in active inquiry and equitybased instructional practices. Teachers practice and reflect on teaching ECS lessons; they also discuss the findings in Stuck in the Shallow End: Education, Race, and Computing [6] about how to change the structural inequities and the biased belief systems that set up obstacles to broadening participation in computing in their schools.

ECS began in Los Angeles (L.A.) in 2008, with support from the National Science Foundation, but is now a rapidly expanding national program. In summer 2015, we participated in professional development of more than 700 teachers committed to teaching ECS beyond L.A. next year. In collaboration with partners including Code.org and Teach for America, the program has dramatically scaled to major urban
school districts in the country including Boston, Broward County in Florida, Chicago, Houston, Los Angeles, Milwaukee, New York City, Seattle, and schools in Silicon Valley [7].

All ECS programs are expected to assure that the student demographics reflect the school population. In L.A., approximately 2,500 students are enrolled in ECS annually, with the student ethnicity demographics reflecting those of the district. In 2014-2015, ECS students were 74\% Latino/a, 9\% White, 8\% African-American, 7\% Asian, and 2\% other. The female enrollment for the last several years has been between $42-45 \%$. This is a dramatic contrast to national statistics for Advanced Placement computer science (CS) that show only 13\% African-American and Latino/a combined, and only 20\% were female in 2014 [8].

## Challenging the Biases About Who Can Do Computer Science

Data from external evaluations of the ECS program have shown that, after taking ECS, students report an increase in interest and knowledge of CS. This year, students displayed a roughly one standard deviation increase in their self-reported knowledge at the end of the school year. Also, this year's data shows that $88 \%$ of the students would recommend ECS to another student.

What is also noteworthy is how these gains differ between female and male students. Although all students showed a marked increase in self-reported knowledge, gains are especially large among female students. In the 2014-2015 school year, the gender gap in reported CS knowledge at the beginning of the year shrunk by $43 \%$ at the end of the school year, a finding that has been consistently replicated in previous annual evaluations. Female students' subjective interest in CS also increased dramatically, with the interest gap between male and female participants closing by approximately $53 \%$ at the end of the school year.

We theorize that these findings are explained, in part, by ECS teacher initiatives to challenge prevailing stereotypes and create CS classrooms where all students, regardless of race or gender, are believed to be capable of doing the work, and where a "growth" rather than a "fixed" mindset is established. We hypothesize that this creates a special boost to female students' engagement as they began the course with a


Figure 1. Pre-and post-changes in self-reported CS knowledge by gender
lower level of confidence because of societal biases, more mixed expectations, and therefore further benefit from the impact of such a supportive and inclusive classroom culture. As explained by Stanford University psychology professor Carol Dweck [9], increasing diversity requires a "growth" mindset, which centers on a belief that all students with quality education can grow in their capacity and engagement. Yet, traditional CS classrooms have been infused with what Dweck calls a "fixed mindset": the belief that innate ability is static and set. Our research in Stuck in the Shallow End showed how a fixed mindset identified White and Asian males as having this "innate" talent, whereas we discovered this to be associated with "preparatory privilege," such as home resources that provide a jump-start into computing, along with parental and social group support [6].

## Words That Reveal

In the documentary "CODE: Debugging the Gender Gap," [10] Dweck associates the drop in female enrollment in computer science in the mid-80s with the rise in identifying "nerd geniuses" with the "boy wonder" innovators of technology. To probe students' stereotypes and mindsets about CS and how these might change during the ECS course, we asked students, "What might it mean to think like a computer scientist?" We posed this question at the beginning of the year, when we thought their beliefs would be mostly informed by a fixed mindset, the media, and cultural stereotypes, and we asked them again at the end of the school year, when we thought their beliefs would be more grounded in their ECS learning.

Using text-analysis software, students' answers were coded for whether they answered the question using stereotypeconsistent words like "genius," "intelligence," and "smart." Their answers were also coded for how often they used CS-related words like "programming," "solving," and "analysis." The results of these analyses, which averaged more than 1,000 students, are depicted in Figure 2 below. They illustrate that whereas students at the beginning of the year were more likely to use stereotype-consistent words than CS words, by the end of the school year that pattern flipped, such that students were more likely to use CS words and less likely to use stereotypeconsistent words. We would like to explore this research further and hope to strengthen the influence of ECS to replace their media and culturally generated conceptions of CS with actual experience and success in CS contexts using equitybased instruction.


Figure 2. Percentage of total words written that were either CS-related words or words related to intelligence stereotypes at pre- and post-survey administration

## Equity Must Be Constantly and Pro-Actively Monitored

All broadening participation in computing programs must make choices about which students, schools, and school districts to work with, and these choices are connected to values, goals, and strategies. In ECS, we work to democratize computer science knowledge for all students. We work to assure that the ECS program exists in schools that are commonly lowresourced, and with high numbers of African-American and Latino/a students, assuring access for students who have been previously denied learning opportunities. This requires
vigilance about the fuller social reality of schools, knowledge about educational reforms, and how CS initiatives fit into the larger picture of students' education. This also requires knowledge about culture, identity, and the best instructional methods for students who have been traditionally pushed away from computer science learning [12].

There is a misleading belief among many that equity in CS education will just trickle down if you increase student enrollment. But increases in AP CS course-taking over the last years, without any significant uptick in diversity, shows otherwise [6]. In fact, our work on this issue has demonstrated how programs must constantly and proactively monitor recruitment, expansion, and equity because in computer science scaling up could readily slide backwards and mirror the field's current race and gender gaps. Therefore, as we scale, we must measure our success not solely on numbers but on the quality of instruction, classroom culture, student learning, and the increasing engagement of students who have been traditionally underrepresented in computer science [11].

## References

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# NSF/CISE Plays Leadership Role in New Federal Smart Cities Initiative 

## By Jim Kurose, Assistant Director of the National Science Foundation (NSF) for Computer and Information Science and Engineering (CISE), and Erwin Gianchandani, NSF Acting Deputy Assistant Director for CISE



On Monday, Sept. 15th, the National Science Foundation (NSF) Director, Dr. France Córdova, joined other federal science leaders at the White House, including the President's Science Advisor, Dr. John Holdren, and U.S. Chief Technology Officer, Ms. Megan Smith, to help kick off a new government-wide Smart Cities Initiative. NSF's Directorate for Computer and Information Science and Engineering (CISE) is pleased to be playing a leadership role in this initiative.

Indeed, our CISE community has already played a crucially important role in laying the foundation for this initiative, which creates enormous opportunities for unlocking "smart" new solutions to improve the quality of life in cities and communities throughout the Nation. The deep integration of computation into physical devices, systems, and infrastructure, coupled with advanced networking capabilities, opens the door to transforming our communities in myriad ways, including optimized energy use, reduced traffic congestion, improved access to education and government, and many other other critical services.

At the White House event, Dr. Córdova announced more than \$35 million in new NSF smart cities-related grants in FY 2015, including:

- \$12 million to support new research and infrastructure projects through the US Ignite program, including awards to Mozilla Foundation and US Ignite, Inc., to foster "living labs" that will scale up next-generation Internet application prototypes in important public-sector areas such as healthcare, energy, education and learning, transportation, and public safety across our Nation's cities and communities;
- \$10 million to support new Cyber-Physical Systems (CPS) projects with emphases on Smart Cities and the Internet of Things;
- \$3 million to support a new Major Research Instrumentation (MRI) project called the Array of Things to the University of Chicago, which will be the first at-scale research infrastructure deployment enabling researchers to study an urban environment;
- $\$ 2.5$ million to enhance the design and operation of efficient, secure and Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP) that provide essential goods and services in the context of cities and communities;
- \$2.5 million to enable NSF-funded researchers to participate in the National Institute of Standards and Technology Global Cities Team Challenge;
- \$2 million in new Smart and Connected Health (SCH) research projects to accelerate the development of nextgeneration health care solutions to enable patient-centered care and wellness that extend to the home, workplace, and community;

D \$375,000 to establish a Research Coordination Networks (RCN) to stimulate novel international research on how to integrate data from physical sensors, social media and other sources; and

- \$4 million to support academic and industry partnerships through the Partnerships for Innovation: Building Innovation Capacity (PFI:BIC) program that facilitate integration of breakthrough research discoveries into human-centered service systems, with an emphasis on emerging technologies that can contribute to smart cities/ communities.

Beyond these investments, the cornerstone of NSF's announcements was a new Dear Colleague Letter (DCL) that aims to accelerate fundamental research addressing challenges in enabling Smart and Connected Communities. This DCL is led by the CISE Directorate, and involves the participation of NSF's Directorates for Education and Human Resources; Engineering; Geosciences; and Social, Behavioral, and Economic Sciences - a testament to the highly interdisciplinary nature of the research questions in this space, as well as NSF's unique role in convening the breadth of the science and engineering community.

We look forward to continuing to work with the CISE community to realize the smart and connected communities of tomorrow. We encourage you to review the White House Fact Sheet, NSF press release, and new Dear Colleague Letter, and also to stay tuned for details about an upcoming workshop series later this fall/winter that will help shape the fundamental, interdisciplinary research agenda in this area (For more information about the workshops, please contact CISE's cognizant program director for Smart and Connected Communities, Dr. David Corman).

By working together, we will help enable new ways for how we work, learn, and interact with one another; cultivate an ecosystem of discovery, innovation, and sharing; and support transformational approaches for conducting interdisciplinary science and engineering that will change how we think of our cities and communities well into the future.


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## Professional Opportunities

## American Association for the Advancement of Science, Washington, DC

Science \& Technology Policy Fellowships
AAAS Science \& Technology Policy Fellow
Applications are now being accepted for the 2016-17 AAAS S\&T Policy Fellowships. Policy fellowships provide computer scientists the unique professional development opportunity to apply their knowledge and skills to national and international issues in the federal policy realm. Fellows serve yearlong assignments in the executive, legislative and judicial branches of the federal government in Washington, DC.

S\&T Policy fellows represent a broad array of science and engineering fields. Fellows share an interest and commitment to public service, a desire to learn about science and technology policy, and a willingness to apply their background in new arenas.

QUALIFICATIONS:

- Doctoral-level degree (PhD, MD, DVM, DSc, etc.)
- US citizenship.

STIPEND \& BENEFITS:

- \$75,000-\$100,000.
- Health insurance, travel/training and relocation allowances.

ONLINE APPLICATIONS DUE: November 1, 2015
FELLOWSHIP YEAR: September 1, 2016 -
August 31, 2017
To apply: http://www.aaas.org/program/ science-technology-policy-fellowships

Questions? Email: fellowships@aaas.org or call 202-326-6700

## Aalto University <br> Multiple Positions

The Department of Communications and Networking at the Aalto University School of Electrical Engineering in Finland invites applications for tenure track professor
position at the level of assistant professor. The candidate's research can lie in networking technology and software: internet technologies, protocol design or a closely related field such as distributed systems, networked embedded systems and network security.

The Department of Communications and Networking (Comnet) is a multi-disciplinary unit of research and higher education covering communications and networking technology, networking business and human aspects of communication and communications technology. In it's area, Comnet is the largest unit in Finland. The department is in charge of the basic C and C++ programming Bachelor level education in Aalto University and has major role in organizing the Communications Engineering major in the Master's Program in Computer, Communication and Information Sciences.

For more information of the department visit http://comnet.aalto.fi/en/ and http://www. aalto.fi/en/studies/education/programme/ computer_communication_information_ sciences_master/.

For more information of the tenure track position and application instructions, please visit http://www.aalto.fi/en/about/careers/ jobs/view/573/. Deadline for the applications is September 30, 2015.

## Auburn University

Department of Computer Science and Software Engineering
Assistant/Associate/Full Professor and Lecturer

The Department of Computer Science and Software Engineering (CSSE) invites applications for multiple tenured/tenuretrack faculty positions at the Assistant/ Associate/Full Professor levels and one Lecturer position to begin in Spring 2016 or Fall 2016. Salary will be commensurate with the candidate's qualifications. We encourage
candidates from all areas of computer science and software engineering to apply. Excellent communication skills are required. Applicants should apply by submitting a cover letter, current curriculum vitae, research vision, teaching philosophy, and three references to:

Tenure Track Faculty Positions:
Wireless Engineering and Computer Networking
https://aufacultypositions.peopleadmin.com/ postings/1150

Artificial Intelligence, Big Data, and High Performance Computing https://aufacultypositions.peopleadmin.com/ postings/1140

Cyber Security, Data Analytics, and High Performance Computing
https://aufacultypositions.peopleadmin.com/ postings/1151

All areas of Computer Science and Software Engineering
https://aufacultypositions.peopleadmin.com/ postings/1192

Non-Tenure Track Lecturer Position: https://aufacultypositions.peopleadmin.com/ postings/1194

The applicant review process will begin October 1, 2015 and continue until successful candidates have been identified. Detailed announcements of these positions can be found at: http://www.eng.auburn.edu/csse/.

Auburn University is an EEO/Vet/Disability Employer.

# College of Arts \& Sciences, Department of Computer Science Computer Science (Assistant, Associate, Full professor) 

The Department of Computer Science in the College of Arts and Sciences at American University invites applications for up to three tenure-line positions. Applicants will be considered at the Assistant, Associate, and Full professor levels. If there are three hires, at least one will be at the rank of Associate or Full professor, with tenure.
Research expertise may be in any area of computer science. Following the department's strong recent hires in the interdisciplinary areas of computational neuroscience and gaming, the university seeks to build computer science's core program areas, which may include machine learning, artificial intelligence, robotics, computer graphics, analytics, databases and information retrieval, computational media, human-computer interactions, numerical and symbolic computation, simulation, programming languages, or software methodology and engineering. Preference will be given to individuals who can contribute to a vibrant research environment, complement current research areas in the department, teach one or more of the core program areas, and expand the university's capacity in the area of big data.
The Computer Science Department is currently in a period of expansion, and is poised to become a leader in the university's technology and innovation sectors. To support this trajectory, the department will soon be moving to a new building that is designed to promote cross-department collaboration. The new building will be shared with the Physics, Math and Statistics Departments, as well as with the Gaming program, and the Collaborative for Applied Perceptual Research and Innovation (CAPRI).

## QUALIFICATIONS

All applicants should have a strong record of (or potential for) externally sponsored research. We are especially eager to recruit candidates with established research partnerships (or the ability to form such partnerships) in the Washington, DC area. Preference will be given to candidates who also have a record of excellence in teaching and mentoring students. Teaching responsibilities will include core courses in computer science and more advanced courses in the applicant's area of specialty. The Ph.D. in Computer Science or a closely related field is required; post-doctoral or industry experience is preferred. For senior applicants, preference will be given to candidates who are able and willing to lead the department. APPLICATION INSTRUCTIONS
Applicants should include a statement of research outlining their research focus (or foci) and future plans for developing a nationally competitive, externally funded research program at American University. In addition, applications should include statements of research and teaching experience, links to research publications, a CV, and the names of three references. Please submit applications via: http://apply.interfolio.com/30363. Review of applications will begin November 10 and continue until the positions are filled.

For more information contact Arthur Shapiro, Chair of Computer Science at Arthur.Shapiro@american.edu
This institution is using Interfolio's ByCommittee to conduct this search. Applicants to this position receive a free Dossier account and can send all application materials, including confidential letters of recommendation, free of charge. For help signing up, accessing your account, or submitting your application please get in touch via email at help@interfolio.com or phone at (877) 997-8807. American University is an equal opportunity, affirmative action institution that operates in compliance with applicable laws and regulations. The university does not discriminate on the basis of race, color, national origin, religion, sex (including pregnancy), age, sexual orientation, disability, marital status, personal appearance, gender identity and expression, family responsibilities, political affiliation, source of income, veteran status, an individual's genetic information or any other bases under federal or local laws (collectively "Protected Bases") in its programs and activities. American University is a tobacco and smoke free campus.

## Professional Opportunities

## Cal Poly, San Luis Obispo

Assistant or Associate Professor Software Engineering

Cal Poly's Computer Science Department invites applications for a full-time, tenuretrack Software Engineering faculty position beginning no later than 9/15/2016. Candidates with industry experience are encouraged to apply. Cal Poly offers an ABET accredited undergraduate major in Software Engineering. The successful candidate will play a pivotal role in development and expansion of the Software Engineering program. Duties include teaching undergraduate and master's level courses, supporting and expanding the curricula development in Software Engineering, pursuing research in this area, and providing service to the department, the university, and the community. Strategic priorities of the department include the areas of: Mobile, Cloud Computing, and Software Testing. A doctorate in Software Engineering, Computer Science or a closely related field is required by the start of employment at Cal Poly.

Review the full position description (Req. \#103800) at: www.calpolyjobs.org/ applicants/Central?quickFind=164883 and select Apply For This Posting to complete the online faculty application. Applicants are encouraged to submit materials by Dec. 1, 2015 for full consideration; however, the position will remain open until filled. For additional information contact: Search Committee Chair Prof. David Janzen at djanzen@calpoly.edu

Cal Poly is an affirmative action/equal opportunity employer.

## Carleton College

Tenure-Track Position
Carleton College invites applications for a tenure-track position in computer science, in any area of specialization, to begin September 1, 2016.

More details on this position can be found at: https://jobs.carleton.edu/postings/2447 Carleton is a highly selective liberal arts college with outstanding, enthusiastic students. We seek an equally enthusiastic computer scientist committed to excellence in teaching, curriculum design, ongoing research, and undergraduate research advising. We are particularly interested in candidates committed to teaching a diverse student body. To apply, please visit jobs.carleton.edu and complete the online application, including a cover letter, CV, brief statements describing teaching philosophy and research agenda, a graduate transcript, and contact information for writers of three letters of reference (at least one of which should address your teaching). Applications completed by December 15 , 2015, including reference letters, will receive full consideration.

Carleton College is an affirmative action/ equal opportunity employer. We are committed to developing our faculty to better reflect the diversity of our student body and American society. Women and members of minority groups are strongly encouraged to apply.

## Colorado College, Colorado Springs, CO

Department of Mathematics \& Computer Science
Tenure Track Assistant Professor of Computer Science

The Department of Mathematics and Computer Science at Colorado College announces a tenure track Assistant Professor of Computer Science position, beginning fall 2016. A PhD in computer science or related field is required. Candidates with demonstrated breadth of knowledge within computer science are strongly preferred. We will consider candidates in any area of computer science. The current members of the program have

## Professional Opportunities

interests in artificial intelligence, machine learning, programming languages, software engineering and security/privacy; candidates whose interests are complementary to these are preferred. To be considered for the position, candidates should apply by November 20, 2015.

We urge interested individuals to begin the application process at their earliest opportunity, online at: https://employment. coloradocollege.edu

Colorado College is a leading national liberal arts college with about 2000 undergraduates and an innovative "Block Plan" academic calendar. The college is dedicated to greater diversity among its faculty, students, and curriculum. Candidates are encouraged to identify their strengths and experiences in contributing to these diversity goals.

A successful candidate must exhibit the potential for excellence in teaching and for contributing to the department's scholarly activities, both through their own research and by supervising student projects. The application should include a cover letter, statements describing your approach to teaching and your research program, a curriculum vita, graduate school transcripts and three letters of recommendation (at least one of which should address teaching ability). The department plans to begin phone interviews with select candidates in late December, and to invite top candidates for on-campus interviews in February.

Equal Opportunity Employer: Colorado College is an equal opportunity employer committed to increasing the diversity of its community. We do not discriminate on the basis of race, color, national origin, gender, age, religion, gender identity or expression, disability, or sexual orientation in our educational programs and activities or our employment practices.

## Cornell Tech

Computer Science
Faculty Positions
Multiple faculty positions in computer science are available at Cornell's new Cornell NYC Tech campus in New York City. Applications are welcome in all areas of computer science and related fields and at all levels, including tenured and tenuretrack. Faculty hired in these positions will be within the Department of Computer Science, which will span the Ithaca and New York City campuses, but their teaching and research will be based in New York City. Candidates, whose work fits into one of the three initial hubs at Cornell Tech, Connective Media, Healthier Life, and Built Environment, are particularly encouraged.

Candidates must hold a Ph.D., have demonstrated an ability to conduct outstanding research at the level of tenuretrack or tenured faculty in the Department of Computer Science, and also have a strong interest in the technology commercialization and entrepreneurship mission of the campus. In addition, interest in international programs and/or pre-college ( K -12) education is advantageous.

This search may include Cornell faculty positions that are part of the Jacobs Technion-Cornell Institute (Jacobs Institute). To ensure full consideration, applications should be received by December 1, 2015, but will be accepted until all positions are filled.

Applicants should submit a curriculum vita, brief statements of research and teaching interests, identify one or two top publications to which they have made significant contributions, and the names and contact information of at least three references on-line at: https:// academicjobsonline.org/ajo/jobs/6037

## Cornell University

Computer Science
Faculty Positions
The Department of Computer Science of Cornell University, based in Ithaca, New York, has multiple faculty positions open. Applications are welcome in all areas of computer science and related fields and at all levels, including tenured, tenure-track, and lecturer. We particularly encourage applications from women and underrepresented minorities. Tenured and tenure track faculty must hold the equivalent of a Ph.D. Lecturers must hold the equivalent of a Masters degree, with a Ph.D. preferred. Applicants must have demonstrated an ability to conduct outstanding research. Successful candidates are expected to pursue an active research program, to teach graduate and undergraduate courses, and to supervise graduate students. The department is ranked among the top computer science departments in the country, with 35 tenured and tenuretrack faculty members across all areas of computer science.

Cornell University is located in Ithaca, New York, a city of about 30,000 people in the heart of the Finger Lakes region. Both Cornell and Ithaca offer a wide range of cultural activities, sports, and outdoor activities with the pleasures of both city and country close at hand. Ithaca is Gorges!

To ensure full consideration, applications should be received by December 1, 2015, but will be accepted until all positions are filled.

Applicants should submit a curriculum vita and brief statements of research and teaching interests, identify one or two top publications to which they have made significant contributions, and arrange to have at least three reference letters submitted at: https://academicjobsonline. org/ajo/jobs/6042

## Professional Opportunities

## Florida International University

Florida International University is a comprehensive university offering 340 majors in 188 degree programs in 23 colleges and schools, with innovative bachelor's, master's and doctoral programs across all disciplines including medicine, public health, law, journalism, hospitality, and architecture. FIU is Carnegie-designated as both a research university with high research activity and a community-engaged university. Located in the heart of the dynamic south Florida urban region, our multiple campuses serve over 55,000 students, placing FIU among the ten largest universities in the nation. Our annual research expenditures in excess of $\$ 100$ million and our deep commitment to engagement have made FIU the go-to solutions center for issues ranging from local to global. FIU leads the nation in granting bachelor's degrees, including in the STEM fields, to minority students and is first in awarding STEM master's degrees to Hispanics. Our students, faculty, and staff
reflect Miami's diverse population, earning FIU the designation of Hispanic-Serving Institution. At FIU, we are proud to be 'Worlds Ahead'! For more information about FIU, visit fiu.edu.

The School of Computing and Information Sciences (SCIS) seeks exceptionally qualified candidates for tenure-track and tenured faculty positions at all levels as well as nontenure track faculty positions at the level of Instructor, including visiting instructor appointments. SCIS is a rapidly growing program of excellence at the University, with 30 tenure-track faculty members and over 2,000 students, including over 80 Ph.D. students. SCIS offers B.S., M.S., and Ph.D. degrees in Computer Science, an M.S. degree in Telecommunications and Networking, an M.S. degree in Cybersecurity, and B.S., B.A., and M.S. degrees in Information Technology. SCIS has received over \$22M in the last four years in external research funding, has six research centers/clusters with first-class computing and support infrastructure, and enjoys broad and dynamic industry and international partnerships.
outstanding candidates in any area will be considered. The course load is 3-3. Salary is competitive with peer schools and dependent on qualifications and experience. Drake University is committed to building a culturally diverse faculty and strongly encourages applications from female and minority candidates.

Applicants should submit electronically: a letter of application, curriculum vitae, description of teaching experience, teaching philosophy, research agenda, and contact information for three references, at least two of whom can address teaching, through Hire Touch: https://drake.HireTouch.com/. Questions may be directed to the search chair at timothy.urness@drake.edu.

## Faculty Positions in Data Science and

 Machine Learning Ecole polytechnique fédérale de LausanneTo apply, please follow the application procedure at https://academicjobsonline.org/ajo/jobs/6192
The following documents are requested in PDF format: cover letter, 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 December 1, 2015. Further questions can be addressed to:

## Prof. James Larus

## Recruiting Committee

School of Computer and Communication Sciences

## EPFL

CH-1015 Lausanne
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

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## Open-Rank Tenure Track/Tenured Positions (Job ID\# 508676)

SCIS seeks exceptionally qualified candidates for tenure-track and tenured faculty positions at all levels. We seek wellqualified candidates in all areas; researchers in the areas of computer systems, cybersecurity, cognitive computing, data science, health informatics, and networking are particularly encouraged to apply. Preference will be given to candidates who will enhance or complement our existing research strengths.

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 the graduate and undergraduate levels. An earned Ph.D. in Computer Science or related disciplines is required.

## Non-tenure track instructor positions (Job Opening 507474)

We seek well-qualified candidates in all areas of Computer Science and Information Technology. Ideal candidates must be committed to excellence in teaching a variety of courses at the undergraduate level. A graduate degree in Computer Science or related disciplines is required; significant prior teaching and industry experience and/ or a Ph.D. in Computer Science is preferred.

## HOW TO APPLY:

Qualified candidates for open-rank faculty positions are encouraged to apply to (Job Opening ID \#508676); and candidates for instructor positions are encouraged to apply to (Job Opening ID \# 507474). Submit applications at facultycareers.fiu.edu and attach cover letter, curriculum vitae,
statement of teaching philosophy, research statement, etc as individual attachments. Candidates will be required to provide names and contact information for at least three references who will be contacted as determined by the search committee. To receive full consideration, applications and required materials should be received by December 31st, 2015. Review will continue until position is filled.

If you are interested in a visiting appointment please contact the department directly by emailing Dr. Mark Weiss at Weiss@cis.fiu.edu. All other applicants should apply by going to facultycareers.fiu.edu.

FIU is a member of the State University System of Florida and an Equal Opportunity, Equal Access Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.

## Florida Institute of Technology CS Faculty Positions

Florida Tech invites applications for openrank faculty positions in computer science that begin in Fall 2016. All areas of CS are considered. The CS department offers BS, MS, and PhD degree programs. Florida Tech is in the Space Coast, where NASA Kennedy Space Center is located. According to Brookings Institute's report on "America's Advanced Industries," Space Coast ranks 7th in Advanced Industries' Share of Total 2013 Employment. Submission of applications and more information are at: cs.fit.edu/careers/.

Equal Opportunity Employer Minorities/ Women/Veterans/Disabled

We are an E-verify employer
EEO is the Law
http://www.fit.edu/hr/documents/eeoc_law.pdf

## Florida Southern College

Tenure-Track Assistant Professor

Florida Southern College invites applications for a tenure-track Assistant Professor of Computer Science position to begin in August 2016. At Florida Southern, a national leader in engaged learning, Computer Science is experiencing rapid growth. New faculty will help determine the future direction of the program.

Qualified candidates will have a Ph.D. in Computer Science, or be on track to complete the degree by summer 2016, and will have strong credentials in teaching undergraduate computer science courses. Preference will be given to applicants with an ability to teach courses in Cybersecurity. Candidates will also demonstrate excellence in research and a commitment to faculty/ student collaboration.

To learn more, and to apply, please visit: http://flsouthern.edu/human-resources/asst-prof-computer-science.aspx

## Fontbonne University

Tenure-Track Faculty Position in Computer Science

The Department of Mathematics and Computer Science at Fontbonne University invites applications for a tenure-track Assistant Professor position in Computer Science to begin in the fall of 2016. We seek a motivated, organized, enthusiastic and excellent instructor and researcher who can teach master level computer science courses, especially in the area of data mining, and also general undergraduate computer science courses. The new hire will be the Director of the MS in Computer Science program.

Qualified candidates must:

- Hold a Ph.D. in computer science with strong data mining expertise and credentials.


## Professional Opportunities

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- Demonstrate evidence of excellence in teaching at the university level.
- Demonstrate a record of research in computer science and data mining.
- Be willing to assume department and university responsibilities such as advising students, directing student research projects, supervising internships and participating in university governance.
- Have experience working in a diverse environment and/or with students from diverse backgrounds.
- Demonstrate excellent communication (oral and written), organizational, and networking skills.
- Support the university's mission statement.

Review of applicants will begin November
1, 2015. Please send a current curriculum vita, a statement of teaching philosophy, evidence of teaching effectiveness, a brief statement of research interests/ accomplishments, and the names of three references to:

Human Resources
Fontbonne University
6800 Wydown Boulevard
St. Louis, M0 63105

## Fordham University

Postdoctoral Position in Cybersecurity
We invite applications for a postdoctoral researcher position in Cybersecurity in the Department of Computer and Information Science. This position requires a Ph.D. in Computer Science or a closely related area with a specialization in cybersecurity. Those with expertise in network security, software security, cyber-physical systems, computer forensics, wireless security, biometrics-based security, e-Systems Security, and related areas of cybersecurity are encouraged to apply. This postdoctoral researcher will conduct high-quality research in cybersecurity and teach courses for MS program in Cybersecurity. The selected candidate can apply and
compete for a tenure track position that will be available next year.

## How to apply: Send a detailed CV, research statement, teaching

statement, and a list of info of 3-5 references with e-mail addresses in a single pdf file to sajalbhatia@gmail.com. Include job-code "POSTDOC-Cybersecurity" in subject line. Review of applications will begin immediately and continue until the position is filled.

For more details about the position, CIS Department and Fordham University, visit: http://www.cis.fordham.edu/events/ CybersecPostdoc.pdf

## Georgia Institute of Technology

 Tenure-Track Faculty PositionsThe School of Interactive Computing (IC) at the Georgia Institute of Technology (Georgia Tech) invites applications for several anticipated tenure track faculty positions at all levels of seniority.

Areas of interest include Robotics, Machine Learning, Artificial Intelligence, Human-Centered Computing, Information and Communication Technologies for Development, CS Education, Social Computing, Ubiquitous and Wearable Computing, and Geometric and Visual Computing, but we will also consider exceptional candidates in other areas that support the school's mission and expand it in strategic directions.

The School of IC is a part of Georgia Tech's College of Computing, which is ranked among the top ten Computer Science departments in the nation. The School includes 36 full time tenure-track Faculty, 6 Faculty with joint appointments, 12 Research Scientists, 130 PhD students, and a large number of Master's students. These work in a wide range of research areas relating to the interface of computing to the world. The School is affiliated with the GVU

Center and the Institute for Robotics and Intelligent Machines.

Application materials should be submitted online: https://academicjobsonline.org/ajo/ jobs/6204 and must include a cover letter, research statement, teaching statement, curriculum vitae, the contact information of at least three references, and up to three publications. Applicants must have outstanding academic credentials, a sincere commitment to teaching, and an interest in engaging in substantive interdisciplinary research. We ask that applicants clearly indicate their research area(s) in their cover letters.

Preference will be given to applications submitted before November 1, 2015, but applications received before December 31 , 2015 will also be considered. We expect that hiring decisions will be made by May 1 , 2015. Questions regarding the status of an application may be directed to recruitingic@cc.gatech.edu.

Georgia Tech is an Affirmative Action/Equal Opportunity Employer. Applications from women and under-represented minorities are strongly encouraged.

## Georgia Institute of Technology

Tenure-Track Faculty Positions
Applications will be considered until open positions are filled. However, to receive full consideration, applications should be submitted by December 7, 2015. Application materials should include a full academic CV, teaching and research statements, and a list of at least three references. Applicants are encouraged to clearly identify in their cover letter the area(s) that best describe their research interests. All applications must be submitted online.

## Professional Opportunities

For best consideration, applications are due by December 16, 2015, submitted online through https://academicjobsonline.org/ajo/ jobs/6009. The application material should include a full academic CV, teaching and research statements, a list of at least three references and up to three publications. Georgia Tech is an Affirmative Action/Equal Opportunity Employer. Applications from women and under-represented minorities are strongly encouraged.

For more information about Georgia Tech's School of Computational Science and Engineering please visit: http://www.cse. gatech.edul

## Henry M. Jackson Foundation

Research Scientist (Physiological Data Modeling)

The Henry M. Jackson Foundation for the Advancement of Military Medicine Inc. (HJF) is seeking a Research Scientist (Physiological Data Modeling) to support the U.S. Army Medical Research and Materiel Command's Biotechnology High Performance Computing Software Applications Institute (BHSAI) [www.BHSAl.org]. HJF provides scientific, technical, and programmatic support services to the BHSAI.

## Responsibilities:

1. Develop and apply computational solutions to biomedical problems, involving signal processing of time series physiological data, data mining, datadriven and physiological-based models, and artificial intelligence.
2. Analyze and model physiological data with relevance to, but not limited to, cognitive performance, sleep disorders, and therapeutic interventions using MATLAB and associated toolboxes.
3. Work simultaneously on multiple projects, involving a diverse and interdisciplinary team of scientists across multiple laboratories.
4. Prepare research proposals, progress reports, and manuscripts for submission to scientific journals.
5. Present research methods and findings at appropriate scientific conferences.

## Required Knowledge, Skills, and

Abilities: The candidate is expected to simultaneously work on multiple projects, involving a diverse and interdisciplinary team of scientists across multiple laboratories

## Minimum Education/Training

Requirements: Ph.D. in a related discipline, post-graduate experience, and a strong publication record.

Minimum Experience: 2 to 4 years' experience

Please apply on-line at careers.hjf.org click "Advanced Search" and enter job number 210487 in the Job Opening ID box.

The Henry M. Jackson Foundation for the Advancement of Military Medicine (HJF) is an equal opportunity and affirmative action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status or other status protected by law.

## Illinois Wesleyan University <br> Department of Computer Science <br> Visiting Faculty Member - Computer Science Beginning Spring 2016

The Department of Computer Science at Illinois Wesleyan University invites applications for a visiting faculty position. The position is for a period of three semesters, beginning in January 2016. The teaching load will be three courses per semester. A graduate degree in Computer Science or Computer Engineering is required; a PhD is preferred. Candidates must be able to teach in the core CS curriculum. Preference may be given to candidates who

## Professional Opportunities

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are able to teach theory of computing and programming languages

Please send applications to cssearch@iwu edu. Review of applications will begin after September 18, 2015

Illinois Wesleyan University is an Equal Opportunity Employer committed to a diverse workforce. Please find further information at http://www.iwu.edu/iwujobs/

## Indiana University-Purdue University Indianapolis (IUPUI)

Department of Computer and Information Science

Tenure-track Faculty Position
The Department of Computer and Information Science at IUPUI invites applications for a tenure track faculty position at the Assistant or Associate Professor level, beginning August 2016. An applicant must hold a Ph.D. in Computer Science or a closely related field at the time of appointment, and is expected to develop a high-quality externally funded research program and be committed to excellence in teaching undergraduate and graduate students. While we welcome applicants in all areas of computer science to apply, we are especially interested in candidates in the area of Big Data, with preference for candidates whose research overlaps with one or more of the areas of (a) Computational Science, (b) Security, (c) Natural Language Processing, and (d) Data Visualization.

The application should be submitted via email (as PDF files) to the Faculty Search Committee (wittlief@cs.iupui.edu), and must consist of a letter of interest, curriculum vitae, and a statement of research direction and teaching interests. Applicants should also arrange for three letters of recommendation sent directly to the Faculty Search Committee via email. Evaluation of applications will begin on January 1, 2016 and will continue until the positions are filled.

The IUPUI campus, located in downtown Indianapolis, is an urban comprehensive research university with 19 academic schools, including one of the largest medical schools in the nation. The Department of Computer and Information Science offers Purdue University degrees at the Bachelor, Master, and Ph.D. levels, with nearly 300 undergraduate majors and 200 graduate students. The Department currently has 15 full time tenure track faculty and 3 full time lecturers. The CIS faculty members
are committed to high quality research and teaching, with research foci on data mining, imaging/visualization, high performance computing, software engineering, and networking/network security. Faculty research programs are well funded by NSF (including several CAREER awards in recent years), NIH, NASA, NIJ and DoD. For further information about the Department, please visit http://www.cs.iupui.edu.

IUPUI is an EEO/AA Employer, M/F/D. We are committed to achieving excellence through

## Indiana University <br> School of Informatics and Computing Faculty Positions in Computer Science and Informatics

The School of Informatics and Computing (SolC) at Indiana University Bloomington invites applications for faculty positions in computer science, health informatics, and security informatics. Positions are open at all levels (assistant, associate, or full professor). Duties include teaching, research, and service.

Computer science applications are especially encouraged in the areas of databases, machine learning, and systems (particularly cyber-physical systems, parallelism, and networks).

Health informatics applications are especially encouraged in the areas of patient-facing technologies, including but not limited to novel technologies used by patients outside the clinical setting.

Security informatics applications are welcome from information and computer scientists in a wide range of areas including but not limited to usable security, human-centered design, identity, social informatics of security, and design for privacy.

Applicants should have an established record (for senior level) or demonstrable potential for excellence (for junior level) in research and teaching, and a PhD in a relevant area or (for junior level) expected before $8 / 16$.

The SolC is the first of its kind and among the largest in the country, with unsurpassed breadth. Its mission is to excel and lead in education, research, and outreach spanning and integrating the full breadth of computing and information technology. It includes Computer Science, Informatics, and Information and Library Science, with over 100 faculty, 900 graduate students, and 1500 undergraduate majors on the Bloomington Campus. It offers PhDs in Computer Science, Informatics, and Information Science.

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

All applicants should submit a CV, a statement of research and teaching, and names of 6 references (3 for junior level) using the links below (preferred) or to Faculty Search, SolC, $919 \mathrm{E} 10^{\text {th }} \mathrm{St}$, Bloomington, IN 47408. Questions may be sent to hiring@soic.indiana.edu. For full consideration applications are due by $12 / 1 / 15$.
http://indiana.peopleadmin.com/postings/1693 (computer science)
http://indiana.peopleadmin.com/postings/1694 (health informatics) http://indiana.peopleadmin.com/postings/1695 (security informatics)

Indiana University is an equal employment and affirmative action employer and a provider of ADA services. All qualified applicants will receive consideration for employment without regard to age, ethnicity, color, race, religion, sex, sexual orientation or identity, national origin, disability status or protected veteran status.
diversity. Applications and nominations of women, persons of color, applicants with disabilities, and members of other underrepresented groups are desired.

## Macalester College, Saint Paul, MN, USA

Department of Mathematics, Statistics, and Computer Science
Tenure-track Assistant Professor of Computer Science
Candidates must have or be completing a PhD in CS and have a strong commitment to both teaching and research in an undergraduate liberal arts environment. Areas of highest priority include computer and data security and privacy, mobile and ubiquitous computing, human-computer interaction, and visualization. Evaluation of applications will begin December 1 .
See http://www.macalester.edu/mscs for details.

## Marquette University

## Two Tenure-Track Positions

The Department of Mathematics, Statistics and Computer Science at Marquette University invites applications for two tenuretrack positions in computer science at the rank of Assistant Professor to begin August, 2016. The Department seeks exceptional individuals with solid training in computer science, or a closely related field, and research interest in Parallel and Distributed Computing, High Performance Computing, Big Data, Cloud Computing, Visualization, Human Computer Interaction, Security, Software Engineering or related fields. Preference will be shown to those that demonstrate the ability to teach at both the undergraduate and graduate levels and with a strong research record that demonstrates potential for establishing an externally funded research program. The Department highly regards and encourages interdisciplinary

## LEHIGH <br> U N I V E R S I T Y。

## DEAN, P.C. ROSSIN COLLEGE OF ENGINEERING \& APPLIED SCIENCE

Lehigh University recently announced the appointment of John D. Simon as its 14th President. President Simon and Provost Patrick V. Farrell have appointed a Search Advisory Committee to identify and review candidates for the position of Dean of the P.C. Rossin College of Engineering and Applied Science (RCEAS). With great excitement, they now invite inquiries, applications and nominations for this senior leadership position.
Lehigh is a premier research university that uniquely combines tier one research, award winning interdisciplinary programs, strong industry collaborations, and an unwavering passion for student academic and postgraduation success. In recent years, Lehigh's engineering program has experienced significant enrollment growth, launched highly innovative academic initiatives, recruited nationally recognized faculty, and is preparing to announce the most transformational capital campaign in the college's history. This especially attractive decanal position offers an opportunity to redefine the future of engineering at Lehigh, while positioning Lehigh as a national/global model for innovative excellence in engineering research and education. To guide this transformation, Lehigh seeks a creative and inspiring leader, a bold and strategic thinker, an effective and socially adept manager, and a recognized scholar to serve as its next Dean. The new Dean will take the helm of a college of engineering and applied science that consistently ranks among the top 50 engineering colleges in the country.
Founded in 1865, Lehigh University is a premier residential research university, ranked in the top tier of national research universities each year. Lehigh is a coeducational, nondenominational, private university that offers a distinct academic environment for approximately 4,900 undergraduate and 2,100 graduate students from across the globe. Lehigh enjoys a small student-to-faculty ratio. Located in Pennsylvania's scenic Lehigh Valley, the campus is in close proximity to both New York City and Philadelphia. Lehigh Valley International Airport, served by most major airlines, is 15 minutes from campus. The campus is composed of 2,358 acres, making it one of the largest private universities, by acreage, in the country.
The University's endowment is currently $\$ 1.2$ billion. For more information about the campus and Dean's position, please visit
www.lehigh.edu/rceasdeansearch
The Search Advisory Committee will review all internal and external candidates for the position of Dean, and will recommend the strongest to President Simon and Provost Farrell for final consideration. The successful candidate must have an earned doctorate or other terminal degree, a superb record of intellectual leadership and of distinguished scholarship and teaching, suitable for an appointment as a full professor with tenure.
Individuals nominated and those who wish to apply should provide an electronic version of their curriculum vitae and a bullet point summary of leadership roles held, and the scope of responsibilities and major accomplishments in each.
All nominations and applications should be sent electronically to:
Dr. Ilene H. Nagel, Nate Haines, and Charles E. Kaler
Consultants to the Search Committee
Russell Reynolds Associates
Higher Education Practice
Lehigh.Engineering@russellreynolds.com
The appointment date is open. However, to ensure full consideration, materials should be received as soon as possible. Review of nominations and applications for the position will commence immediately and continue until the position is filled. References will not be contacted without the prior knowledge and approval of the candidate.
Lehigh University is an equal opportunity and affirmative action employer with a strong commitment to building a diverse and equitable work
environment and campus community. All interested candidates who share this goal are encouraged to apply.

## Professional Opportunities

research. For more information, or to apply for one of these positions, please see the listings on Marquette University's electronic recruiting system:

Position 1, Parallel and Distributed Computing, High Performance Computing, or related fields, http://employment.marquette. edu/postings/4584

Position 2, Big Data, Cloud Computing, Visualization, Human Computer Interaction, Security, Software Engineering, or related fields, http://employment.marquette.edu/ postings/4591

Marquette is a Jesuit, Catholic university with a vigorous undergraduate liberal arts core and various postgraduate programs. We seek candidates who can contribute to the university mission, a statement of which can be found at http://www.marquette. edu/about/mission.php. Candidates from underrepresented groups are particularly welcome. Formal review of applicants will begin on November 18, 2015 and will continue until the positions are filled

## Michigan State University

Computer Science \& Engineering Teaching Line Position

The Department of Computer Science and Engineering at Michigan State University invites applications for a teaching position, classified as a "Specialist". The successful candidate will join a motivated team with a track record in innovative course development, delivery and assessment Those interested in research in pedagogy are especially encouraged to apply. The appointment will be a fixed term, $100 \%$ time for a one-year period, with renewal each year according to performance and budget. This is a 9 month (academic) appointment and salary is dependent on educational background and experience Additional opportunity exists for summer salary compensation. The responsibilities
for this position include teaching and development of undergraduate courses, as well as training and supervision of graduate teaching assistants and coordinating laboratory sections. Applicants for the
position must have an advanced degree in Computer Science or related area with substantial teaching or industrial experience. This position will start January 1, 2016. For full consideration, applications should be

## Department of Media and Information TENURE SYSTEM ASSISTANT PROFESSOR IN DATA SCIENCE AND HEALTH

The Department of Media and Information (M\&I) at Michigan State University (MSU) invites applications for a full-time, tenure system faculty position at the rank of Assistant Professor in the area of data analytics with a strong interest in health, health IT, e-health, and/or m-health.
More details are available at http://cas.msu.edu/job/posting-1632/. To apply, please visit the Michigan State University Employment Opportunities website (https://jobs.msu.edu), refer to Posting \#1632, and complete an electronic submission. Review of applications will begin on September 15, 2015, and continue until the position is filled.

## MICHIGAN STATE <br> UNIVERSITY

MSU is committed to achieving excellence through cultural diversity. The University actively encourages applications and/or nominations of women, persons of color, veterans and persons with disabilities.

## MSU is an Affirmative Action, Equal Opportunity Employer.

## Department of Media and Information TENURE SYSTEM ASSISTANT PROFESSOR INTERNET ECONOMICS

The Department of Media and Information (M\&I) at Michigan State University (MSU) invites applications for a tenure system position at the rank of Assistant Professor in Internet Economics with an interest in new and emerging media.
More details are available at http://cas.msu.edu/job/posting-1631/. To apply, please visit the Michigan State University Employment Opportunities website (https://jobs.msu.edu), refer to Posting \#1631, and complete an electronic submission. Please direct any questions to Professor Johannes M. Bauer, Search Committee Chair, Department of Media and Information at Michigan State University, at bauerj@msu.edu or 1-517-355-8372. Expected start date is August 16, 2016.

## MICHIGAN STATE UNIVERSITY

MSU is committed to achieving excellence through cultural diversity. The University actively encourages applications and/or nominations of women, persons of color, veterans and persons with disabilities.

MSU is an Affirmative Action, Equal Opportunity Employer.

## Professional Opportunities

submitted by October 1, 2015. However, applications will be accepted until the position is filled.

As a unit within the College of Engineering at Michigan State University, the Department of Computer Science and Engineering offers the Bachelor of Science, Master of Science, and Doctor of Philosophy degrees. The Department currently has 28 tenure-stream faculty, 3 teaching specialists and an enrollment of approximately 150 graduate students and 550 undergraduates. Michigan State University enjoys a park-like campus of 2,100 developed acres and 3,100 acres of outlying research facilities and natural areas. The campus is adjacent to the cities of East Lansing and the capital city, Lansing. The Greater Lansing area has approximately 250,000 residents. The communities have excellent school systems and place a high value on education.

Applicants should submit a cover letter, curriculum vitae, the names of at least three references,
and statements of research and teaching interests for this position through http:// jobs.msu.edu and refer to posting \#1909 (PDF files are preferred). Applications will be reviewed on a continuing basis until the positions are filled. Review of applications will begin on October 1, 2015. Nominations or questions are welcome by contacting the search committee chair through email at search@cse.msu.edu.

For additional information about the university, college and department, please use the following links:
CSE Department - http://www.cse.msu.edu College of Engineering - http://www.egr. msu.edul
MSU - http://www.msu.edu/
MSU is an affirmative-action, equal opportunity employer. MSU is committed to achieving excellence through a diverse workforce and inclusive culture
that encourages all people to reach their full potential. The University actively encourages applications and/or nominations of women, persons of color, veterans and persons with disabilities.

## Missouri State University, Springfield, Missouri <br> Computer Science Department Assistant Professor

Missouri State University invites application for a full-time tenure-track Assistant Professor in our Computer Science Dept., accredited by ABET. PhD in CS is required (ABD considered). Start date: August, 2016; first consideration: October 15, 2015. For more information and instructions visit https://jobs.missouristate.edu/ postings/22132.

Employment will require a criminal background check at University expense.

EO/AA/M/F/Veterans/Disability

## Massachusetts Institute Of Technology

Department of Electrical Engineering and Computer Science
Faculty Positions
The Department of Electrical Engineering and Computer Science (EECS) seeks candidates for faculty positions starting in September 2016. Appointment will be at the assistant or untenured associate professor level. In special cases, a senior faculty appointment may be possible. Faculty duties include teaching at the undergraduate and graduate levels, research, and supervision of student research. Candidates should hold a Ph.D. in electrical engineering and computer science or a related field by the start of employment. We will consider candidates with research and teaching interests in any area of electrical engineering and computer science.

Candidates must register with the EECS search website at https://eecs-search. eecs.mit.edu, and must submit application materials electronically to this website.

## Middlebury

## Two Tenure-track Faculty Positions in Computer Science

Middlebury College invites applications for two tenure-track faculty positions in computer science, beginning in Fall 2016. Specialization is open, with preference for candidates working in computer systems or applied areas. For more information, see http://apptrkr.com/667454 . To be assured full consideration, applications should be received by November 20, 2015. An Equal Opportunity Employer, the College is committed to hiring a diverse faculty as we work to foster innovation in our curriculum and to provide a rich and varied educational experience to our increasingly diverse student body.

## Professional Opportunities

Candidate applications should include a description of professional interests and goals in both teaching and research. Each application should include a curriculum vitae and the names and addresses of three or more individuals who will provide letters of recommendation. Letter writers should submit their letters directly to MIT, preferably on the website or by mailing to the address below. Complete applications should be received by December l,
2015. Applications will be considered complete only when both the applicant materials and at least three letters of recommendation are received.

It is the responsibility of the candidate to arrange reference letters to be uploaded at https://eecs-search.eecs. mit.edu by December 1, 2015.

Send all materials not submitted on the website to:
Professor Anantha Chandrakasan Department Head, Electrical Engineering and Computer Science
Massachusetts Institute of Technology
Room 38-401
77 Massachusetts Avenue
Cambridge, MA 02139
M.I.T. is an equal opportunity/affirmative action employer.

## National Library of Medicine, Bethesda, MD (NIH Main Campus)

## Director

With nation-wide responsibility for improving the health and well-being of all Americans, the Department of Health and Human Services (DHHS) oversees the biomedical research programs of the National Institutes of Health (NIH) and those of NIH's research Institutes and Centers (ICs). As the world's largest medical research facility, NIH consists of 27 ICs including the Clinical Center (an on-site research hospital).

## The Position

The National Institutes of Health (NIH) in Bethesda, Maryland, is seeking applications from exceptional candidates who are energetic, innovative, and solution-oriented for the important position of Director, National Library of Medicine (NLM). This is a senior position with responsibilities focused on the direction and management of the world's largest biomedical library and electronic information and data resources that are used billions of times each year by millions of people and thousands of computer systems worldwide. The mission of NLM is to assist the advancement of medical and related sciences and to aid the dissemination and exchange of scientific and other information important to the progress of medicine and to the public health as established in 1956 in the National

Library of Medicine Act and still part of the US Code shown: http://www.gpo.gov/fdsys/ pkg/USCODE-2011-title42/html/USCODE-2011-title42-chap6A-subchapIII-partD.htm

NLM assists in the advancement of medical and related sciences through the collection, dissemination, and exchange of information important to the progress of medicine and health. It also serves as a national information resource for medical education, research, and service activities of Federal and private agencies, organizations, and institutions, in addition to patients, families, and general public by providing electronic access to reliable health information issued by NIH and other trusted sources. NLM publishes electronically and in print, guides to health sciences information in the form of catalogs, bibliographies,

## Professional Opportunities

indexes, and online databases. It provides support for medical library development and training of biomedical librarians and other health information specialists; conducts and supports research in methods for recording, storing, retrieving, preserving, and communicating health information; and creates information resources and access tools for molecular biology, biotechnology, toxicology, environmental health, and health services research. It provides technical consultation services and research assistance. In accordance with the strategic vision articulated in a recent report from the Advisory Committee to the NIH Director, the NLM will also move towards becoming the epicenter for biomedical data science, not just at NIH, but across the biomedical research enterprise, and will include the activities initiated under the Big Data to Knowledge program (http://acd.od.nih.gov/ reports/Report-NLM-06112015-ACD.pdf). The NLM has a staff of approximately 1600 employees including full-time equivalency positions, training positions, contractors, volunteers, and guest researchers. The current annual budget is $\$ 387,134,000$.

This position offers a unique and exciting opportunity for an exceptional leader to serve as the chief visionary for NLM and lead all aspects of this highly complex organization. The Director, NLM, is responsible for the management and direction of the world's largest biomedical library, and will lead the organization in championing data science efforts. Scientists, health professionals, and the general public rely on robust, uninterrupted access to NLM's digital resources. As an international leader in information innovation, the NLM also supports and conducts computational biology, data science and standards, biomedical communications, and health information technology.

The Director, NLM, serves as the principal advisor to the Director, NIH, concerning matters related to biomedical informatics
and access to biomedical information with responsibilities for program planning, implementation and evaluation, keeping the NIH Director abreast of NLM developments, accomplishments, and needs as the relate to the overall mission of NIH. The Director, NLM, maintains continuous contact with outside industry and private interest groups, members of Congress, officials of other Federal agencies, and officials of foreign governments for the purpose of explaining the program, mission, and goals of informatics research and information access at NIH.

## Qualifications Required

Applicants must possess a Ph.D., M.D., or comparable doctorate degree in a field of health science plus senior-level scientific experience and knowledge of research programs in one or more areas related to biomedical informatics, computational biology, data science and standards, biomedical communications, and health information technology. The individual should be known and respected, both nationally and internationally, within their profession as someone of scientific prominence, with a distinguished record of research accomplishments and leadership credentials. They should have demonstrated leadership and broad visionary capabilities in the research arena, with demonstrated ability to engage others to create and execute an organization's vision; to navigate successfully within and collaborate across the public sector to achieve research objectives; and to optimize organizational performance by developing strategic priorities, setting and communicating clearly defined expectations, promoting accountability for results, and resolving operational problems and issues. Candidates should have demonstrated management acumen, including identification and management of financial and human resource needs; proven ability to make complex and strategic decisions to optimize
resource usage, mitigate risks, and achieve desired results; and, the ability to build, mentor, motivate, and maintain a culturally diverse staff.

## Salary/Benefits

The Director, NLM, will be appointed at a salary commensurate with his/her qualifications. Full Federal benefits will be provided, including vacation, health and life insurance, long-term care insurance, retirement, and savings plan (401k equivalent).

## How To Apply

Applicants must submit a current CV and bibliography electronically to Ms. Regina Reiter at SeniorRe@od.nih.gov (301-4021130). In addition, applicants must also submit a supplemental narrative statement that addresses the qualifications requirements (not to exceed a total of two pages), a vision statement (not to exceed a total of two pages), and provide the names, titles, email addresses, and telephone numbers of 4-5 references.

Information about the National Institutes of Health is located at its website.

NIH encourages the application and nomination of qualified women, minorities, and individuals with disabilities.

## Standards of Conduct/Financial Disclosure

The National Institutes of Health inspires public confidence in our science by maintaining high ethical principles. NIH employees are subject to Federal government-wide regulations and statutes, as well as agency-specific regulations described at NIH Ethics website. We encourage you to review this information. The position requires the incumbent to complete a public financial disclosure report prior to the effective date of the appointment.

Selection for this position will be based solely on merit, with no discrimination for non-merit reasons such as race, color,

## Professional Opportunities

CRA
religion, gender, sexual orientation, national origin, political affiliation, marital status, disability, age, or membership or nonmembership in an employee organization.

## Reasonable Accommodation

NIH provides reasonable accommodations to applicants with disabilities. If you require reasonable accommodation during any part of the application and hiring process, please notify us. The decision on granting reasonable accommodation will be made on a case-by-case basis.

Applications will be reviewed starting October 20, 2015 and will be accepted until the position is filled.

DHHS/NIH IS AN EQUAL OPPORTUNITY EMPLOYER

The Autonomic Management group conducts research in the area of large-scale complex IT systems. The department has ongoing projects in enterprise security, big-data platform/analytics and cloud/ data center management bringing together experts in security, systems, networking, storage, big-data and data mining. Applicants must be pursuing a PhD in CS/CE with strong experience in the following topics:

- Data mining and statistical learning - Time series analysis and prediction
- Graph data management and mining - Graph algorithm and graph querying - Big-data analytics and algorithms - Big system design and implementation, storage/database systems
- Strong system building skills - Attack forensics and dependency analysis - Distributed information flow analysis The Integrated Systems department engages in research in system software for stream/real-time computing with application to higher-performance analytics platforms. The current focus is on developing realtime platforms for video surveillance and smart transportation applications. Interns will work on projects in high performance analytics platforms ranging from distributed systems, stream processing, programming models and compilers to runtimes and middleware, including resource scheduling on clusters.


## Naval Postgraduate School

Department of CS
Multiple tenure-track Assistant Professor Positions

The Naval Postgraduate School has multiple full-time tenure-track Assistant Professor positions in Computer Science, with emphasis on security, data science, and networks. Must have a Ph.D. in Computer Science or a related field, and US citizenship.

See http://cs.nps.edu/Faculty/Openings/ CSFacultyOpenings.html

## NEC Laboratories America, Inc <br> Fall/Winter Interns

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 for fall/winter interns in the following research areas:


## Multiple Tenure-Track or Tenured Faculty Positions in Computer Science

The Department of Computer Science at National University of Singapore (NUS) invites applications for several tenure-track or tenured faculty positions. We have positions dedicated to cyber security or big data analytics as well as positions open to all areas of computer science. While our main focus is on the assistant professor level, we also welcome exceptional candidates at the associate and full professor levels. For applications at the assistant professor level, candidates should demonstrate excellent research potential and a strong commitment to teaching. Candidates at more senior levels should have an established record of outstanding research achievements.

The Department of Computer Science at NUS is highly ranked internationally. It enjoys ample research funding, moderate teaching load, excellent facilities, and extensive international collaborations. The department covers all major research areas in computer science and boasts a thriving PhD program that attracts the brightest students from the region and beyond. More information is available at http://www.comp.nus.edu.sg/.

NUS offers highly competitive salaries and is situated in Singapore, an English-speaking cosmopolitan city and a meeting point of many cultures, both the east and the west. Singapore offers high-quality education, healthcare, and extremely low tax rates.

Interested candidates are invited to send, via electronic submission, the following materials to the Chair of the CS Faculty Search Committee, Prof. David Hsu, at csrec@comp.nus.edu.sg:

- A cover letter that clearly indicates main research interests
- Curriculum Vitae
- A teaching statement
- A research statement

Please arrange for

- at least 3 references
to be sent directly to the same e-mail address or provide the contact information.
Application review will commence on October 1, 2015 and continue until the positions are filled. To ensure maximal consideration, please submit your application by December 15, 2015.


## Professional Opportunities

to doctoral. New appointees will be offered competitive salaries and startup packages, with affordable housing within a short walking distance of the department. New York University is located in Greenwich Village, one of the most attractive residential areas of Manhattan.

The department has 35 regular faculty members and several clinical, research, adjunct, and visiting faculty members. The department's current research interests include algorithms, cryptography and theory; computational biology; distributed computing and networking; graphics, vision and multimedia; machine learning and data science; natural language processing; scientific computing; and verification and programming languages.

Collaborative research with industry is facilitated by geographic proximity to computer science activities at AT\&T, Facebook, Google, IBM, Bell Labs, NEC, and Siemens.

Please apply at https://cs.nyu.edu/webapps/ facapp/register

To guarantee full consideration, applications should be submitted no later than December 1,2015 ; however, this is not a hard deadline, as all candidates will be considered to the full extent feasible, until all positions are filled. Visiting positions may also be available.

New York University is an equal opportunity/ affirmative action employer.

## Northwestern University

Assistant Professor of Computer Science and the Learning Sciences

Northwestern University's programs in Computer Science (CS) and Learning Sciences (LS) offer a tenure track assistant professor faculty position to be jointly appointed in the School of Education and Social Policy and the McCormick School of Engineering and Applied Science. The
successful applicant will be one who contributes to important and impactful research in both fields. We seek a scholar who advances understanding of how new technologies can be best designed to improve learning, while also pushing boundaries in the design of these new learning technologies. We welcome applications from candidates with interests in the design and study of new and pervasive computational technologies for learning such as computer-based modeling, visualization, scaffolded tools, virtual reality, games, Al, robotics, ubiquitous computing, digital fabrication, physical computing, learning analytics, models for teaching and learning at scale, or social networking, that have the potential to enable powerful learning in schools and other settings. We are open to a wide range of approaches to scholarship within these general areas. An interest in broadening participation in computing, computational thinking or computational literacy is desirable. Teaching and advising responsibilities will include doctoral, master's, and undergraduate students in both Computer Science and Learning Sciences.

Applicants should submit electronically a letter outlining their research program and teaching experience, a current CV, representative reprints, and three letters of reference, to Professors Larry Birnbaum \& Uri Wilensky (Search Committee Co-Chairs). Upload instructions are found at http:// www.mccormick.northwestern.edu/eecs/ careers.html. For general questions about the search or application assistance post submission, contact facsearch@eecs. northwestern.edu. Review of materials will begin on November 15, 2015, and applicants are strongly encouraged to submit their materials before that date. Applications received after that date will be considered on a rolling basis.

Northwestern University is an Equal Opportunity, Affirmative Action Employer

## Professional Opportunities

of all protected classes including veterans and individuals with disabilities. Women and minorities are encouraged to apply. Hiring is contingent upon eligibility to work in the United States. Northwestern University is located in an attractive lakefront community adjacent to Chicago. For more information about the School of Education and Social Policy, please visit http://www.sesp. northwestern.edu/ and about the McCormick School of Engineering and Applied Science at http://www.mccormick.northwestern.edu/.

## Princeton University, Princeton, New Jersey, USA Computer Science

Tenure Track Position(s)

The Department of Computer Science at Princeton University invites applications for faculty positions at the Assistant Professor level. We are accepting applications in all areas of Computer Science. Applicants must demonstrate superior research and scholarship potential as well as teaching ability.

A PhD in Computer Science or a related area is required. Candidates should expect to receive their PhD before Fall, 2016. More senior appointments may be considered for
extraordinary candidates at the associate and full professor levels. Successful candidates are expected to pursue an active research program and to contribute significantly to the teaching programs of the department. Applicants should include a CV and contact information for at least three people who can comment on the applicant's professional qualifications.

For full consideration we recommend that applicants apply by December 1 , 2015, though we will continue to review applications past that date.

Princeton University is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law. This position is subject to the University's background check policy.

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

## Qatar University and Simon Fraser University, Doha, Qatar Computer Science and Engineering PostDoc Fellow

Position Category (Broad Research Area): Large-scale multimedia systems and networking, cloud computing.

Position Description:
Qatar University and Simon Fraser University are seeking a Postdoctoral Research Scientist to work on a joint project in the field of cloud computing support for multimedia applications. The project aims to accelerate the development of next generation multimedia applications on cloud platforms. The position is based in Doha at Qatar University campus. The team is led by Dr. Aiman Erbad (Qatar University), in close collaboration with Drs. Jiangchuan Liu and Mohamed Hefeeda (Simon Fraser University).

## Professional Opportunities

## QUALIFICATIONS:

An M.S. in Computer Science or closely related field is required, with a Ph.D. or equivalent preferred. At least two years of college-level teaching experience in Computer Science is strongly preferred.

Experience with teaching advance undergraduate and/or M.S. level classes also strongly preferred.

To apply, please submit a curriculum vitae, teaching statement, and contact information for three references at: http://apply. interfolio.com/30965.

Questions can be directed to: Ahmed Elgammal, elgammal@cs.rutgers.edu or James Abello, abelloj@cs.rutgers.edu. Review of applications begins on September 24, 2015 and will continue until the position has been filled.

Rutgers, the State University of New Jersey, is an Equal Opportunity/Affirmative Action Employer. Qualified applicants will be considered for employment without regard to race, creed, color, religion, sex, sexual

Applicants need to have strong experience in large-scale multimedia systems, multimedia networking, video processing, 3D video communications, and cloud-support for multimedia. Each applicant should have PhD in Computer Science or related field, with strong publication record, and excellent communication skills.

## Application Instructions:

Applications will be reviewed immediately and the review process will continue until the position is filled. Employment benefits include: Competitive tax-free salary, furnished accommodations or housing allowance, annual round-trip air tickets for the candidate and his/her dependents, educational allowance for candidate's children, health insurance to candidate and family members, and annual leave, all in accordance with Qatar University Human Resource policies

To apply, candidates should email the following information to Dr. Aiman Erbad (aerbad@qu.edu.qa): CV, I page research statement, and 2 references.
orientation, gender identity or expression, national origin, disability status, genetic information, protected veteran status, military service or any other category protected by law. As an institution, we value diversity of background and opinion, and prohibit discrimination or harassment on the basis of any legally protected class in the areas of hiring, recruitment, promotion, transfer, demotion, training, compensation, pay, fringe benefits, layoff, termination or any other terms and conditions of employment.

## Simon Fraser University

Two University Research Associates
The School of Computing Science at Simon Fraser University invites applications for TWO University Research Associates in the area of Big Data. University Research Associates are expected to conduct research, supervise graduate students, and provide course instruction.


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## Rutgers University

Non-Tenure Track Assistant Professor
The Department of Computer Science at Rutgers University invites applications for a 1 year non-tenure-track renewable position at the rank of Assistant Professor. The appointment will start in January 2016, subject to the availability of funds.

Responsibilities include developing, updating, and teaching M.S. and undergraduate classes, interviewing and hiring recitation instructors and graders (typically senior undergraduate or M.S. students), coordinating and supervising recitation sections, and coordinate and supervise grading. Responsibilities may also include helping to administer the department's M.S. program.


## Professional Opportunities

candidate will be responsible for teaching undergraduate and graduate courses in computing-related technologies.

For a complete job announcement and application procedure, visit: http://agency. governmentjobs.com/semoedu/default. cfm?promotionaljobs=1.

AN EQUAL OPPORTUNITY, AFFIRMATIVE ACTION EMPLOYER

## Stanford University <br> Department of Computer Science

 Assistant or untenured Associate ProfessorThe Department of Computer Science at Stanford University invites applications for tenure track faculty positions at the junior level (Assistant or untenured Associate Professor). We give higher priority to the overall originality and promise of the candidate's work than to the candidate's sub-area of specialization within Computer Science

We are seeking applicants from all areas of Computer Science, spanning theoretical foundations, systems, software, and applications. We are also interested in applicants doing research at the frontiers of Computer Science with other disciplines, including but certainly not limited to those in the engineering, mathematical, medical, physical, and social sciences. Applicants must have completed (or be completing) a Ph.D., must have demonstrated the ability to pursue a program of research, and must have a strong commitment to graduate and undergraduate teaching. A successful candidate will be expected to teach courses at the graduate and undergraduate levels, and to build and lead a team of graduate students in Ph.D. research. Further information about the Computer Science Department can be found at http://cs.stanford.edu. The School of Engineering website may be found at http://soe.stanford.edu.

Applications should include a curriculum vita, brief statements of research and teaching interests, and the names and contact information of at least four references. Please apply online at http://soeapps.stanford.edu/FacultyApplyCS. Questions should be directed to, Search Committee Chair, c/o Laura Kenny-Carlson, via electronic mail to search@cs.stanford.edu.

The review of applications will begin on November 16, 2015, and applicants are strongly encouraged to submit complete applications by that date for full consideration; however, applications will continue to be accepted until February 12, 2016.

> Stanford University is an equal opportunity employer and is committed to increasing the diversity of its faculty. It welcomes nominations of and applications from women, members of minority groups, protected veterans and individuals with disabilities, as well as from others who would bring additional dimensions to the university's research, teaching and clinical missions.

## Stanford University

Department of Computer Science Sr. Level Teaching Faculty

The Department of Computer Science at Stanford University invites applications for a senior-level teaching faculty position. The appointment will be made as a nontenure line Professor (Teaching), with rank (Associate or Full Professor) depending upon the candidate's seniority and experience. Normally, the initial appointment term is 5 years, and is eligible for promotion to a continuing term appointment, which provides security of appointment without requiring further formal reappointment.

The candidate's responsibilities include: teaching classes (typically four courses during the three quarters of the regular

## Professional Opportunities

in Computer or Electrical Engineering is required. The appointee will pursue a research program that encourages involvement by undergraduate students. Strong interests in undergraduate teaching, supervising senior design projects, and student mentoring are also required. Teaching responsibilities include courses in computer hardware such as computer architecture and digital logic, and electives in the appointee's area of specialization.

For the full details on the position and application instructions, visit: https:// academicjobsonline.org/ajo/jobs/5947

Swarthmore has a strong institutional commitment to excellence through diversity in its educational program and employment practices and actively seeks and welcomes applications from candidates with exceptional qualifications, particularly those with demonstrable commitments to a more inclusive society and world.

## Swarthmore College

One Tenure-Track Position and Multiple Visiting Positions

The Computer Science Department invites applications for one tenure-track position and multiple visiting positions at the rank of Assistant Professor to begin Fall semester 2016.

Swarthmore College has a strong institutional commitment to excellence through diversity and inclusivity in its educational program and employment practices. The College actively seeks and welcomes applications from candidates with exceptional qualifications, particularly those with demonstrated commitments to a more inclusive society and world.

Swarthmore College is a small, selective, liberal arts college located 10 miles outside of Philadelphia. The Computer Science Department offers majors and minors at the undergraduate level.
academic year), working to develop CS undergraduate curriculum, and involvement in the broader CS educational community. The ideal applicant for this position will have a strong commitment to and demonstrated aptitude for teaching, as well as an established reputation and national visibility in Computer Science Education. All candidates must hold a Ph.D. in computer science or a closely related discipline. Further information about the Computer Science Department can be found at http://cs.stanford.edu. The School of Engineering website may be found at http://soe.stanford.edu.

Applications should include a cover letter, curriculum vita, teaching statement, material relevant to evaluating the applicant's teaching abilities, and the names and contact information of at least three references. Candidates are requested to ask references to send their letters directly to the search committee. Applications and letters should be sent to: Search Committee Chair, c/o Laura KennyCarlson, via electronic mail to: search@ cs.stanford.edu. Applications will be accepted until January 4, 2016.

## Stanford University is an equal opportunity employer and is committed to increasing the diversity of its faculty. It welcomes nominations of and applications from women, members of minority groups, protected veterans and individuals with disabilities, as well as from others who would bring additional dimensions to the university's research, teaching and clinical missions.

## Swarthmore College

Assistant Professor of Engineering
Swarthmore College invites applications for a tenure-track position in the area of Computer/Electrical Engineering at the Assistant Professor level, to start during the Fall semester of 2016. A doctorate

## Professional Opportunities

Union College, Schenectady, NY
Computer Science
Assistant Professor
Specialization is open.
Union College invites applications for a tenure track assistant professor position in Computer Science, beginning September 2016. Specialization is open. We will begin reviewing applications December 15, 2015, and will continue until the position is filled. Union emphasizes close collaborations between faculty and students and the department is involved in many interdisciplinary activities. Union College is an equal opportunity employer and strongly committed to student and workforce diversity.

Application Instructions
For information, see http://cs.union.edu/jobs
is desirable for junior-level candidates, and required for senior-level candidates. UAB is a Carnegie Research Intensive University.

University of Alabama<br>Tenured/Tenure-Track Faculty Position, Computer Science<br>All Areas of Computer Science

The Department of Computer Science at the University of Alabama invites applications for a tenure-track faculty position at either the Assistant or Associate level, to begin August 2016. Outstanding candidates in all areas of computer science will be considered.

Located in Tuscaloosa, AL, the University of Alabama is the capstone of higher education in the State. The student-centered research
institution is also the State's largest, with roughly 36,000 students. Housed in the College of Engineering, the Computer Science Department has 22 faculty members (14 tenured/tenure track faculty), and approximately 500 undergraduate and 50 graduate students.

For additional details, visit http://cs.ua. edu/ or contact Dr. Susan Vrbsky (faculty. search@cs.ua.edu). To apply, visit: http:// facultyjobs.ua.edu/postings/37597. Review of applications will begin November 30 and will continue until the position is filled.

The University of Alabama is an equal opportunity/affirmative action employee. Women and minority applicants are particularly encouraged to apply.

## The University of Alabama at Birmingham

Department of Computer and Information Sciences

## Assistant/Associate/Full Professor

The Department of Computer and Information Sciences (CIS) at the University of Alabama at Birmingham (UAB) is seeking candidates for a tenure-track/ tenure-earning/tenured faculty position at the Assistant/Associate/Full-Professor rank beginning Fall 2016. For additional information about the Department, please visit: http://www.cis.uab.edu.

Candidates with expertise in all core CIS topics are sought, with preference given to Artificial Intelligence, Machine Learning, Data Mining, Software Engineering, High Performance Computing, Networking, and Human-Computer Interaction. UAB has made a significant commitment to both research and teaching in Computer Science. Candidates must consequently have strong research and teaching credentials. Experience and success in funded research

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## Temple University

## Junior and Senior Tenure-Track Faculty Positions

Applications are invited for tenure-track, open rank, faculty positions in the CIS department at Temple University.

The junior position is in the systems area, including but not limited to: computer architecture and languages, storage systems, distributed computing, software systems, and embedded computing.

The senior position for Associate, Full, or Endowed Chair Professor is open to all areas of computer science/engineering. Applicants for the senior position are expected to have an outstanding and continuing track record of research and funding.

The CIS Department has two undergraduate degree programs, one in Computer Science (CS) and one in Information Science and Technology (IS\&T), a master's program in CIS, a master's program in IS\&T, and a PhD program in CIS. The department, recently moved to a new Science Education and Research Center, has undergone considerable growth in research in the past few years, during which research funding, publication rates, and the number of Ph.D. students has significantly increased. Located in Philadelphia, the 5th-largest city in the U.S., Temple University is a comprehensive research institution that serves more than 39,000 students. It is the 26th largest university in the United States and is one of the nation's leading centers of professional education.

Please submit applications with all requested information online at https://academicjobsonline.org/ajo/jobs/6035. For further information check http://www.cis.temple.edu or send email to Dr. Krishna Kant, Chair, Faculty Search Committee at kkant@temple.edu with Subject=TTPosition. Review of candidates will begin on October 15, 2015. Candidates are encouraged to apply by this deadline to receive priority consideration. Review continues until the positions are filled. Senior position applicants, who are interested in the general future directions of the department, can also directly contact the department chair Dr. Jie Wu at jiewu@temple.edu with Subject=SeniorPosition.

## Professional Opportunities

## University at Albany

Computer Science Department Assistant Professor

The Computer Science Department in the College of Engineering and Applied Sciences at the University at Albany SUNY is searching for tenure-track faculty beginning either January 2016 or Fall 2016. While the search is primarily at the Assistant Professor level, we will consider senior applicants with appropriate credentials. We seek candidates with research expertise in cyber-security and privacy, an area that the University has identified as a priority for development.

Applicants must have a Ph.D. in Computer Science, Computer Engineering, Informatics, or a closely related discipline.

For a complete job description and application procedures, visit: https://albany. interviewexchange.com/jobofferdetails. jsp?JOBID=53468

Questions regarding the position may be addressed to CSCyber@albany.edu

The Computer Science Department offers Bachelor's, Master's and Ph.D. degrees. For additional information, please visit http:// www.cs.albany.edu/

The University at Albany is an EO/AA/IRCA/ ADA Employer

## University of Arizona

Lecturer Position
The Department of Computer Science at The University of Arizona seeks applicants for a Lecturer position. This is a fulltime, benefits-eligible, non-tenure track appointment. The position is a one year renewable academic-year contract.

The most important criteria for the position are demonstrated excellence in undergraduate Computer Science education and extensive knowledge of core Computer Science topics. Candidates with experience
teaching large-enrollment classes are especially welcome.

The minimum requirement for the position is an MS in Computer Science or closely related discipline. Preference will be given to candidates who have, or are close to having, a Ph.D in Computer Science or related field, as well as teaching experience.

As of Fall 2015, the Department of Computer Science at the University of Arizona will have 22 faculty members, including three senior lecturers and two junior lecturers. The Department has a long history of research accomplishment, influential software distribution, and excellent undergraduate and graduate instruction. Current research and teaching areas span most core areas of Computer Science. The university is located in Tucson, a valley with desert landscape surrounded by mountain ranges. Tucson boasts a warm climate, 350 sunny days per year, with ample opportunities for outdoor activities such as hiking, mountain biking, horseback riding, caving, and rock climbing. More information about the University and its environs is available at www.whyUA.com.

The University of Arizona is a committed Equal Opportunity/Affirmative Action Institution. Women, minorities, veterans and individuals with disabilities are encouraged to apply.

Current information regarding this position and instructions for applying are available at http://uacareers.com:80/postings/4863. Review of applications will start on June 10th and will continue until the position is filled.

## University of California, Davis

Department Of Statistics
Tenure-Track Assistant Professor Position
We invite applications for a tenure-track Assistant Professor position beginning 07/01/2016. Requires a Ph.D. in Statistics or
a related field. All areas of statistics will be considered. Individuals specializing in statistical methods for large and complex or massive data are especially encouraged to apply. The start-date for the position is July 1, 2016.

Application review begins 11/12/2015. See http://www-stat.ucdavis.edu/ for more information.

To apply, go to https://recruit.ucdavis.edu/ apply/JPF00668

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, age or protected veteran status.

## University of California, Santa Barbara

Two Tenure-Track Positions
The University of California, Santa Barbara invites applicants for two tenure-track appointments at the Assistant Professor level in the Department of Computer Science, effective July 1, 2016. Applicants must have a Ph.D. in computer science or a closely related field. We are looking for exceptional individuals from all areas of computer science who have the potential to become outstanding research and education leaders. We are especially interested in the broad areas of Big Data, focusing on largescale data gathering, mining and learning, and Physical Computing, focusing on tight integration of computational and physical systems. Qualified candidates will be considered for appointment to the Eugene Aas Endowed Chair.

The department seeks individuals with promise and a proven track record of research excellence, a deep commitment to educating undergraduate and graduate students, and professional leadership abilities. We are particularly interested in

## Professional Opportunities

candidates who value cross-disciplinary and collaborative research.

UC Santa Barbara is a premier public research university. The Department of Computer Science is part of the College of Engineering, in which all five departments are ranked among the top ten by the National Research Council (NRC). With 34 full-time faculty and more than 120 doctoral students currently, the Department of Computer Science has witnessed a rapid rise over the past ten years, both in size and stature. We are looking for candidates who will add to the department's dynamic culture and stimulating intellectual environment.

Additional information about the department and our academic programs can be found at http://www.cs.ucsb.edu.

Primary consideration will be given to applications received by December 15, 2015, however the position will remain open until filled. Applications should be submitted electronically as PDF documents to: https://recruit.ap.ucsb.edu/apply/JPF00544

Applications must include a detailed resume, research and teaching statements, three reference letters and three publications.

The department is especially interested in candidates who can contribute to the diversity and excellence of the academic community through research, teaching and service. The University of California is an Equal Opportunity/Affirmative Action Employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.

## University of Central Arkansas

## Department of Computer Science

 ChairThe University of Central Arkansas (UCA) invites applications and nominations for the position of Chair of the Department of Computer Science. Reporting to the Dean of the College of Natural Sciences and Mathematics, the Chair is responsible for an ABET accredited BS Program in Computer Science with more than 200 majors along with an MS program in Applied Computing. The successful candidate will work with 10 talented faculty members to support current programs, and to develop new programs in related areas, e.g. software engineering, mobile systems, or other areas appropriate to the developing technology-based industrial infrastructure in Central Arkansas. Conway is home to both established and start-up information technology companies and provides many opportunities for universityindustry collaboration. The incoming chair will have the opportunity to play a major role in determining the future direction of the department and its programs. Candidates should have an earned doctorate in Computer Science/Engineering or a closely related field; a strong record of teaching, research, scholarship, and service to support a tenured appointment at the rank of associate or full professor; demonstrated leadership and administrative skills; a clear vision for the future growth and diversification in computer science and related engineering fields; a demonstrated ability to work with industrial partners; the ability to communicate effectively and clearly; strong interpersonal skills; and a commitment to enhance the representation and success of underrepresented populations.

Candidates should submit a complete application including a cover letter, curriculum vitae, a statement of leadership, research, and teaching philosophies, and contact information for three references.

All materials must be submitted to https:// jobs.uca.edul. The desired starting date is January 4, 2016. Application review begins October 5 and continues until the position is filled. UCA is an EO/AA Employer.

Application Information Contact:
Dr. Stephen Addison, Dean
College of Natural Sciences and Mathematics
University of Central Arkansas
201 S. Donaghey Avenue, LSC 105
Conway, AR 72035
Email: saddison@uca.edu
Telephone: 501 4503199
Online App. Form: https://jobs.uca.edu/

## University of Chicago

Assistant Professor
The Department of Computer Science at the University of Chicago invites applications from exceptionally qualified candidates in the areas of (a) systems, (b) theory of computing and (c) artificial intelligence for faculty positions at the rank of Assistant Professor.

Systems is a broad, synergistic collection of research areas spanning systems and networking, programming languages and software engineering, software and hardware architecture, data-intensive computing and databases, graphics and visualization, security, systems biology, and a number of other areas. We encourage applicants working within our strategic focus of data-intensive computing, but also in all areas of systems.

The Theory of Computing ("Theory" for short) strives to understand the fundamental principles underlying computation and explores the power and limitations of efficient computation. While mathematical at its core, it also has strong connections with physics (quantum computing), machine learning, computer vision, natural language

## Professional Opportunities

processing, network science, cryptography, bioinformatics, and economics, to name just a few areas. We encourage applications from researchers in core areas of Theory such as complexity theory and algorithms as well as in any area with a significant Theory component.

Artificial Intelligence ("Al" for short) includes both the theory of machine learning and applications such as natural language processing and computer vision. Outstanding researchers in any of these areas are encouraged to apply.

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

The Department of Computer Science (cs.uchicago.edu) is the hub of a large, diverse computing community of two hundred researchers focused on advancing foundations of computing and driving its most advanced applications. Long distinguished in theoretical computer science and artificial intelligence, the Department is now building strong systems and machine learning groups. The larger community in these areas at the University of Chicago includes the Department of Statistics, the Computation Institute, the Toyota Technological Institute at Chicago (TTIC), and the Mathematics and Computer Science Division of Argonne National Laboratory.

The Chicago metropolitan area provides a diverse and exciting environment. The local economy is vigorous, with international stature in banking, trade, commerce, manufacturing, and transportation, while the cultural scene includes diverse cultures, vibrant theater, world-renowned
symphony, opera, jazz, and blues. The University is located in Hyde Park, a Chicago neighborhood on the Lake Michigan shore just a few minutes from downtown.

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

Applications must be submitted through the University's Academic Jobs website.

To apply for the Assistant Professor Systems, go to: http://tinyurl.com/p673lul To apply for the Assistant Professor Theory, go to: http://tinyurl.com/ozbn5s4

To apply for the Assistant Professor Artificial Intelligence, go to: http://tinyurl. com/qjfhmb3

To be considered as an applicant, the following materials are required:

- cover letter
- curriculum vitae including a list of publications
- statement describing past and current research accomplishments and outlining future research plans
- description of teaching philosophy - three reference letters, one of which must address the candidate's teaching ability.

Reference letter submission information will be provided during the application process.

Review of application materials will begin on January 1, 2016 and continue until all available positions are filled.

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, protected veteran status or status as an individual with disability

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

Job seekers in need of a reasonable accommodation to complete the application process should call 773-702-5671 or email ACOppAdministrator@uchicago.edu with their request.

## University Of Dayton

Computer Science Department Tenure Track

The Department of Computer Science at the University of Dayton invites applications for the position of Tenure Track Assistant Professor starting August 16, 2016. We seek an expert committed to excellence in undergraduate and graduate education who also has a focus on research. The individual holding this position is expected to teach undergraduate and graduate courses, advise and mentor students, and pursue an externally funded research program.

Required Qualifications: Applicant must have completed all course work necessary for a Ph.D. in Computer Science or closely related field; potential for quality teaching; potential for scholarly research in cybersecurity or interactive media; and must be committed to excellence in undergraduate and graduate education with a focus on research.

Preferred Qualifications: Ph.D. in Computer Science; research or professional experience in cybersecurity or interactive media.

For a full description of the position, list of preferred qualifications and to apply online, see http://jobs.udayton.edu/postings/18201

A complete application consists of a cover letter, CV, unofficial undergraduate and graduate transcripts, statement addressing teaching philosophy, and research plans. Three letters of recommendation are also required for a complete application. Review of applications will begin November 30, 2015, and will continue until the position is filled.

## Professional Opportunities

excellence. The University ranks among the top 100 universities in federal R\&D support for science and engineering, with external funding exceeding \$200 million annually. Supported by state-of-the-art facilities, research is conducted across all seven colleges and numerous interdisciplinary institutes and centers. The main campus in Newark, Delaware, provides the amenities of a vibrant college town with convenient access to the major cities of the East Coast. The newly opened 194,000-square-foot Harker Interdisciplinary Science and Engineering Laboratory greatly expands opportunities and resources for interdisciplinary research and active learning, and the recently acquired 272acre Science, Technology and Advanced Research (STAR) campus offers additional opportunities for academic and commercial collaborative research and development.

Candidates must have a Ph.D. degree in electrical or computer engineering, computer science or a related discipline. Applicants should submit a curriculum vita, a one-page statement of teaching experience and interests, a 3-6-page research proposal and a list of at least four references. The University of Delaware values diversity and is supportive of the needs of dualcareer couples; women and minorities are especially encouraged to apply.

To submit applications please visit apply. interfolio.com/31482

Equal Employment Opportunity
The University of Delaware is an Equal Opportunity Employer which encourages applications from minority group members, women, individuals with a disability and veterans. The University's Notice of NonDiscrimination can be found at http:// www.udel.edu/aboutus/legalnotices.html. Employment offers will be conditioned upon successful completion of a criminal background check. A conviction will not necessarily exclude you from employment.

## University of Georgia

Director of Discovery and Innovation Partnerships

The University of Georgia (UGA) seeks to increase research partnerships with industry that engage its new College of Engineering as well as other colleges and schools on campus. To achieve this goal, the Office of the Vice President for Research and the College of Engineering have established a new initiative, Discovery and Innovation Partnerships, and they are searching for a dynamic individual to serve as its founding director. Reporting jointly to the Vice President for Research and the Associate Dean for Research of the College of Engineering, the director will be responsible for establishing new partnerships as well as expanding existing ones, with an emphasis on long-term research relationships of mutual value. Among other tasks, the director will: (1) identify opportunities to work with industry that align with UGA's capabilities and strategic priorities; (2) engage with prospective industry partners to understand their short- and long-term needs; and (3) help to forge and foster relationships that meet the needs of industry while simultaneously growing UGA's research portfolio. To achieve this mission, the director will work closely with UGA's Innovation Gateway team [http:// research.uga.edu/gateway/], the College of Engineering [http://www.engr.uga.edu/] and other academic units.

The successful candidate must have an advanced degree in a science or engineering discipline, plus ten or more years of relevant, successful experience in corporate or university research, research administration, and/or management. A
PhD is highly desirable, as is experience in implementing state-of-the-art, open innovation models for effective industryuniversity partnerships. The director must also be able to work effectively within both

## Professional Opportunities

university and corporate cultures, bridging them to forge productive partnerships. Application procedures and further details regarding UGA and its College of Engineering are available at http://www.ugajobsearch. com/applicants/Central?quickFind=67264. Confidential inquiries and questions related to the position may be directed to Dr. Larry Hornak, Professor and Associate Dean for Research, Email: lahornak@uga.edu; Telephone: 706-542-2462

Complete applications received by October 15, 2015 are assured of consideration.

THE UNIVERSITY OF GEORGIA IS AN EEOI AA/Vet/Disability Institution

## University of Georgia

Tenure-Track Assistant Professor Position
The Department of Computer Science at the University of Georgia invites applications for a tenure-track assistant professor position, starting August 2016. Applicants should hold a PhD in Computer Science or closely related field, have a strong research record, and be committed to excellence in both research and teaching.

We are especially interested in candidates with research background in all aspects of Big Data Computing (acquisition, storage, management, analytics, and visualization), Biomedical Informatics, Brain Mapping, Cyber-Security, and Cyber-Physical Systems with emphasis on Smart Sensors and Robotics. We currently have faculty with research interests spanning the above areas. Strong applicants in other areas of Computer Science will also be considered.

Computer Science is a growing and congenial department of 23 faculty within the Franklin College of Arts and Sciences. The department has over 745 undergraduate and over 150 graduate students and offers the B.S., M.S., and Ph.D. degrees in CS. The teaching load allows for substantial concentration on research.

In addition to the areas in which we are recruiting, our faculty cover a broad range of research interests, including distributed information systems, real-time systems, databases, vision and image processing, theory, algorithms, bioinformatics and bio-imaging, simulations, computational science, parallel and distributed computing, and artificial intelligence.

The University of Georgia (http://uga.edu/), founded in 1785, is the oldest land-grant university in the nation and the largest university in Georgia (exploregeorgia.com), with a student body of over 34,000. It is located in Athens (http://www.visitathensga. com/) a charming and historic university town of about 100,000 , approximately 65 miles from Atlanta, with mild winters and warm summers. The University boasts a major Performing Arts Center and has one of the largest student athletic recreation facilities in the US. It has been consistently ranked among the top 20 public universities by U.S. News and World Report.

To apply, please go to http://facultyjobs.uga. edu/postings/342

Please upload a cover letter, curriculum vitae, and short statements of research interests and teaching philosophy (a single PDF is preferable). Please provide contact information (email) for three references.

Review of candidates will begin on December 01, 2015 and will continue until the position is filled. Please see http://www. cs.uga.edu for more information about the department and the university.

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 sustaining a work and learning environment that is inclusive. Women, minorities, protected veterans and individuals with disability are encouraged to apply. The University of Georgia is an EOO/AA institution, and does not discriminate based on race, color,
religion, sex, sexual orientation, gender identity, national origin, disability, or protected veteran status.

## University of Georgia

The College of Engineering
Multiple Tenure-Track Faculty Positions in Engineering - Health, Cognition, and Learning

Position: The College of Engineering at the University of Georgia (UGA) aims to be the Nation's leader in interdisciplinary research and education in health and wellness engineering as well as cognitive systems and learning. Fundamental discovery and engineering innovation from the levels of fundamental biology to cognitive science are rapidly transforming our lives in a broad range of areas extending from advanced prosthetics such as artificial retinas to a new understanding of human factors and learning. The next generation of engineering faculty will need extraordinary talent to educate and to engage in scholarship in order to meet the challenges of the 21st century. The UGA College of Engineering seeks such talent to fill up to three new fulltime (academic year) tenure-track positions at the assistant professor rank. The positions will be available January 8, 2016.

Responsibilities: The responsibilities of the successful candidate will be to: (l) establish an outstanding research program recognized nationally and internationally, (2) establish collaborations and partnerships within and outside the College of Engineering as well as industry, (3) be an outstanding, inspiring educator who exhibits a strong commitment to teaching excellence at both the undergraduate and graduate levels, and (4) compete successfully for extramural funding to support research and a companion graduate and postdoctoral training program. The candidate will have broad latitude to develop a research program that focuses on innovations in

## Professional Opportunities

the targeted areas and advances in basic knowledge, taking a systems perspective to significantly benefit society.

Qualifications: Candidates should have a Ph.D. degree in an Engineering discipline, including but not limited to biomedical engineering, electrical engineering, chemical engineering, or mechanical engineering, or related fields such as engineering education, cognitive science, physics, chemistry or biology. Faculty with research interests in a broad range of topics including biomedical devices and interfaces (e.g. wireless wearable health devices, Al centered device technology, therapeutic/assistive devices, bio-physical and brain-machine interfaces), fundamental discovery (e.g. optogenetics, biological machines, emergent behavior in biological systems), and cognition (e.g. human factors, engineering education, social research in engineering practice settings, and engineering epistemologies) will be considered. A demonstrated record exhibiting leadership traits, effective communication, and the ability to develop innovative collaborative programs is required.

Application Procedure: Please submit applications at http://facultyjobs.uga.edu/ postings/302. Questions related to the positions may be directed to Peter Kner, Email: kner@engr.uga.edu; Telephone: 706-542-8966

Complete applications received by November 20, 2015 are assured of consideration.
the university of georgia is an eeolaal Vet/Disability Institution

## University of Idaho, Idaho Falls

College of Engineering
Regular Faculty for Computer Science
Employee Category: Faculty
Pay Range: \$89,000 - \$92,000
Full/Part Time: Full Time
Position Summary:

The University of Idaho invites applications for a position in Computer Science at the Assistant professor level with an emphasis in: computer security, large-scale database management (big data), data analytics and data mining, visualization, and critical infrastructure.

This position is located at University Place in Idaho Falls, near the Center for Advanced Energy Studies(CAES ) and the Idaho National Laboratory.

Minimum Qualifications:

- An earned doctorate in Computer Science or a closely related field
- Demonstrated success in research publications and presentations in an appropriate field.
- Excellent written and oral communication skills
- Professional portfolio consistent with appointment to the rank of Assistant Professor
- Authorized to work in the U.S.

Special Instructions:
Application Procedure: To apply, complete the online application http://www.uidaho. edu/human-resources/jobs and provide the following: (1) current curriculum vitae (10-page limit), (2) letter of application, (3) statement of teaching and research philosophy (4-page limit), and (4) four professional references.

Application Review: Review of applications will begin after October 6, 2015 as soon as a sufficient candidate pool arises, but no later than November 1, 2015, and will continue until the position is filled.

Offer of employment is contingent upon verification of the individual's eligibility for employment in the United States.

To apply, please visit: http://apptrkr. com/670180

EEO

## University of Kansas

Three Tenure Track Positions
The University of Kansas (KU) Department of Electrical Engineering and Computer Science seeks individuals for three tenure track positions in the disciplines of electrical engineering, computer engineering, or computer science. Candidates are expected to contribute to the development of academic and research programs and to the research community. Applicants are expected to have an earned doctorate, or equivalent in electrical engineering, computer science, computer engineering, or related fields at the time of appointment. The successful candidate must be eligible to work in the U.S. by the time of appointment. The following positions are open at the assistant professor (tenure-track) level, with the possibility of higher rank for the exceptional applicant, with experience in:

Data Science - Machine learning, large-scale data analytics, semantics, provenance. https://employment.ku.edu/academic/4351BR

Bioinformatics/health informatics/ biomedical informatics - translational bioinformatics; computational systems biology; decision support in health systems; storing, retrieving, analyzing biological and/ or health data. https://employment.ku.edu/ academic/4339BR

Power systems engineering - focusing on the integration of renewable energy resources, e.g., photovoltaic and wind systems, into the power grid to create reliable and resilient future power systems is preferred. Expertise in one or more of the following areas is desirable, distributed generation and storage; power system operation and planning; power system dynamics and control; smart and micro grid. https://employment.ku.edu/ academic/4358BR

Exceptional applicants in other closely related areas to the above topics may be considered.

## Professional Opportunities

in 1962. The School includes the Computer Science Program, the Informatics Program, and The Center for Advanced Computer Studies. The School offers an ABET/CAC accredited Bachelor's degree in Computer Science, a Bachelor's degree in Informatics, Master's degrees in Computer Science and in Computer Engineering, and Ph.D. degrees in Computer Science and Computer Engineering. The School has an enrollment of approximately 700 students including over 100 graduate students. It is home to the first student chapter of the Association for Computing Machinery. Among the 23 full-time faculty members are two IEEE Fellows and four NSF Career Award winners. In recent years, annual new research grants awarded totals $\$ 3 M^{+}$, with an average of $\$ 300 \mathrm{~K}$ per year in externally funded research assistantships. UL Lafayette is the lead institution of the NSF Center for Visual and Decision Informatics. The city of Lafayette has one of the largest publicallyowned fiber-to-the-home networks delivering economical broadband services to homes and businesses, for well over a decade and has attracted employers that have plans to employ well over 1,000 computer science and informatics majors in the near future.

The School is seeking a dynamic leader to leverage the University's commitment and enthusiastic community support to lead the School's academic programs and research capabilities to an international standard of excellence, with the goal of becoming a Top 25 academic unit for Computing and Informatics in the nation.

Qualifications

- An earned doctorate in computer science or a related area, combined with a strong track record in doctoral student supervision and developing a successful, externally funded research program;
- Possess a broad knowledge of computing and informatics areas as well as having intellectual interests to enable him/her
to lead or contribute to multidisciplinary efforts in studies and research;
- Strong record of successfully initiating and managing relationships with industrial or governmental agency partners;
- Experience and accomplishments in leadership roles, preferably at a research university, in promoting academic quality and vitality, including promoting experiential learning opportunities for students;
- Record of entrepreneurial and innovative skills in developing and communicating a vision within an academic environment and implementing the vision in a collaborative, transparent manner;
- Excellent communication and relationship building skills and the ability to effectively work with individuals from diverse groups and disciplines and engage both internal and external stakeholders.

The expected start date is August 2016. Applicants should send complete application packages, including a letter of application, curriculum vitae, short statements of research, teaching, and leadership philosophy, and contact information of five references electronically (as a single pdf file) to Professor Magdy Bayoumi at (dcmix@cacs.louisiana.edu). To ensure full consideration, receipt of complete application material is required on or before October 31, 2015.

## University of Massachusetts Amherst

Search for the Dean of the College of Information and Computer Sciences
The University of Massachusetts Amherst seeks a visionary leader to serve as founding Dean for its new College of Information and Computer Sciences. The Dean will have a unique opportunity to shape and grow a new college, building on the strong foundation of our highly ranked

## Professional Opportunities

Computer Science program, which is in the midst of a major faculty hiring initiative and enjoying new growth in centers and multidisciplinary institutes.

UMass Amherst is the flagship campus of the five-campus University of Massachusetts system and a member of the Five College consortium with Mt. Holyoke, Smith, Amherst, and Hampshire colleges. Founded in 1863, the campus is home to more than 1,200 faculty, nearly 21,000 undergraduates from 68 countries and 49 states, and approximately 6,000 graduate students. While already the largest public university in New England, UMass Amherst has been enhancing its leadership position with over $\$ 1.4$ billion in new construction and renovations, another \$1.4 billion in the works, and substantial investments in the sciences, all with state government support.

The University's creation of the new College is an indication of its commitment to dramatically expand in information and computer sciences. Today, the College of Information and Computer Sciences has 51 faculty, including 16 new faculty hired in the past four years. The College continues to grow in long-standing research strengths, including machine learning, networking, mobile systems, information retrieval, programming languages, software engineering, theoretical computer science, robotics, distributed systems, security \& privacy, computer vision, graphics, educational technologies, and databases. Our faculty includes 28 Fellows of the ACM, AAAI, AAAS, IEEE, and similar societies. Research funding from industry and government exceeded $\$ 16$ million in the past year. The College maintains significant research collaborations with more than 50 industryleading technology companies. Its affiliated research centers include the Center for Intelligent Information Retrieval, Center for Data Science, Computational Social Science Institute, and a new Cybersecurity Institute. We also have strong connections
with regional institutions, including the Massachusetts Green High Performance Computing Center, a collaboration with Harvard, MIT, Northeastern, and Boston University, which augments our state-of-the-art computing facilities. The College offers world-class education, with 180 PhD students, 80 MS students, 800 undergraduate majors, and over 400 minors. Reporting to the Provost and Senior Vice Chancellor for Academic Affairs, the Dean is the principal academic and administrative officer for the College. The Dean will lead the planning for the new College's future, expand its collaborations and interdisciplinary efforts in both research and education, evolve its organizational structure beyond its previous single-department structure, grow the faculty, expand the breadth and depth of the College's research programs, and build on the College's existing top-tier international reputation.

Qualifications for the position include a distinguished record of research and scholarship appropriate for appointment as a tenured full professor in the College of Information and Computer Sciences. We seek candidates who will embrace and foster the College's collegial and collaborative culture; promote diversity among our faculty, students, and staff; advocate for the College locally and nationally, and drive development; collaborate with deans of the other colleges to enhance interdisciplinary efforts. The candidate should articulate a broad and creative view of information and computer sciences, including their multidisciplinary impact and roles in enabling innovation.

The Search Committee invites nominations and expressions of interest as well as applications sent to provost@provost. umass.edu. Applications consist of a letter of interest, curriculum vitae, and contact information for three to five references. For full consideration apply by October 9 ,
2015. Review of applications will continue until the appointment is made. For more information about the College see https:// www.cs.umass.edu/.

The University of Massachusetts Amherst is an Affirmative Action/Equal Opportunity Employer of women, minorities, protected veterans, and individuals with disabilities and encourages applications from these and other protected group members.

## University of Miami

## Faculty Position

The Department of Computer Science at the University of Miami invites applications for two Assistant/Associate Professor faculty positions starting August 2016. Candidates must possess a Ph.D. in Computer Science or in a closely-related discipline, with strong research expertise in areas related to either Cyber-security in System-software, or Data and Information Visualization. The successful candidates will be expected to teach at both undergraduate and graduate levels, and to develop and maintain an internationally recognized research program. The department encourages innovative interdisciplinary work with other units of the university. In particular, the Data and Information Visualization position entails working within the Visualization Program of the Center for Computational Sciences to form collaborations across the University.

Applicants should submit a cover letter, CV, research plan, statement of teaching philosophy, sample preprints or reprints, teaching evaluations from the last two years, and the names of at least three references, online at http://www.cs.miami. edu/search/. Review of applications will begin lst October 2015, and continue until the position is filled. Information about the College can be found at http://www. as.miami.edu/.

## Professional Opportunities

teaching program in the area of software engineering. While all areas of software engineering are of interest, applicants whose research connects security or human centered computing to software engineering are particularly welcome. Applicants should have a demonstrated potential for outstanding research and a promise of effective teaching at undergraduate through graduate levels including the advising of M.S. and Ph.D. students. Candidates will hold a Ph.D. in Computer Science, Computer Engineering, or a closely related discipline. Applicants should have excellent communication skills and a strong desire to work in a diverse and collaborative environment.

To apply go to http://employment.unl.edu and complete the Faculty/Administration
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at the University of Nebraska at Omaha (UNO) invites applications for a tenure(UNO) invites applications for a tenure-
track, Assistant Professor position with an emphasis on computing education research (CER). Candidates must have an earned doctorate in computer science, learning sciences, human-centered computing, cognitive or information science or a closely allied field prior to an August 2016 employment start date. The selected candidate should have strong potential to conduct high-quality discipline based education research in computing, procure external funding, and be committed to teaching at the undergraduate and graduate levels within the computer science degree programs as well as within new K-12 teacher certification programs developed collaboratively between CS and UNO's College of Education.

Review of applications will begin on 09/15/2015 and continue until the position is filled. The university and department have a strong commitment to achieving diversity among faculty and staff. We are particularly interested in receiving applications from members of under-represented groups and strongly encourage women and persons of
College of Information Science and Technology
Faculty Position in Computer Science
The Department of Computer Science
color to apply for this position. Applications will be accepted until the position is filled. Complete an application, attach a cover letter, vita, and a list of 3 references online at http://www.unomaha.edu.

For additional information contact Dr. Brian Dorn, Chair, bdorn@unomaha.edu.

## University of Nebraska Lincoln

Multiple Tenure-Track Faculty Positions
The Department of Computer Science and Engineering at the University of Nebraska - Lincoln invites applications for multiple tenure-track faculty positions at the rank of Assistant Professor to begin in August, 2016.

We are seeking faculty members who can establish a strong scholarly research and

The University of Miami offers competitive salaries and a comprehensive benefits package including medical and dental benefits, tuition remission, vacation, paid holidays and much more. The University of Miami is an Equal Opportunity Employer - Females/Minorities/Protected Veterans/ Individuals with Disabilities are encouraged to apply. Applicants and employees are protected from discrimination based on certain categories protected by Federal law."

## at Omaha <br> University of Nebraska

estabish a strong scholarly research and -

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## Professional Opportunities

summer time teaching, research and grant related activities.

An earned doctorate in computer science or related discipline is required. The ideal candidate will also have demonstrated ability and strong interest in high quality teaching as well as complementary scholarship through technical or educational research, and/or involvement in computer science education at the national or international level. Candidates with significant computing industry experience with software, web, or cloud based platforms are encouraged to apply. The university and department have a strong commitment to achieving diversity among faculty and staff. We are particularly interested in applicants from underrepresented groups and strongly encourage women and persons of color to apply.

Complete an application online at http:// www.unomaha.edu. Current curriculum vita, a cover letter and the names and contact information of three references must be attached to the electronic application. For more information, contact Dr. Mahadevan Subramaniam, Chair Search Committee at msubramaniam@unomaha.edu.

The university and department have a strong commitment to achieving diversity among faculty and staff. We are particularly interested in receiving applications from members of under-represented groups and strongly encourage women and persons of color to apply for this position. Applications will be accepted until the position is filled.

## University of Richmond

Department of Mathematics and Computer Science

Assistant Professor of Computer Science
The University of Richmond invites applications for a tenure-track Assistant

Professor position in Computer Science to begin August 2016.

For additional information and to apply, please visit: https://richmond.csod.com/ats/ careersite/JobDetails.aspx?id=690

## University of San Francisco <br> Department of Computer Science <br> Two tenure-track Assistant Professor Positions

The Department of Computer Science at the University of San Francisco is accepting applications for two tenure-track Assistant Professor positions starting in August 2016.

See http://www.cs.usfca.edu/tenure-trackposition.html for application instructions.

To receive full consideration applications must be received by December 1, 2015.

## University of Southern California, Los Angeles, CA

Viterbi School of Engineering - Department of Computer Science

Teaching Faculty [All Ranks]
The Computer Science Department (http:// cs.usc.edu) at the USC Viterbi School of Engineering (http://viterbi.usc.edu) seeks candidates for teaching positions to teach undergraduate and graduate courses. These are full time, benefits eligible faculty positions on the non-tenure track. Competitive candidates will have the training and experience necessary to teach effectively in a highly-ranked Computer Science department that advances undergraduate students through an accredited BS degree program and graduate students enrolled in MS and PhD programs. While we are interested in candidates with backgrounds in all areas of Computer Science we are particularly interested in candidates with expertise in Algorithms, Artificial Intelligence, Databases, Games, Programming Languages, Networks/ Systems, and Software Engineering. Relevant industry experience is valued for

## Professional Opportunities

candidates interested in teaching gamesrelated courses.

These are primarily teaching positions; all candidates are expected to have a strong commitment to teaching. Faculty will spend the majority of their time on teaching and teaching-related duties with reduced obligation for research and University service. Qualified candidates should have a doctoral degree in Computer Science (or equivalent) by the date of appointment. Salary and benefits are competitive. While we seek applications at the level of Lecturer, in exceptional cases, applicants with longer teaching experience may also be considered for a commensurate position (e.g., Senior Lecturer).

Applicants should submit their applications online at: https://goo.gI/OXAQvp

Applications must include a cover letter, a detailed curriculum vitae, a teaching statement, and names of at least three professional references, at least two of whom must be familiar with, and able to comment on, the applicant's teaching experience. Applicants may also optionally include a research statement. Applications should be received by October 15, 2015. Applications received after this deadline may not be considered.

The USC Viterbi School of Engineering is among the top tier engineering schools in the world. It counts 180 full-time, tenuretrack 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 Center for Innovation. Research expenditures typically exceed \$180 million annually. With 37 tenure-track, 33
research faculty, and 11 teaching faculty, the USC Department of Computer Science is one of the nation's leading centers of research and education in the field.

USC is an equal-opportunity educator and employer, proudly pluralistic and firmly committed to providing equal opportunity for outstanding persons of every race, gender, creed and background. The University particularly encourages women, members of underrepresented groups, veterans and individuals with disabilities to apply. USC will make reasonable accommodations for qualified individuals with known disabilities unless doing so would result in an undue hardship. Further information is available by contacting uschr@usc.edu.

## University of Texas at El Paso

Department of Computer Science Software Engineering
The Department of Computer Science at the University of Texas at El Paso invites applications for a faculty position in Software Engineering at the Assistant/ Associate level to begin spring or fall 2016. Preference will be given to candidates with experience in Cyber Security and industry. UTEP is an affirmative action, equal opportunity employer.

Full ad: http://www.cs.utep.edu

## University of Texas at Austin

 Tenure-Track FacultyThe School of Information at the University of Texas at Austin is seeking to hire a tenure-track faculty member, probably at the assistant professor level. One of our preferred hiring areas is a technical field that would fit in an information school that is separate from a CS or ECE department. We already have strengths in HCl and information retrieval and are interested in building on or complementing
these strengths. Design, data analytics, visualization, social network analysis, and other fields are possibilities, but in every case we expect the applicant to explain how her or his work would fit in to an information school.

See the official ad at https://www.ischool. utexas.edu/facultysearch

## University of Waterloo

David R. Cheriton School of Computer Science
Tenured and Tenure-Track Faculty Positions 2015-2016

Applications are invited for several tenuretrack or tenured faculty positions in the David R. Cheriton School of Computer Science.
(a) David R. Cheriton Chair in Software Systems. The Cheriton Chairs were created to support world-leading research in traditional and emerging areas of Computer Science and interdisciplinary fields. An outstanding researcher is sought for one endowed Cheriton Chair at the rank of Full or Associate Professor, with tenure. The chair includes substantial research support and teaching reduction. The successful applicant is expected to lead an innovative and high-impact research programme, to engage actively in graduate student supervision, and to contribute to the overall development and reputation of the School. Candidates are expected to have an outstanding research record in software systems (very broadly defined). A Ph.D. in Computer Science, or equivalent, is required and rank and salary will be commensurate with experience; the salary range is $\$ 150,000$ to $\$ 200,000$ and negotiations beyond this salary range will be considered for exceptionally qualified candidates.
(b) Canada Research Chair (Tier II). An exceptional emerging researcher is sought, as an Assistant or Associate Professor

## Professional Opportunities

(tenure track) and research chair, who will enhance the School's strength in Computer Science. Priority research areas include Systems and Networking, Machine Learning and Information Retrieval, and Software Engineering, but outstanding applicants in all areas of computer science are encouraged to apply. The position includes substantial research support and teaching reduction. The successful applicant is expected to be a leader in research, to engage actively in graduate student supervision and teaching, and to contribute to the overall development of the School. A Ph.D. in Computer Science, or equivalent, is required. Rank and salary will be commensurate with experience; the salary range is $\$ 120,000$ to $\$ 170,000$ and negotiations beyond this salary range will be considered for exceptionally qualified candidates. Appointments are expected to commence during the 2016 calendar year.
(c) Several tenure-track Professor positions. Excellent tenure-track faculty members, at an Assistant or Associate, or in special cases a Full Professor are sought who will enhance the School's strength in Computer Science. Priority areas include Systems and Networking, Machine Learning and Information Retrieval, and Software Engineering, but outstanding applicants in all areas of computer science are encouraged to apply. More senior appointments are possible as circumstances warrant. Successful applicants will have demonstrated the potential to be leaders in research and teaching, to engage actively in graduate student supervision, and to contribute to the overall development of the School. A Ph.D. in Computer Science, or equivalent, is required. Rank and salary will be commensurate with experience; the salary range is $\$ 120,000$ to $\$ 170,000$ and negotiations beyond this salary range will be considered for exceptionally qualified candidates. Appointments are expected to commence during the 2016 calendar year.

The David R. Cheriton School of Computer Science is the largest computer science school in Canada, with 83 faculty members. It enjoys an excellent reputation in pure and applied research and houses a diverse research program of international stature. Because of its recognized capabilities, the School attracts exceptionally wellqualified students at both undergraduate and graduate levels. In addition, the University has an enlightened intellectual property policy which vests all rights in the inventor. Please see our web site for more information: https://www.cs.uwaterloo.ca.

To submit an application, please register at the submission site: https://www. cs.uwaterloo.ca/faculty-recruiting. Once registered, instructions will be provided regarding how to submit your full application. Applications will be considered when they are complete and as long as positions are available. However, full consideration for the regular tenure-track positions (c) is assured only for applications received by November 30, 2015

The University of Waterloo respects, appreciates and encourages diversity. We welcome applications from all qualified individuals including women, members of visible minorities, Aboriginal peoples and persons with disabilities. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.
"Three reasons to apply: https://uwaterloo. ca/watport/why-waterloo."

## Washington State Vancouver <br> Computer Science Faculty

Washington State University Vancouver invites applications for a full-time tenuretrack position at the assistant professor level beginning 8/16/2016. Candidates are sought with expertise in computer networks, wireless networks or sensor networks.

Required qualifications: Ph.D. in Computer Science or Software Engineering by the employment start date and demonstrated ability to (1) develop a funded research program, (2) establish industrial collaborations, (3) teach undergraduate/ graduate courses, and (4) contribute to our campus diversity goals (e.g. incorporate issues of diversity into mentoring, curriculum, service or research). Preferred qualifications: (1) already have published promising scholarly work in the field and (2) relevant industrial background.

Duties include: (1) teaching at undergraduate and graduate levels including the topics of networks; (2) participation and documentation of distinguished scholarly activities including research, innovative teaching and laboratory development; (3) securing external funding for research programs; and (4) service to the department and university through committee work, recruitment, and interaction with industry.

WSU Vancouver serves about 3,000 graduate and undergraduate students and is fifteen miles north of Portland, Oregon. The rapidly growing School of Engineering and Computer Science (ENCS) equally values both research and teaching. WSU is Washington's land grant university with faculty and programs on four campuses. For more information: http://ecs.vancouver.wsu.edu. WSU Vancouver is committed to building a culturally diverse educational environment.

To apply: Please visit www.wsujobs. com and search postings by location. Applications must include: (1) cover letter with a clear description of experience relevant to each of the required and preferred qualifications; (2) vita including a list of at least three references, and (3) A statement (two page total) of how candidate's research will expand/ complement the current research in ENCS and a list of the existing ENCS courses

## Professional Opportunities

CRA
Computing Research Association
the candidate can teach and any new courses the candidate proposes to develop. Application deadline is November 29, 2015.

WASHINGTON STATE UNIVERSITY IS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EDUCATOR AND EMPLOYER. Members of ethnic minorities, women, special disabled veterans, veterans of the Vietnam-era, recently separated veterans, and other protected veterans, persons of disability and/or persons age 40 and over are encouraged to apply. WSU employs only U.S. citizens and lawfully authorized nonU.S. citizens.

## Washington University in St. Louis

Tenure-Track Faculty Position
The Department of Computer Science \& Engineering at Washington University in St. Louis seeks outstanding tenuretrack faculty in all areas of computer science and engineering.

The department has been growing with plans to continue expanding in the coming years. We seek talented and highly motivated individuals who will build transformative research programs through
work in the core disciplines of computer science and computer engineering, as well as interdisciplinary collaborations with researchers in areas such as biomedicine, engineering, and the sciences. Candidates from all areas of computer science and engineering will be considered, with successful candidates showing exceptional promise for research leadership and a strong commitment to high-quality teaching. Candidates will be expected to publish their research in peer-reviewed conferences and journals, teach, and participate in department and university service.

Our faculty is engaged in a broad range of research activities. Key strategic themes include: tight integration of computation with the human and physical worlds, the extraction of knowledge from massive data sets; and the design of safe, secure, and scalable computing systems. The impact of our work is magnified through interdisciplinary collaborations throughout the School of Engineering; with colleagues in the sciences, arts, and humanities; and with our world-renowned School of Medicine. Our doctoral graduates go on to leadership positions in both academia and industry. The department values both
fundamental and applied research and has a strong tradition of successful technology transfer. Our faculty is known for its collegiality and for providing a supportive environment for new arrivals.

Washington University is a private university with roughly 6,500 full-time undergraduates and 6,500 graduate students. It is nationally known for the exceptional quality of its student body and for its attractive campus, which borders residential neighborhoods and one of the nation's largest urban parks. Many faculty walk or bike to work. St. Louis combines a Midwest cost of living with a vibrant metropolitan area, offering a wealth of cultural and entertainment opportunities.

Appointment is expected at the rank of Assistant Professor; however, exceptionally qualified applicants may be considered for appointments at the Associate or Full Professor level. Applicants must hold a doctorate in Computer Science, Computer Engineering, or a closely related field. Qualified applicants should submit a complete application (cover letter, curriculum vitae, research statement, teaching statement, and contact information for at least three references)


## Faculty Positions

## Department of Computer Science

The Department of Computer Science at Virginia Tech (www.cs.vt.edu) seeks applicants for tenure-track faculty positions in three areas: interactive computing, cyber security, and data analytics. Candidates should have a Ph.D. in Computer Science or related field at the time of appointment, a rank-appropriate record of scholarship and collaboration in computing and interdisciplinary areas, sensitivity to issues of diversity in the campus community, and will be required to teach at the undergraduate and/or graduate levels. The position requires occasional travel to professional conferences and meetings.

## Tenure-track Assistant Professor in Interactive Computing - Blacksburg, VA

Strong candidates from any area related to interactive computing are encouraged to apply. Exceptional candidates at higher ranks will also be considered. Candidates who complement existing strengths in human-computer interaction, graphics, intelligent user interfaces, visualization, visual analytics, human interaction with big data, augmented reality, tangible interfaces, human-robot interaction, game design, creativity support, or computing in the arts and humanities are especially encouraged. Candidates have opportunities for collaboration in the interdisciplinary Center for Human-Computer Interaction (hci.vt.edu) which includes 30 faculty across campus, the Institute for Creativity, Arts, and Technology (icat.vt.edu) housed in the new Moss Center for the Arts, and the Discovery Analytics Center (dac.cs.vt.edu). Applications must be submitted online to http://jobs.vt.edu for posting \#TR0150108. Applicant screening will begin on November 20, 2015 and continue until each position is filled. Inquiries should be directed to Dr. Chris North, Search Committee Chair, north@vt.edu.

## Tenure-track Assistant Professor in Cyber Security - Blacksburg, VA

Candidates with expertise in cyber security, including technologies for and applications in information security, network security, and trustworthy computing are encouraged to apply. Candidates focusing on security issues of cyber-physical systems, embedded systems, sensor networks, robotics, Internet of Things (IoT), etc. are especially encouraged. The candidate will join the CS department and also participate in an interdisciplinary team of five faculty in Advanced Manufacturing and share common space and equipment, leveraging established labs and the Commonwealth Center for Advanced Manufacturing ( www.ccam-va.com/ ), a public-private partnership in Virginia. There is an active group of cyber security faculty in CS and ECE departments collaborating in research as well as graduate and undergraduate education (see: www.cyber.vt.edu/). Applications must be submitted online to http://jobs.vt.edu for posting \#TR0150107. Applicant screening will begin on November 20, 2015 and continue until the position is filled. Inquiries should be directed to Dr. Ali Butt, Search Committee Chair, butta@cs.vt.edu.
Associate/Full Professor in Data Analytics - National Capital Region (NCR) Candidates with research depth and breadth in data analytics, data mining, "big data", or data science are encouraged to apply. Candidates working at the intersection of data analytics and cyber-security and at the intersection of data analytics and urban computing are especially encouraged. Candidates should present a proven ability to initiate and sustain collaborations within computing as well as with application specialists. The department is home to the Discovery Analytics Center (dac.cs.vt.edu) that leads "big data" research on campus. 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. The NCR campus (www.ncr.vt.edu) is located near the Washington D.C./Falls Church area and houses the Virginia Tech Research Center (www.ncr.vt.edu/arlington) in Arlington, VA. Applications must be submitted online to http://jobs.vt.edu for posting \#TR0150106. Applicant screening will begin on November 20, 2015 and continue until the position is filled. Inquiries should be directed to Dr. Naren Ramakrishnan, Search Committee Chair, naren@cs.vt.edu.
The Department of Computer Science has 40 research oriented tenure-track faculty and $\sim 10$ postdocs/research faculty. There are a total 12 NSF/DOE CAREER awardees in the department. Research expenditures for FY2015 were $\$ 412$ thousand per tenure-track faculty member (i.e., a total of $\$ 15.5$ million); total research funding at the beginning of FY2015 was $\$ 43.4$ million. BS, MS, and PhD degrees are offered, with a growing enrollment of over 610 undergraduate majors ( $14 \%$ women) and over $270 \mathrm{PhD} / \mathrm{MS}$ students. In 2010, CS@VT was ranked 5th in the country in recruiting quality of CS undergrads by the Wall Street Journal. The department is in the College of Engineering, whose undergraduate program was ranked 8th and graduate program was ranked 12th among public engineering schools in 2014 by U.S. News \& World Report.
Early applications are encouraged. We welcome applications from women or minorities. Salary for suitably qualified applicants is competitive and commensurate with experience. Selected candidates must pass a criminal background check prior to employment.

## Professional Opportunities

Candidates in application areas including $\mathrm{Al}, \mathrm{HCl}$, and bioinformatics are especially encouraged to apply. New faculty will join eight current members of the department in supporting a thriving and diverse undergraduate computer science major. Candidates should have a commitment to excellence in teaching, an active research
program, and should, by September 2016, possess a Ph.D. in computer science or a closely related discipline. The successful candidate will teach a total of three courses during the academic year, along with associated labs.

The Department of Computer Science offers a congenial working environment with small

Applications received by January 1, 2016 will receive full consideration. Washington University is an AA/EOE and is strongly committed to enhancing the diversity of its faculty; minority and women applicants are especially encouraged. Employment eligibility verification will be required upon employment.

## Wesleyan University

Tenure Track Assistant Professorship
The Department of Mathematics and Computer Science at Wesleyan University invites applications for a tenure track assistant professorship in Computer Science to start in fall 2016.

For description and application procedure see: http://www.wesleyan.edu/mathcs/ employment.html

Contact: Jim Lipton. Email: cssearch@ wesleyan.edu. Tel: 860-834-1636. Fax: 860-685-2571.

Apply: http://academicjobsonline.org/ajo/ jobs/5939

## Williams College

Computer Science Department
Tenure Track Assistant Professor
The Department of Computer Science at Williams College invites applications for an opening at the Assistant Professor level for the fall of 2016. This is a tenure-track position with a three-year initial term. A more senior appointment is possible in exceptional circumstances. This position is open to all areas of computer science.
through AcademicJobsOnline at https:// academicjobsonline.org/ajo/jobs/6156. Other communications may be directed to Prof. Roch Guérin, Department of Computer Science and Engineering, Campus Box 1045, Washington University in St. Louis, One Brookings Drive, St. Louis, M0 63130-4899. -

Tonure Track Assistant professor for the fall of 2016. This is a tenure-track -

## ITITIIIIII Postdoctoral Fellowships at the Institute for Quantum Computing

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

Quantum information science aims to develop transformational technologies that harness the power of quantum mechanics. The Institute for Quantum Computing (IQC) is a world-leading institute for research in quantum information at the University of Waterloo. IQC has 22 faculty members (growing to 33 ) whose research programs span the areas of Applied Mathematics, Chemistry, Combinatorics \& Optimization, Computer Science, Electrical \& Computer Engineering, Physics \& Astronomy, and Pure Mathematics. IQC members have the opportunity to interact with other research groups at the University, such as the Centre for Applied Cryptographic Research and the nearby Perimeter Institute for Theoretical Physics. New infrastructure, including an advanced nanofabrication and metrology centre, support an expansion of experimental research programs at IQC. We are based in the new Mike and Ophelia Lazaridis Quantum-Nano Centre, a state-of-the-art facility at the heart of the University of Waterloo campus, which provides unprecedented opportunities for research, collaboration and innovation.

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

For information on how to join IQC as a postdoctoral fellow, please visit the Available positions link at https://uwaterloo.ca/institute-for-quantum-computing/

The preferred deadline for receiving applications is November 1, 2015, but applications may be considered year-round. Candidates are also encouraged to visit the NSERC website to learn about the prestigious Banting Postdoctoral Fellowship. The deadline for the Banting Fellowship applications is September 23, 2015; qualified candidates should contact a potential supervisor immediately.

All qualified candidates are encouraged to apply; however Canadians and permanent residents will be given priority. The University of Waterloo encourages applications from all qualified individuals, members of visible minorities, native peoples, and persons with disabilities.

## Professional Opportunities

## York University, Toronto, ON, Canada

Department of Electrical Engineering and Computer Science - Lassonde School of Engineering

Assistant Professor

## The Department of Electrical Engineering and Computer Science,

York University, is seeking two outstanding candidates at the rank of Assistant Professor. Priority hiring areas are Computer Vision, Robotics and Big Data although exceptional applicants in other areas will be considered. Successful candidates will have a PhD in Computer Science, or a closely related field, and a research record commensurate with rank. Appointments are to commence on July 1, 2016, subject to budgetary approval. For full position details, see http://www.yorku.ca/acadjobs.

Applicants should complete the on-line process at http://lassonde.yorku.ca/newfacultyl. A complete application includes a cover letter, a detailed CV, statement of contribution to research, teaching and curriculum development, three sample research publications and three reference letters. Complete applications must be received by November 30, 2015.

York University is an Affirmative Action (AA) employer. The AA Program can be found at http://www.yorku.ca/acadjobs or a copy can be obtained by calling the AA office at 416-736-5713. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

## York University, Toronto, ON, Canada

Department of Electrical Engineering and Computer Science - Lassonde School of Engineering

Assistant/Associate Professor

## The Department of Electrical

 Engineering and Computer Science, YorkUniversity, is seeking three outstanding candidates, one at the rank of Associate Professor in the area of Electric Power Engineering and two at the rank of Assistant Professor or Associate Professor in Biomedical Engineering or Micro/ Nanoelectronics, but exceptional applicants from other areas in Electrical Engineering may also be considered. Successful candidates will have a PhD in Electrical Engineering, or a closely related field, and a research record commensurate with rank. Appointments are to commence on July l, 2016, subject to budgetary approval.

For full position details, see http://www. yorku.ca/acadjobs. Applicants should complete the on-line process at http:// lassonde.yorku.ca/new-facultyl. A complete application includes a cover letter indicating the rank for w Department of Electrical Engineering and Computer Science Lassonde School of Engineering hich the candidate wishes to be considered, a detailed CV, statement of contribution to research, teaching and curriculum development, three sample research publications and three reference letters. Complete applications must be received by November 30, 2015.

York University is an Affirmative Action (AA) employer. The AA Program can be found at http://www.yorku.ca/acadjobs or a copy can be obtained by calling the AA office at 416-736-5713. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

## Professional Opportunities

Computing Rese Association

## York University, Toronto, ON, Canada

Department of Electrical Engineering and Computer Science - Lassonde School of Engineering

Canada Research Chair in Computer Vision (Tier I)

The Department of Electrical Engineering and Computer Science, Lassonde School of Engineering, York University invites applications for a tenured position in the area of Computer Vision at the Full Professor level with a Canada Research Chair (CRC) Tier 1 appointment to commence no later than July l, 2016, subject to budgetary approval. The Department offers programs in Computer Engineering, Computer Science, Computer Security Electrical Engineering, Software Engineering and Digital Media.

This position will attract a highly-successful research leader with an established and innovative program of research and teaching in computer vision. The successful candidate will be expected to interact with existing researchers in related areas within the department and to build linkages to other faculty hires related to vision research across the university, including participation and membership in York's internationally recognized Centre for Vision Research. Tier 1 CRC Chairs are researchintensive faculty positions providing the chair holder with an exceptional opportunity to grow their research program through prioritization on research and access to infrastructure funding. The awards have seven-year terms, are renewable and are intended for exceptional established researchers who have acknowledged leadership in their field of research. Information about the CRC program can be found at http://www.chairs.gc.ca.

York University offers a world-class, interdisciplinary academic experience in Toronto, Canada's most multicultural
city. York is a centre of innovation, with a thriving community of almost 60,000 faculty, staff and students.

Applicants should complete the online application process at http://lassonde.yorku. ca/new-faculty with a cover letter, detailed CV, statements of contribution to research and teaching, links to scholarly work and three reference letters. Applications must be received by November 30, 2015.

York University is an Affirmative Action (AA) employer and strongly values diversity, including gender and sexual diversity, within its community. The AA program, which applies to Aboriginal people, visible minorities, people with disabilities, and women, can be found at http://yorku.ca/ acadjobs or by calling the AA office at 416-736-5713. All qualified candidates are encouraged to apply; however, Canadian citizens and Permanent Residents will be given priority.


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    ## COLLEGE OF ENGINEERING

    COMPUTER SCIENCE \& ENGINEERING UNIVERSITY OF MICHIGAN

    The University of Michigan, Ann Arbor<br>Department of Electrical Engineering and Computer Science Computer Science and Engineering Division Faculty Positions

    Applications and nominations are solicited for multiple faculty positions in the Computer Science and Engineering (CSE) Division. Highly qualified candidates from all areas of computer science and computer engineering will be considered for positions at all levels and are encouraged to apply. Candidates whose interests fall in the areas of data analytics and data management will also be considered for affiliation with the Michigan Institute for Data Science (MIDAS), a new multi-disciplinary Institute at the University of Michigan (midas.umich.edu).

    Qualifications include an outstanding academic record, a doctorate or equivalent in computer science or computer engineering, and a strong commitment to teaching and research. The college is especially interested in candidates who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the academic community.

    The University of Michigan is a Non-Discriminatory/Affirmative Action Employer with an Active Dual-Career Assistance Program.
    Applications must be received by January 1, 2016. To apply, please complete the form at: https://www.eecs.umich.edu/eecs/etc/csejobs/

    Electronic applications are strongly preferred, but you may alternatively send resume, teaching statement, research statement and names of three references to:

    Professor Atul Prakash, Chair, CSE Faculty Search
    Department of Electrical Engineering and Computer Science
    University of Michigan
    2260 Hayward Street, Ann Arbor, MI 48109-2121

