

Computing Research News

MARCH 2017 • Vol. 29 / No. 3

Computing Research Association, Uniting Industry, Academia and Government to Advance Computing Research and Change the World.



CRA

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Association

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- CRA Award Winners
- CRA Releases Report on Surge in Computer Science Enrollments
- New CRA Board Members

Photo credit: #WOCinTech Chat



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CRA-W will be accepting applications for the 2017-2018 Collaborative Research Experience for Undergraduates (CREU) program starting April 15. Application Deadline: May 18, 2017.

CCC

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This blog post is the first in a series showcasing CCC's involvement at the 2017 AAAS Annual Meeting. CCC Council Members Beth Mynatt, Shwetak Patel, and Gregory Hager provided a press briefing on diagnosing and treating disease with smartphones.

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The CCC AI and Robotics Task Force recently released a white paper for the community.

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Trump Issues New Travel Ban; CRA Reiterates Concerns

By Peter Harsha, CRA Director of Government Affairs

On March 6, President Trump issued a new executive order designed to suspend immigration to the U.S. from six countries considered either state-sponsors of terrorism or homes to terrorist activities, for 90 days beginning March 16, 2017. Like the President's previous order, the new order halts visa issuance to nationals of Iran, Libya, Somalia, Sudan, Syria, and Yemen (Iraq is not included in the revised order), and it exempts nationals from those countries who already have approved visas or who have permanent residence status in the U.S.

CRA issued a statement¹ opposing the President's first order on January 27, 2017, arguing that the order would create uncertainty and hardship for many students and researchers already studying and working at U.S. institutions. We also argued that the ban would likely discourage foreign-born researchers from bringing their talents to the U.S. in the future, significantly hurting our national competitiveness.

While we retain these concerns about the new order, certain exceptions could alleviate the immediate impacts on current researchers and students. In addition to exempting travelers who already have visas permanent residency status, the order adds exceptions to be considered under a case-by-case waiver system. There are nine such exceptions, but the first four seem most relevant to the computing research community:

- (i) the foreign national has previously been admitted to the United States for a continuous period of work, study, or other long-term activity, is outside the United States on the effective date of this order, seeks to reenter the United States to resume that activity, and the denial of reentry during the suspension period would impair that activity;
- (ii) the foreign national has previously established significant contacts with the United States but is

outside the United States on the effective date of this order for work, study, or other lawful activity;

- (iii) the foreign national seeks to enter the United States for significant business or professional obligations and the denial of entry during the suspension period would impair those obligations;
- (iv) the foreign national seeks to enter the United States to visit or reside with a close family member (e.g., a spouse, child, or parent) who is a United States citizen, lawful permanent resident, or alien lawfully admitted on a valid nonimmigrant visa, and the denial of entry during the suspension period would cause undue hardship;

In particular, exception (iii) appears to apply to new incoming students, visiting faculty or participants in academic or professional conferences, although only on a case-by-case basis. If so, these exceptions would help mitigate negative effects on our community, although clarification is clearly needed. We hope the administration will provide that clarification soon.

Even with these possible exceptions, the ban sends a message that will discourage talented researchers and students from around the world from traveling to the U.S. As noted in our original statement, the U.S. enjoys its leadership role in science and technology in part because the world's best and brightest bring their talents here to be a part of U.S. scholarship and innovation. Policies that discourage the world's best science and engineering talent from coming to the U.S. threaten our leadership in science and engineering. We urge the Administration to clarify how the exceptions policy will be implemented and to ensure that the order is truly temporary.

¹ <http://cra.org/govaffairs/blog/2017/01/cra-expresses-concern-new-executive-order-suspending-visas/>

2017 CRA Distinguished Service and A. Nico Habermann Awardees Announced

The CRA board of directors is pleased to announce its selections for the 2017 CRA Awards.

Tom Kalil - Distinguished Service Award Winner

*Former Deputy Director for Technology
and Innovation, White House Office of
Science and Technology Policy*



Tom Kalil was selected as the 2017 recipient of the CRA Distinguished Service Award for his long history of leading national initiatives that have had transformational impact on the computing research community and as an exemplary spokesperson, advocate, and collaborator for the computing research community.

Tom has served as the National Economic Council's "point person" on a wide range of science, technology and

innovation issues, including the National Nanotechnology Initiative, the Next Generation Internet, liberalization of computer export controls, and education technology. At the White House Office of Science and Technology Policy, Tom supervised a team of 19 policy entrepreneurs working science, technology and innovation policy issues such as President Obama's Strategy for American Innovation, grand challenges, incentive prizes, STEM education, the maker movement, high-growth entrepreneurship, Lab-to-Market, space policy, innovation for global development, R&D funding, insights from the social and behavioral science, and national S&T initiatives in areas such as advanced manufacturing, big data, cyber-physical systems, nanotechnology, robotics, software-defined networks, and synthetic biology.

Carol Frieze - A. Nico Habermann Award Winner

*Director of SCS4ALL and Women@SCS,
Carnegie Mellon University (CMU)*



Carol Frieze was selected as the recipient of the 2017 A. Nico Habermann Award Winner for devoting nearly two decades to promoting diversity and inclusiveness in computing. She has worked with and supported a wide variety of students including women, people with disabilities, and various age groups ranging from K-12 to graduate students.

Carol has contributed valuable research towards understanding the challenges diverse populations face, and

in many ways, her research has challenged the existing narrative in the field. And it's had impact: 48% of computer science majors in the 2016 incoming freshman class at CMU are women, far above the national average. Her work towards improving diversity and inclusion in computing goes well beyond advocacy. Carol has shared her knowledge with others by developing teacher resources, books, and course materials. She also participates in conferences and other programs including CRA-Women's Collaborative Research Experiences for Undergraduates.

Carol's nomination letters attest that she played an important role in creating an inclusive environment at CMU, and her research can help others learn best practices and insights to help spread this type of progress beyond her home institution to the entire community.

2017 CRA Board Election Results

CRA members have elected two new members to its board of directors: Carla Brodley and Kim Hazelwood. Brodley has previously served on the CRA board and is a CRA-W emeritus member. Hazelwood received the CRA-W Borg Early Career Award in 2009 and has participated in several CRA-W activities. Current board members Nancy Amato, Susan Davidson, Dan Grossman, Brent Hailpern, Susanne Hambrusch, Barbara Ryder and Ellen Zegura were re-elected to the CRA board. Their terms run from July 1, 2017 through June 30, 2020. CRA would like to thank everyone who agreed to run for a position on the board this year. Also beginning July 1, Brian Noble will be the USENIX representative to the CRA board replacing Margo Seltzer. Retiring from the board as of June 30, 2017 are David Culler, Mary Czerwinski and Seltzer. CRA thanks them all for contributions during their service on the board.



Carla E. Brodley

Carla E. Brodley

Carla E. Brodley is the dean of the College of Computer and Information Science at Northeastern University. Prior to joining Northeastern, she was a professor of the Department of Computer Science and the Clinical and Translational Science Institute at Tufts University (2004-2014). Before joining Tufts she was on the faculty of the School of Electrical Engineering at Purdue University (1994-2004).

A Fellow of the ACM and the Association for the Advancement of Artificial Intelligence (AAAI), Brodley's interdisciplinary machine learning research led to advances not only in computer and information science, but in many other areas including remote sensing, neuroscience, digital libraries, astrophysics, content-based image retrieval of medical images, computational biology, chemistry, evidence-based medicine, and predictive medicine.

Brodley's numerous leadership positions in computer science as well as her chosen research fields of machine learning and data mining include serving as program co-chair of ICML, co-chair of AAAI, and serving as associate editor of the Journal of AI Research, and the Journal of Machine Learning Research. She has previously served on the Defense Science Study Group, the CRA board of directors, the board of the International Machine Learning Society, the AAAI Council, and DARPA's Information Science and Technology (ISAT) board. She is currently serving as an executive committee member of the Northeast Big Data Hub, and as a member-at-large of the section on Information, Computing, and Communication of AAAS.

Kim Hazelwood



Kim Hazelwood

Kim Hazelwood is a senior engineering manager in Facebook's Infrastructure division, where she leads a performance analysis team that drives the data center server and storage roadmap. Her research interests include computer architecture, performance analysis, and binary translation tools. Prior to Facebook, Hazelwood held positions including a tenured associate professor at the University of Virginia, software engineer at Google, and director of systems research at Yahoo Labs. She received a Ph.D. in computer science from Harvard University in 2004, and is the recipient of an NSF CAREER Award, the Anita Borg Early Career Award, the MIT Technology Review Top 35 Innovators under 35 Award, and the ACM SIGPLAN 10-Year Test of Time Award. She has authored over 50 conference papers and one book.



Brian Noble

Brian Noble

Brian Noble is a professor of electrical engineering and computer science at the University of Michigan, and is currently serving as the associate dean for undergraduate education for the College of Engineering. His research interests include mobile computing, distributed systems, security, file systems, engineering education, and learning analytics. He has appeared on more than 60 peer-reviewed papers. His past service includes eight years on the USENIX board of directors, as treasurer from 2010 through 2014, and president from 2014 through 2016.

CRA Board Officers Re-Elected

At the CRA board meeting on February 28, the CRA board of directors voted to re-elect its current board officers to serve new two-year terms beginning July 1, 2017. The board officers include: Susan Davidson (chair), Susanne Hambrusch (vice chair), Ron Brachman (treasurer), and Greg Morrisett (secretary).



CRA Releases Report on Surge in Computer Science Enrollments

By CRA Enrollment Committee Institutional Subgroup

Generation CS: Computer Science Undergraduate Enrollments Surge Since 2006

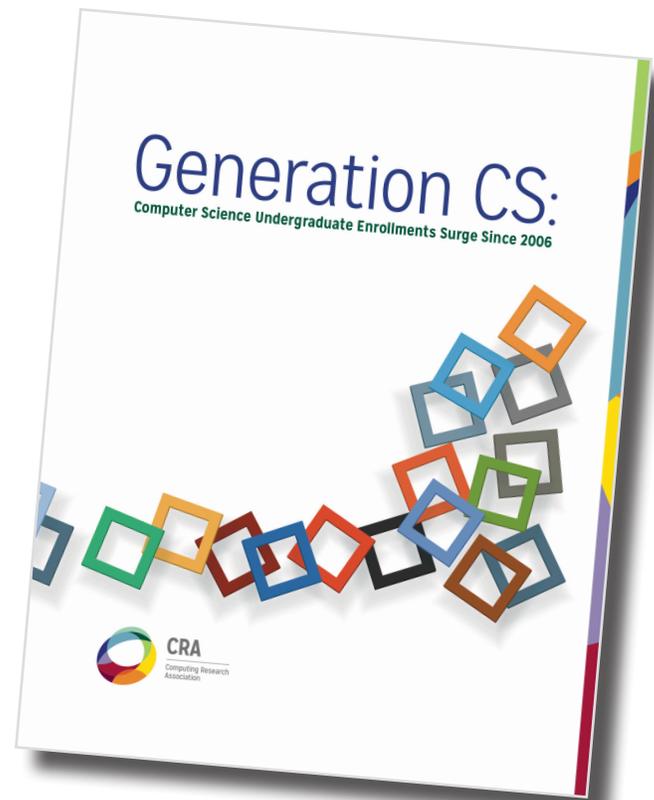
Across the United States and Canada, universities and colleges are facing a significant increase in enrollment in both undergraduate computer science (CS) courses and programs. The current enrollment surge has exceeded previous CS booms, and there is a general sense that the current growth in enrollment is substantially different than that of the mid-1980s and late 1990s. To investigate the current situation, the Computing Research Association (CRA) produced an enrollment survey to measure, assess, and better understand enrollment trends and their impact on computer science units, diversity, and more. The survey was administered in parallel with CRA's annual Taulbee Survey of doctoral-granting units and ACM's annual NDC Study of non-doctoral granting units in computing. Analysis of the survey is presented in a new report, "*Generation CS: CS Enrollments Surge Since 2006*," available for download and online at: <http://cra.org/data/generation-cs/>.

► The *Generation CS* report analyzes the survey results with respect to majors, nonmajors, diversity, impact on academic units, and units' actions in response to the surge.

There has been phenomenal growth of computer science majors in the United States and Canada since 2006 (e.g., the number of CS majors enrolled at doctoral-granting units has more than tripled since 2006); furthermore, the data indicates that continued growth is likely.

► Units are seeing remarkable growth of nonmajors taking computer science courses and an increase in computer science minors.

► The impact of the current student enrollment surge on diversity is a concern of many members of the computer science community. While more data is



needed, there appears to be some good news regarding both the numbers and percentages of women and underrepresented minority students involved in computer science as majors and as students in CS courses; unfortunately not every unit that responded to the survey is experiencing this growth.

► The report covers the impact of the current enrollment surge on the unit (e.g., challenges with space and instructional staff), as well as how units are responding to the current surge (e.g., increasing section sizes or number of sections taught).

► A section on degree completions in computer science from the Integrated Postsecondary Education Data System (IPEDS) data is included, which helps advance understanding of the data collected in the CRA Enrollment

Survey and provides more information about the current surge in computer science at non-doctoral granting units.

The enrollment growth in the mid-1980s is sometimes referred to as the “PC boom” and the enrollment growth in the late 1990s is sometimes referred to as the “dot-com boom.” CRA Conference at Snowbird attendees suggested that we are currently in “Generation CS”, where CS enrollment across the nation is surging due to the pervasiveness of computing in today’s society. Computing plays a significant role in daily life, and students with interests in a variety of fields are beginning to understand that training in computer science is vital.

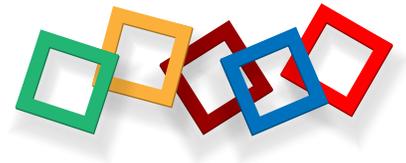
To encourage a conversation about the content of the report, we have enabled a comments section located at the bottom of the main report webpage at: <http://cra.org/data/generation-cs/>.

CRA Enrollment Committee

In early 2015, CRA created a committee to investigate increasing enrollments. As part of this effort, an institutional subgroup of this committee developed a CRA Enrollment Survey and produced this report. The subgroup includes:

- ▶ Tracy Camp, Chair, Colorado School of Mines
- ▶ W. Richards Adrion, University of Massachusetts – Amherst
- ▶ Betsy Bizot, Computing Research Association
- ▶ Susan Davidson, University of Pennsylvania
- ▶ Mary Hall, University of Utah
- ▶ Susanne Hambrusch, Purdue University
- ▶ Ellen Walker, Hiram College
- ▶ Stuart Zweben, The Ohio State University

Main Contact: Tracy Camp, Colorado School of Mines
(tcamp@mines.edu)



Annual CRA Computing Leadership Summit

On Monday, February 27, in Washington, D.C., the Computing Research Association hosted its annual Computing Leadership Summit for the senior leadership of [CRA member societies](#) (Association for the Advancement of Artificial Intelligence, Association for Computing Machinery, CS-Can/Info-Can, IEEE Computer Society, Society for Industrial and Applied Mathematics, and USENIX Association) and the [CSTB](#).

Several engaging sessions provided valuable information on current issues important to the organizations.

- ▶ CRA Vice Chair Susanne Hambrusch shared details from the recently released CRA report on undergraduate enrollment: [Generation CS: CS Enrollments Surge Since 2006](#), which reports the results of the CRA Enrollments survey with respect to majors, non-majors, diversity, impact on academic units, and units’ actions in response to the surge. Hambrusch is co-chair of the National Academy of Sciences committee on the Growth of CS Undergraduate Enrollments, which will also publish a report later this year.
- ▶ CCC Chair Beth Mynatt gave an overview of the structure and processes of CCC and highlighted some recent activities including work done by its various [task forces](#). CCC now

includes members of the community who are not CCC council members on these working groups.

- ▶ Eric Horvitz from Microsoft Research shared information on the formation and early phases of the multi-stakeholder organization, [Partnership on AI to Benefit People and Society](#). The organization will work to advance public understanding of AI and formulate best practices on the challenges and opportunities within the field.
- ▶ During the society round table, each organization discussed current projects and new initiatives, and identified opportunities for collaboration and support.

New to the leadership summit this year, sessions were held jointly with the CRA board meeting.

- ▶ Jim Kurose, Assistant Director of the CISE Directorate at NSF, gave an update on current and new initiatives.
- ▶ CRA Director of Government Affairs Peter Harsha discussed the current environment for science policy in DC, including the difficulties the community is likely to face arguing for robust science investments in the unresolved FY17 and FY18 federal budgets.

Research Highlight: CRA Board Member Susanne Hambrusch

By Susanne Hambrusch, Purdue University



The main focus of my recent research has been computer science education and the role computer science can play in defining and advancing its own education research. Learning computational principles and learning to code is hard, and teaching these subjects is even harder. For most computer science topics, we know very little about how different learners' best learn; how to effectively teach the material to audiences with different abilities, backgrounds, and goals; and how to reliably assess learning. Today, research on learning and teaching computer science is relevant in many contexts.

As computer science evolves into a recognized subject in K-12 curricula, we not only need to know how students learn, but we also need to know how to educate and prepare their teachers. The National Science Foundation's CS10K effort has been an ambitious project with a significant impact on schools and computer science education research. Online learning opportunities, including MOOCs, Khan Academy, Stack Overflow, and Code.org, help many students learn to code and advance their computing knowledge. Online forums can provide data on clicks, completions, progress, and more. How can this data be used to advance how users learn? How can the background and the goals of the learner be integrated into providing personalized and more meaningful help that advances and enhances learning? To answer questions like this, we need to apply knowledge from a range of areas. Computer science education research is an interdisciplinary field that combines learning sciences and areas of computer science, including software engineering, programming languages, machine learning, human-computer interaction, and natural language processing. Techniques, approaches, and tools developed by researchers in these areas have the potential

to create new knowledge about learning and teaching computer science. In turn, this new knowledge has the potential to drive new research in computer science.

In a current project, <http://www.pd4cs.org/>, we designed an evidence-based professional development (PD) online program to improve teachers' knowledge to teach computer science, in particular the new CS AP Principles course. Professional development for teachers is increasingly online-based and education research has shown that online and face-to-face PD have similar learning outcomes for teachers and their students. The PD material was developed along three main guidelines: 1) teaching methodologies and pedagogies grounded in computer science and educational methods, 2) knowledge of the challenges teachers face when teaching computer science with limited domain knowledge background, and 3) responding to misconceptions students and teachers encounter in beginning computing courses. We conducted a two-year, multiphase exploratory design-based study involving two teacher cohorts. The goal was to understand what topics and type of material teachers found most helpful, how general teaching experience and previous CS knowledge influence the PD material a teacher uses, how teachers use the material during the school year, and what incentives encourage teachers to work through PD material. The results of the study provide insight into the challenges effective PD material needs to address. The results show that:

- ▶ Experienced teachers with CS knowledge believe they do not need much PD. They want PD that matches their background and fills in learning gaps.
- ▶ Novice teachers with a CS background do need a little PD about content knowledge, but also need PD on how to teach CS.

- ▶ Teachers with significant teaching experience in other subjects—but little CS knowledge—are more likely to use PD material that addresses the misconceptions students face.
- ▶ All teachers are significantly more likely to use PD material when it clearly matches their course curriculum.
- ▶ Receiving payment for providing feedback and completing surveys provides only limited incentive.

The results raise a number of questions on how to best provide PD. The new CS AP Principles course currently has five approved providers, each with its own curriculum. While this flexibility is a strength, it makes teacher training and development challenging. Computing education, in combination with computer science, will be crucial for developing personalized PD systems that match not only the curriculum, but what individual teachers actually need and will use.

About the Author

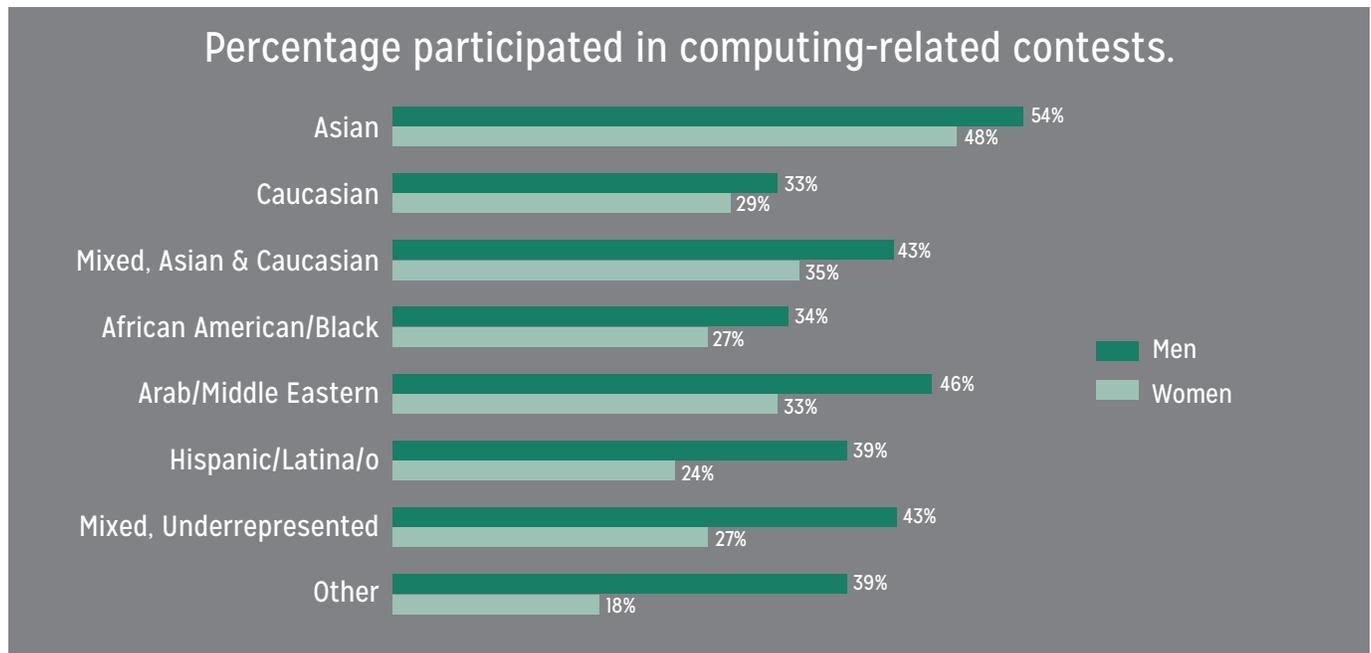
Susanne Hambrusch is a professor of computer science at Purdue University. She holds a Diplom Ingenieur in computer science from the Technical University of Vienna, Austria, and a Ph.D. in computer science from Penn State University. Hambrusch served as the head of the computer science department at Purdue from 2002 to 2007. From 2010 to 2013, she was the director of the Division of Computing and Communication Foundations in the CISE directorate at the National Science Foundation, where she was involved in the development of several new crosscutting programs including Cyber-Enabled Sustainability Science and Engineering (CyberSEES), eXploiting Parallelism and Scalability (XPS), Algorithms in the Field (AiF), NSF/Intel Partnership programs, and the United States-Israel Collaboration in Computer Science. Her research interests are in the analysis of algorithms, query and data management, computer science education, and parallel and distributed computation. She has recently led a number of projects in computer science education, computational thinking, and computer science teacher preparation.

Hambrusch currently serves on the CRA board of directors, where she is the vice chair. She is a cochair of CRA's Education committee (CRA-E) and a board member of CRA's Committee on the Status of Women in Computing Research (CRA-W). She is also a member of both the Taulbee Survey Committee and CRA's Enrollment Committee. Jointly with Jared Cohon (Carnegie Mellon University), she chairs the National Academies of Sciences, Engineering and Medicine's Committee on Growth of Computer Science Undergraduate Enrollments.



Participation Rate in Computing-Related Contests Highest Among Men, and Among Asian Students

By Jane Stout, CERP director, CERP research scientist



During the fall 2016 academic semester, CERP collected data from 5,208 undergraduate students currently or previously enrolled in computing courses at a [sample of U.S. colleges and universities](#). Students were asked whether they had participated in any computing-related contests (e.g., hackathons or robotics competitions) during the past year. Some believe this type of activity can help resumes stand out and makes applicants competitive on the job market (e.g., Harnett, 2016; Mone, 2016). We found men were more likely than women, and Asian students were more likely than their peers, to report having participated in computing-related contests. To help promote a level applicant playing field, contest organizers should consider modifying recruitment strategies to target groups who are less likely to participate, such as women.

Notes. “Mixed, Asian & Caucasian” students are those who identified as both Asian and Caucasian. “Mixed, Underrepresented” students are those who identified with more than one ethnic group, at least one of which was the following: Arab/Middle Eastern, African American/Black, Hispanic/Latina/o, Native American, or Pacific Islander. “Other” students are those who identified, as Native American, Pacific Islander, or more than one ethnic group that were not specified. Sample sizes for each student group are as follows: Asian men = 933, women = 667; Caucasian men = 1,860 women = 686; Mixed Asian & Caucasian men = 119, women = 77; African American/Black men = 112, women = 85; Arab/Middle Eastern men = 39, women = 18; Hispanic/Latina/o men = 192, women = 79; Mixed, Underrepresented men = 193, women = 92; and Other men = 39, women = 17.

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Harnett, S. (2016). Hacking competitions burnish cybersecurity resume. Retrieved from: <http://www.marketplace.org/2016/01/25/world/hacking-competitions-burnish-cybersecurity-resume>

Mone, G. (2016). Bias in technology. *Communications of the ACM*, 60, 19-20.

This infographic is presented 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/>.



Expanding the Pipeline:

Interview with Sandhya Dwarkadas

By Amanda Stent, Bloomberg



Sandhya Dwarkadas is the Albert Arendt Hopeman Professor of Engineering and Chair of the Computer Science Department at the University of Rochester, with a secondary appointment in Electrical and Computer Engineering. She received her Bachelor's from the Indian Institute of Technology, Madras, India, and her M.S. and Ph.D. from Rice University. Her research lies at the interface of hardware and software with a particular focus on concurrency. She has authored more than 100 refereed papers that cross areas within systems. Dwarkadas has made contributions to hardware- and software-based shared memory implementations and system reconfigurability, and has 12 U.S. patents. She is a CRA-W board member, and is currently on the editorial board of CACM Research Highlights and IEEE Micro.

Q: When you started in your field, parallel processing was somewhat esoteric. Now there are many different approaches and parallel processing is widely used. How do you ride that wave of change? What are some key challenges now?

A: Working as I do at the boundary of hardware and software, the continuously changing landscape in terms of underlying technologies and their capabilities, and the demands of new and emerging application domains, provide a steady supply of challenging research questions. Properties such as time, energy, accuracy, reliability, and persistence require re-architecting to adapt to technology changes. In large part, my research focuses on coordination, communication, and sharing—from the design of scalable (in terms of data size and core count) coherence protocols at the architecture level, to the use of hardware performance counters for resource allocation at the operating system level, and the design of scalable runtime systems that allow parallel applications to scale to larger core counts and data sizes.

There is a revival of parallel and distributed computing at an unprecedented scale. I believe many of the challenges will require an increasingly interdisciplinary approach—knowledge of both application domains and underlying technology. I strive to keep abreast of both via collaborations



Dwarkadas bonding with a colleague during a culinary lesson at the 2016 CS department retreat.

with users of parallel computing (e.g., biologists, physicists, biostatisticians, radiologists, and algorithmicists) and via collaborations with industry (DEC/ Compaq, IBM, Intel, Qualcomm, and Huawei).

Q: What appeals to you about a career in academia?

A: The multiple jobs involved (teaching, research, grant writing, and professional and university service) and the flexibility to work on research topics of my choice. Most importantly, the opportunity to work with talented graduate students, each of whom contributes unique strengths and enables me to explore new areas based on their specific interests.

Q: You recently became chair of the computer science department at Rochester. What are some of the most exciting opportunities you have in this new role? What are some of the challenges?

A: I have been chair of the department for the last two years. This is a period of growth for us, and a great opportunity for me as chair to help shape that growth with the help of the rest of the faculty. I just recently held a department retreat where our brainstorming produced a long list of action items and much material for our strategic plan. Burgeoning enrollments have certainly been a challenge, and it sometimes seems like a game of catch-up. We have initiated new interdisciplinary majors, including computational linguistics and computational biology. The university's data science initiative has provided the opportunity and impetus to further our reach. We have strong ties with the brain and cognitive science and the electrical and computer engineering departments, as well as the medical

center. We will move into a new building, along with the Goergen Institute for Data Science, within the next year. All in all, it's an exciting time to be chair.

Q: What advice do you have for Ph.D. students? For new faculty members?

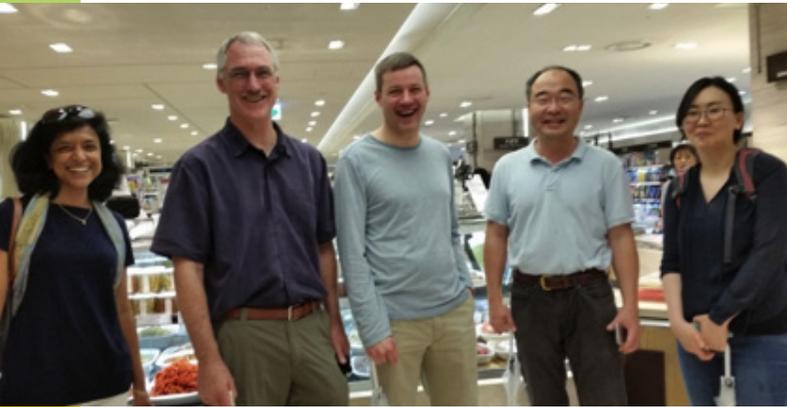
A: To graduate students, my advice would be to seize the opportunity to learn as much as possible about areas outside of your core research in order to be ready to address challenges at the boundaries of your discipline. In other words, get a perspective on the forest rather than focusing only on a single tree (your research).



The 2016 CRA-W Grad Cohort Co-Chairs (Lori Clarke, Dwarkadas, Ayanna Howard) with CRA's Erik Russell.



Dwarkadas engaging with graduate students on the topic of technical presentation skills.



Dwarkadas and colleagues at ISCA 2016.

To new faculty members, I would recommend getting to know your environment, so you can draw from and complement its research strengths, if possible. This would be one excellent way to maximize the impact of your research.

Q: How have you been involved in CRA-W? What has this involvement meant to you?

A: I have always admired CRA-W's efforts to support women in research. As a graduate student, I attended one of the first CRA academic career workshops organized for Ph.D. students.

Subsequently, I've been a panelist or speaker at several CRA-W mentoring workshops. I have been on the CRA-W board since 2010. I am currently co-chair of the Grad Cohort Workshop and I also chair the BECA (Borg Early Career Award) committee.

Running the Grad Cohort Workshop has been particularly rewarding. While much of the advice dispensed is valuable to any graduate student, given the still small percentages of women in Ph.D. programs in computing, it is imperative to provide them with the support that might help retain them in the research pipeline. The Grad Cohort Workshop gives the women the ability not only to interact with senior female mentors, but also to form a peer network amongst themselves and share their experiences.

Q: What other activities have you been involved in that support women in computing?

A: Until very recently, the ratio of women to men in our undergraduate program was very small. As a new chair of the department, I decided to take action and responded to Maria Klawe's call to action to increase diversity in the undergraduate population that she issued at the CRA Conference at Snowbird in 2014. The University of Rochester is one of 15 universities

participating in the BRAID (Building Recruiting and Inclusion for Diversity) initiative, which is funded by Facebook, Google, Intel, and Microsoft, and administered by the Anita Borg Institute. Each of these 15 universities has committed to conscious efforts to broaden participation via curricular innovation, building community, outreach to schools, and interdisciplinary programs. Sharing experiences among the group has been very valuable, and at Rochester we have already seen significant outcomes through our efforts. From 2010 to 2016 the percentage of women in our undergraduate population has gone from 5% to 30%.

Q: What do you enjoy doing when you aren't working?

A: I have a range of things I enjoy, from traveling to reading, watching movies, doing yoga, playing badminton, and partner dancing (salsa and rueda de casino in particular right now). I have even tried my hand at pottery. I garden, cook, try to fix things around the house, and fuss about interior decoration. Most of all, I enjoy spending time with family and friends. They keep me grounded and give me that sense of belonging to the circle of life.

Q: Is there anyone, in particular, who has inspired you?

A: My mother, who was a big part of my life until very recently (she passed away in February). She was a teacher in her younger days. In her later years, she was severely physically debilitated by arthritis, which slowly ate away at her independence. I salute her indomitable courage in the face of all odds and her energy and will to participate and contribute to life where others might have given up a long time ago.

These are attributes I aspire to.



Dwarkadas with her mother during the latter's 80th birthday celebration.

Collaborative Research Experience for Undergraduates

CRA-W will be accepting applications for the 2017-2018 Collaborative Research Experience for Undergraduates (CREU) program starting April 15.

Application Deadline: May 18, 2017

CREU is an undergraduate research program that provides research stipends to teams of students working on research projects under the guidance of a mentor at their home institutions. Students supported by CREU collaborate with each other and with their mentors during the academic year and, in some cases, the following summer. Students are strongly encouraged to present their CREU research at national or regional conferences. The program provides travel funds to support such participation and past CREU participants have found such activities to be extremely valuable.

Read firsthand about the CREU experience and the opportunities this program provides both during and after the research experience.

The objective of the CREU program is to increase the number of women and underrepresented groups entering graduate studies in the fields of computer science and computer engineering by exposing them to the joy and potential of research.

CREU is supported by the National Science Foundation and partners with other organizations committed to broadening participation in computing to administer their REU programs. The NSF funded Institute for African-American Mentoring in Computer Sciences (iAAMCS) is a current partner, and the Coalition to Diversify Computing (CDC) was previously a program partner.

For more information, please visit the CREU website: <http://cra.org/cra-w/creu/>



CREU Team from UMBC Wins Best Student Paper

CCC @ AAAS 2017 - Health in Your Pocket: Diagnosing and Treating Disease with Smartphones

By Ann Drobnis, CCC director



Shwetak Patel, Elizabeth Mynatt, and Gregory Hager

Contributions to this post were made by Gregory Hager, Member of the [CCC Healthcare task force](#) and Director of the [Malone Center for Engineering in Healthcare](#) at Johns Hopkins University.

The [Annual Meeting of the American Association for the Advancement of Science \(AAAS\)](#) is an opportunity for scientists across the spectrum to come together and communicate the importance and excitement of science to the general public. This year's meeting, which took place in Boston on February 16-20, 2017, had the theme of *Serving Science Through Science Policy*, a natural fit for the [Computing Community Consortium \(CCC\)](#)^[1]. This blog post is the first in a series discussing the panels and presentations highlighting the contributions of computing to science and society.

The focus of this post is healthcare. Building on a recent workshop on [Discovery and Innovation in Smart and Pervasive Health](#), three CCC members, Elizabeth Mynatt, Shwetak Patel, and Gregory Hager were asked to provide a Press Briefing entitled "*Health in Your Pocket: Diagnosing and Treating Disease with Smartphones*," one of the topics from the workshop.

Patel kicked off the briefing with a discussion of health-related SmartPhone applications that his lab at the [University of Washington](#) has developed with his clinical collaborators, some of which are currently in process for FDA clearance. Among these are applications to do spirometry, osteoporosis screening, and to determine hemoglobin concentrations for managing chronic diseases and screening. Mynatt discussed the work that her lab is doing on [mobile device applications that can augment the care of a chronically ill patient](#) and described how it relates to the care of breast cancer patients working with a patient navigator. Hager concluded the presentation with an overview of the mobile health space, noting that it is "a bit of a wild west" as [surveys of the more than 165,000 health apps available in the marketplace show that relatively few can be directly tied to scientific studies supporting their construction](#).

Representatives from the press had a variety of questions, ranging from inquiring about payment for these apps if they are used for diagnostic purposes (like SpiroSmart) to the problems of putting more medical information in the hands of people without connecting them to a provider, particularly

in developing countries where there is a huge shortage of healthcare workers.

The CCC has a task force on Healthcare which follows these and other issues. Additional resources, including the media coverage from the AAAS Meeting, can be found on the [Healthcare task force website](#).

Future CCC @ AAAS 2017 posts will look at a panel discussion on [What Happens When Everyday Objects Become Internet Devices: A Science Policy Agenda](#), a series of FlashTalks on [The Technology of the Future](#), and a panel on [Assistive and Rehabilitative Robots](#).

[1] The mission of Computing Research Association's Computing Community Consortium (CCC) is to catalyze the computing research community and enable the pursuit of innovative, high-impact research. CCC conducts activities that strengthens the research community, articulates compelling research visions, and aligns those visions with pressing national and global challenges. The CCC communicates the importance of those visions to policymakers, government and industry stakeholders, the public, and the research community itself.

CCC White Paper - Safety, Security, and Privacy Threats Posed by Accelerating Trends in the Internet of Things

By Ben Zorn, Microsoft Research

The Internet of Things (IoT) is already transforming industries, cities, and homes. The economic value of this transformation across all industries is estimated to be trillions of dollars and the societal impact on energy efficiency, health, and productivity are enormous. Alongside potential benefits of interconnected smart devices comes increased risk and potential for abuse when sensing and intelligence is embedded into every device. A major challenge of having a proliferation of IoT devices is the increased complexity that is required to operate them safely and securely. This increased complexity creates new safety, security, privacy, and usability challenges far beyond the known challenges securing a single device.

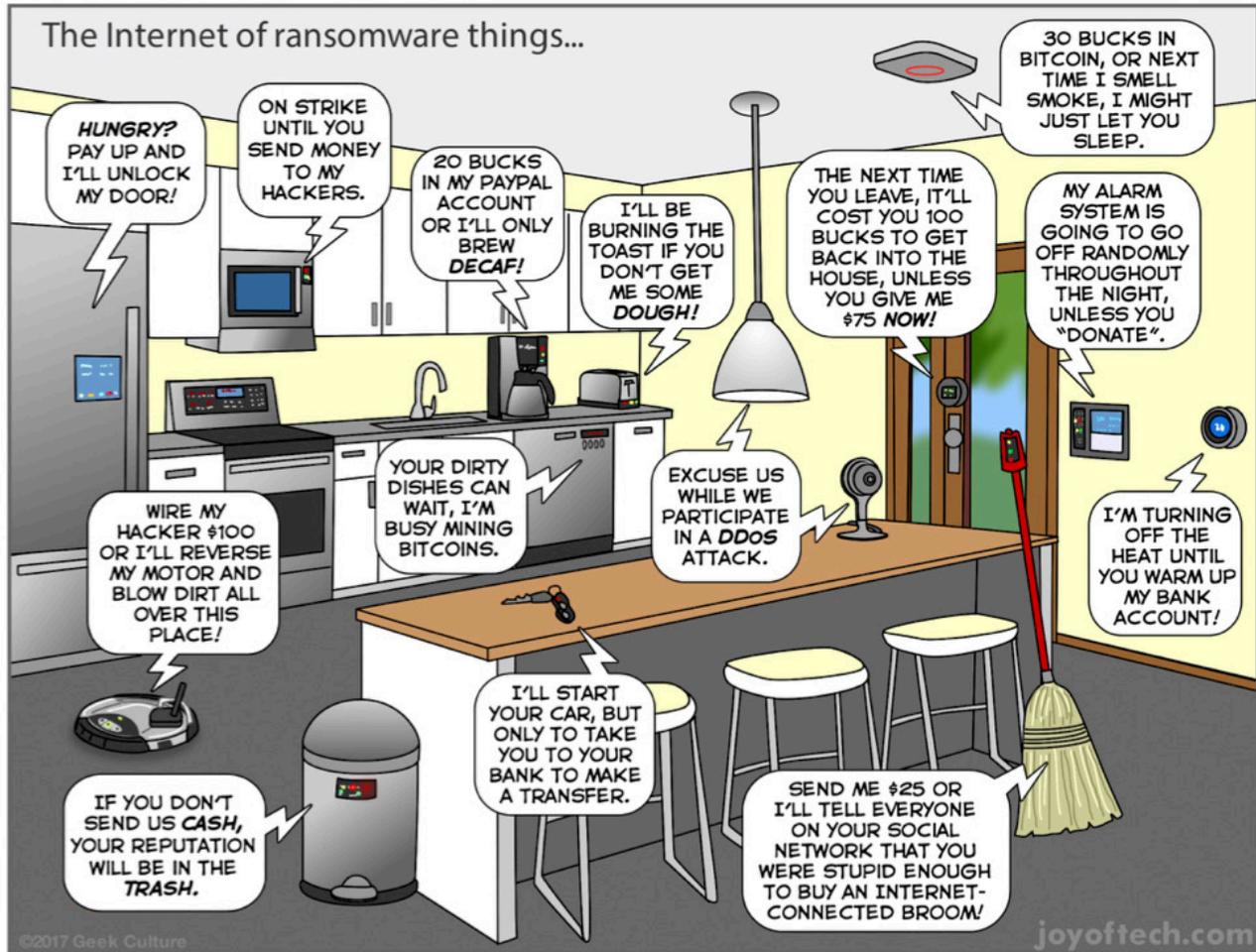
The [Computing Community Consortium \(CCC\) Computing in the Physical World Task Force](#) recently published a white paper on [Safety, Security, and Privacy Threats Posed by Accelerating Trends in the Internet of Things](#). The co-authors include [Kevin Fu](#) from [University of Michigan](#), [Tadayoshi Kohno](#) from [University of Washington](#), [Daniel Lopresti](#) from [Lehigh University](#), [Elizabeth Mynatt](#) from [Georgia Tech](#), [Klara Nahrstedt](#) from [University of Illinois at Urbana-Champaign](#), [Shwetak Patel](#) from [University of Washington](#), [Debra](#)

[Richardson](#) from [University of California-Irvine](#), and [Ben Zorn](#) from [Microsoft Research](#).

In the report, the authors highlight some of the new challenges created by smart devices and collections of devices and they argue that issues related to security, physical safety, privacy, and usability are tightly interconnected. Research is needed in helping manage complexity and that connects usability concerns with safety, security, and privacy. More comprehensive safety and security standards for individual devices based on existing technology are needed. Likewise, research that determines the best way for individuals, small businesses, and small organizations to confidently manage collections of devices must guide the future deployments of such systems.

Their broad conclusions include:

- Problems of security, privacy and usability cannot be considered separately – they need to be considered together and federal investments should prioritize solutions that focus on augmenting a person's ability to understand and manage complex systems.



The Internet cartoon Joy of Tech's interpretation of the future of IoT

- ▶ The potential for risks to physical safety requires that new minimum levels of cybersecurity assurance be defined and required for widespread device deployment.
- ▶ Milestones must be established for determining the level of analysis and testing required for smart device products (akin to EPA emission requirements). Specifically improve:
 - ▶ The transparency of the software the devices are running for inspection and analysis
 - ▶ The level of testing and analysis required for certification
 - ▶ The level of hardening of the critical components (crypto, secure communication, secure update channels)

Technology is rapidly evolving and having enormous impact on society with sensing and intelligence starting to be embedded in every device. The advances bring significant

benefits to people, companies, and organizations, but until the technology is better understood, there are also associated risks. Changes are happening with such speed that the level of risk and uncertainty remains high. Investment in research that helps mitigate potential problems should be prioritized because short-term improvements can have long-term benefits. The potential benefit to human lives, our national interests, and the economy is sufficient to warrant substantial research investments in making future IoT technology as robust as possible.

See the [full report to learn more](#) and the [CCC Computing in the Physical World Task Force](#) page to see other IoT white papers that have been published.



Nanotechnology-Inspired Information Processing Systems Workshop Report

By Khari Douglas, CCC program associate

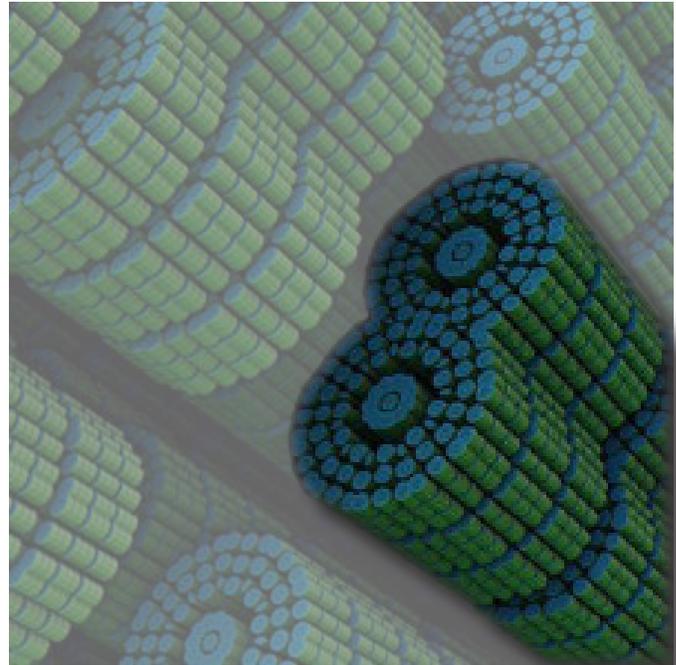
The organizing committee for the Computing Community Consortium (CCC) sponsored Nanotechnology-Inspired Information Processing Systems has released their workshop report.

The workshop, held in September 2016, brought together over 40 leading researchers from the areas of computing, neuroscience, systems, architecture, integrated circuits, and nanoscience, to come up with new ideas for the future of information processing platforms on beyond-CMOS nanoscale technologies that can approach the energy efficiency and the decision making capacity of the human brain.

The workshop report addresses the future of nanoscale process technologies within three application-driven platform-focused topic areas and discusses the current technologies, challenges, and research opportunities in each area. The topic areas are:

- ▶ **cloud-based** systems that provide software, platforms and infrastructure as an on demand service,
- ▶ **autonomous systems** that perform certain tasks to assist, augment, and/or replace humans,
- ▶ and **human-centric systems** including health and wellness preservation and cognitive assistance.

The previously released Executive Summary calls for the creation of a nation-wide Vertically Integrated Semiconductor Ecosystem (VISE), which conducts research and development seamlessly across the entire compute stack. This is



necessary for the future of nanoscale technology research because it opens up new areas of semiconductor research and, due to its cost, creates a high barrier to entry from foreign competitors. Coupled with its recommendations within the three application areas, the report offers a potential roadmap for the future of nanoscale technology research.

To learn more about the workshops recommendations, please read the [full report](#).

CCC White Paper - Advances in Artificial Intelligence Require Progress Across all of Computer Science

By Greg Hager, Johns Hopkins University

Artificial intelligence (AI) has emerged into the public view as an important frontier of technological innovation with potential influences in many realms. Many recent symposia and workshops including [AI for Social Good](#), [Computing Research: Addressing National Priorities and Societal Needs](#), and [Discovery and Innovation in Smart and Pervasive Health](#) have highlighted both the progress and opportunities for AI and its potential to contribute to new products, services, and experiences.

However, we should not lose sight of the fact that fielding real-world systems that realize these innovations will also drive significant advances in virtually all areas of computing, including areas that are not traditionally recognized as being important to AI research and development. To highlight these synergies, the [AI and Robotics Task Force](#), led by [Greg Hager](#) from Johns Hopkins and [Eric Horvitz](#) from Microsoft Research and their current members [Randy Bryant](#) from Carnegie Mellon University, [Maja Matarić](#) from the University of Southern California, and [Vasant Honavar](#) from Pennsylvania State University, has just released a white paper for the community called [Advances in Artificial Intelligence Require Progress Across all of Computer Science](#).

This report suggests several promising areas of interaction between AI and the broader computer science research community. These areas include:

Computing systems and hardware. There are opportunities ahead for leveraging innovations in computing systems and hardware. Directions include the development of methods for speeding up core computational procedures employed in AI systems, such as the methods used to train and to execute classification for perceptual tasks using convolutional neural networks. Opportunities include new approaches to parallelism, smart caching, and uses of specialized hardware like FPGAs to lower costs of computation and to meet the demands and robustness needed with AI applications.

Theoretical computer science. AI was built on theoretical work based on the mathematics of computability in the early 20th century by Turing, Church, and others. AI challenges have long posed and faced combinatorial challenges and has made use of results on the performance and precision of approximation procedures. There are continuing opportunities for the formal study of hard challenges in AI with tools and techniques developed in the realms of analysis of algorithms, including efforts in combinatorics, computational complexity theory, and studies of computability.

Cybersecurity. AI systems are being developed for high-stakes systems in such areas as healthcare and transportation. These systems are also bringing to the fore new attack surfaces that need to be understood and protected. Directions include understanding and hardening systems to whole new categories of attack including, “machine learning attacks,” where clever adversarial procedures are employed to inject data into systems that will confuse or bias them in their intended operation. AI systems frame new challenges that will require advances in security that address the new attack surfaces to ensure that they are safe, reliable, robust and secure against malicious attacks.

Formal methods. Formal methods can play a critical role in defining and constraining AI systems, so as to ensure that their behavior conforms to specifications. Efforts include methods for doing formal verification of programs and also to perform real-time verification of systems through new kinds of monitoring. Formal methods are promising approaches to ensuring that programs do not take actions beyond specified goals and constraints.

Programming languages, tools, and environments. New programming languages, tools, and programming environments can help engineers to build, test, and refine

AI systems. Higher-level languages can offer engineers and scientists new kinds of abstractions and power to weave together multiple competencies, such as a vision, speech recognition, and natural language understanding so as to be able to develop and debug programs that rely on the close coordination of multiple AI analytical pipelines.

Human-computer interaction. The key challenges with AI frame numerous opportunities in the broad realm of research in human-computer interaction (HCI), an important area of computer science research. Efforts include methods for explaining the results of AI systems to people, allowing people to work interactively with AI systems (e.g., interactive machine learning), that help with the specification, encoding, and understanding of the implications of different policies, values, and preferences assumed by automated systems, and supporting new kinds of human-AI collaboration, including mixed-initiative interaction and augmenting human cognition.

There is a growing and compelling imperative to leverage the advances in AI and automation to improve human lives in many ways. The path toward a balanced portfolio of capable, safe, and transparent AI-based systems will draw on a broad spectrum of computing ideas and principles, and is likely to become a driver for new advances in computing. By embracing the promise of AI, we believe that many areas of computer science will not only be advanced, but will also allow AI to address important opportunities and do so in a way that is safe, reliable, and effective.

The [AAAI 2017 Spring Symposium on AI for Social Good \(AISOC\)](#) (co-sponsored by [Association for the Advancement of Artificial Intelligence \(AAAI\)](#) and the [Computing Community Consortium \(CCC\)](#)) will be on March 27-29, 2017 at [Stanford University](#). The symposium will focus on the promise of AI across multiple sectors of society. See more information [here](#).

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Patty Lopez, Intel

Professional Opportunities

Activision

Sr. Research Engineer

Activision Central Technology's CTX group is seeking a Sr. Research Engineer to join our team in Santa Monica, CA. We are a team of artists, scientists, and engineers who collaborate with Activision studios to develop pioneering workflows and techniques for game content creation. We combine expertise from the game industry and the film industry to advance real-time visuals to levels which were previously exclusive to motion pictures. We are looking for an exceptionally skilled – and flexible – researcher to develop novel technologies to take on production challenges!

Responsibilities:

- Lead R&D projects related to performance capture, character animation, and other focus areas as directions evolve
- Proactively come up with ideas for new research directions, workflows, etc.
- Work with team members and studio collaborators to design and implement novel technologies to meet production needs
- Jump into both long-term R&D efforts as well as short-term production support as needed
- Engage with the academic and industry R&D communities, and identify collaboration and partnership opportunities
- Present research findings in scientific journals and/or conferences
- Advise and mentor interns

Requirements:

- Research experience, Ph.D. preferred, with a strong record of research publications
- Expert knowledge of Python, C++, and object-oriented programming practices
- Solid software engineering skills, including the ability to write robust, maintainable, well-architected, well-documented code
- Strong knowledge of mathematics for 3D graphics, particularly linear algebra
- Experience with computer vision and/or numerical optimization

- The ability to track down bottlenecks and accuracy/quality issues, wherever they may be in a pipeline
- Strong problem-solving skills
- Strong verbal and written communications skills, and ability to work effectively with multiple teams
- Self-motivated and able to quickly learn new areas of development
- Strong ability to innovate

Recommended:

- 5+ years' experience in software R&D in a CG production environment
- Strong understanding of the CG production process
- Strong working knowledge of Maya
- Strong understanding of game content creation pipelines
- Knowledge of current industry character animation practices, techniques, and technologies
- Qt / PyQt / PySide development
- Maya plugin development

Great Games Start with Great People! This is an exciting time to join us!

Ask anyone who works at Activision, or with Activision, their favorite thing about it, and they'll tell you, it's the people. We have world class brands, infrastructure and resources, but our success doesn't come from assembly lines producing widgets. Our success comes from people producing greatness together. We are nothing without our employee's brilliance. So if you're interested in our biggest priority, it's the people.

Headquartered in Santa Monica, CA, Activision operates at the intersection of technology, entertainment, esports, and consumer products. Activision is more than just the leading developer and publisher of video games, we are the creators of some of the world's biggest, most ground-breaking titles in the industry. Our portfolio includes Call of Duty®, Skylanders®, and Destiny®.

Please apply at: <http://bit.ly/2lisJTC>

Arizona State University

Assistant Professor in Computational Sensing

The School of Arts, Media, Engineering and the School of Electrical, Computer, and Energy Engineering at Arizona State University are seeking outstanding candidates for a joint tenure-track position beginning in Fall 2017 in the broad area of Computational Sensing. Ideal candidates will have demonstrated experience in co-design of hardware (optics/materials/sensors etc.) and algorithms (signal processing/ optimization/machine learning etc.) for impactful use-inspired applications. Specific application areas may include but not limited to computational imaging, active materials, sensory-motor systems etc.

The tenure home is expected to be in the School of Arts, Media, Engineering. But based on specific candidate profiles, we expect the faculty will be jointly appointed in Electrical, Computer and Energy Engineering (ECEE), or one of the other Schools of Engineering such as Computer Science (CIDSE), Materials Science (SEMTE), Biomedical Engineering (SBHSE) etc. We are particularly interested in candidates interested in fostering interdisciplinary scholarly collaboration: including but not limited to engineering, science, arts, and/or humanities.

The School of Electrical, Computer and Energy Engineering has programs in electrical engineering and computer engineering with approximately 2800 students, 70 faculty and \$31 million in annual research expenditures. The Ira A. Fulton Schools of Engineering include nearly 19,000 students and over 300 faculty members who conduct nearly \$100 million in research, spanning a broad range of engineering, construction and technology fields. The schools' educational programs emphasize problem solving, entrepreneurship, multidisciplinary interactions, social context and connections.

Professional Opportunities

The School of Arts, Media and Engineering is a uniquely transdisciplinary program in media arts and sciences. The appointee will be supported to collaborate with other faculty in significantly advancing experiential media and more broadly the relation between culture and computing. The appointee is expected to further existing research connections between the School of Arts, Media and Engineering and the Fulton Schools of Engineering in areas of common interest related to the appointee's interests and strengths.

The School of Arts, Media and Engineering offers a PhD and a Masters in media arts and sciences, an undergraduate BA in Digital Culture with concentrations in nine collaborating units spanning the arts, design, sciences and engineering. The successful candidate is expected to be involved in the development of new undergraduate and graduate curriculum in Digital Culture, and further develop our connections to the public and private sector. The school has state-of-the-art facilities for the development of embodied interactive media systems with focus on rehabilitation, education, cultural networks and enactive art. AME faculty can access significant federal, private foundation and industry support along with clinical, education and cultural partnerships to develop and deploy these systems.

Faculty at the School of Arts, Media and Engineering direct two paradigm-shifting centers of research: the Center for Science and the Imagination (<http://csi.asu.edu>), and Synthesis (<http://synthesis.ame.asu.edu>).

The Herberger Institute for Design and the Arts is a vibrant example of the philosophy of a New American University. The institute is built on a combination of disciplines unlike any other program in the nation. In addition to the School of Arts, Media and Engineering, the Herberger Institute comprises The Design School, the schools

of Art, Dance, Music, and Theatre and Film, as well as the ASU Art Museum. The institute is part of a university community comprising four differentiated campuses, each positively impacting the economic, social, cultural and environmental health of the communities it serves.

Arizona State University's model for the New American University dissolves the barriers between disciplines and fosters collaboration among diverse units. We also assume major responsibility for the economic, social and cultural vitality of the communities that surround us. ASU is a place where local solutions have a global impact. More than 80,000 students and 2,800 faculty make ASU their academic home in the metropolitan Phoenix area – the nation's fifth largest city. ASU champions intellectual and cultural diversity, welcoming students from all fifty states and more than a hundred nations across the globe.

Required Qualifications

Required: A PhD in Electrical Engineering, Computer Science, Computer Engineering, or some closely related field, with a specialization in computational sensing. Some teaching experience at undergraduate or master's level. Ability to define, lead and find support for research.

Desired Qualifications

Evidence of ability and willingness to collaborate on creative applications. Ability to communicate technical ideas to non-specialized audiences. Ability to mentor graduate students or advanced undergraduates in research projects.

Application Deadline

Application deadline is March 6, 2017; if not filled, every two weeks thereafter until search is closed.

Application Procedure

Send a letter of interest, CV, statement of research, statement of teaching vision (consistent with the transdisciplinary

nature at AME), three to five representative publications and/or media products, and names, addresses and telephone numbers for three to five professional references, via one zipped attachment, to: CompSensing-search@asu.edu. Zipped files sent to this email address are limited to 10MB. For larger files, candidates may alternatively provide a URL to which the search committee may access the candidate's materials. Please note that if a URL is provided, the site must include only the above requested documents in order for the application packet to meet the requirements. For more information, please email: xinwei.sha@asu.edu

ASU conducts pre-employment screening for all positions, which includes a criminal background check, verification of work history, academic credentials, licenses and certifications.

Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity/Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law. See ASU's complete non-discrimination statement at <https://www.asu.edu/aad/manuals/acd/acd401.html>. See ASU's Title IX policy at www.asu.edu/titleIX

Arizona State University

Assistant Professor in Expressive Robotics

The School of Arts, Media, Engineering (ame.asu.edu) and the School for Engineering of Matter, Transport and Energy at Arizona State University are seeking outstanding candidates for a joint tenure-track position beginning in Fall 2017 in the area of Expressive Robotics. Ideal candidates will have demonstrated experience in development of platforms, architectures, and algorithms, for humanoid or non-humanoid robotics.

Professional Opportunities

Specific areas of interest for this position include the design of robotic systems that are capable of non-trivial expressive interaction, including elements of improvisation and creativity, as well as ensembles of animated physical objects.

The tenure home is expected to be in the School of Arts, Media, Engineering. But based on specific candidate profiles, we expect the candidate will be jointly appointed in one of the programs in the Fulton Schools of Engineering, such as Mechanical Engineering (SEMTE), Biomedical Engineering (SBHSE), Computer Science (CIDSE), or Electrical Engineering (ECEE). We are particularly interested in candidates interested in fostering inter-disciplinary scholarly collaboration: including but not limited to engineering, science, health, arts, and/or humanities.

Arizona State University's model for the New American University dissolves the barriers between disciplines and fosters collaboration among diverse units. We also assume major responsibility for the economic, social and cultural vitality of the communities that surround us. ASU is a place where local solutions have a global impact. More than 80,000 students and 2,800 faculty make ASU their academic home in the metropolitan Phoenix area - the nation's fifth largest city. ASU champions intellectual and cultural diversity, welcoming students from all fifty states and more than a hundred nations across the globe.

The Ira A. Fulton Schools of Engineering include nearly 20,000 students and over 330 faculty members who conduct nearly \$100 million in research, spanning a broad range of engineering, construction, and technology fields. The schools' educational programs emphasize problem solving, entrepreneurship, multidisciplinary interactions, social context, and connections.

The Herberger Institute for Design and the Arts is a vibrant example of the philosophy of a New American University. The institute is built on a combination of disciplines unlike any other program in the nation. In addition to the School of Arts, Media and Engineering, the Herberger Institute comprises The Design School, the schools of Art, Dance, Music, and Theatre and Film, as well as the ASU Art Museum. The institute is part of a university community comprising four differentiated campuses, each positively impacting the economic, social, cultural and environmental health of the communities it serves.

The School of Arts, Media and Engineering is a leading transdisciplinary program in media arts and sciences. The appointee's efforts will merge with efforts of other faculty for the achievement of significant advancements in experiential media and more broadly the relation between culture and computing. The appointee is expected to further existing research connections between the School of Arts, Media and Engineering and the Fulton Schools of Engineering (e.g. School for Engineering of Matter, Transport, and Energy) in areas of common interest related to the appointee's interests and strengths.

The School of Arts, Media and Engineering offers a PhD in media arts and sciences, an undergraduate BA in Digital Culture with concentrations in nine collaborating units spanning the arts, design, sciences and engineering. The successful candidate is expected to enhance our connections to the Fulton Schools of Engineering, be involved in the development of new undergraduate and graduate curriculum in Digital Culture, and further develop our connections to industry. The school has state-of-the-art facilities for the development of embodied interactive media systems with focus on rehabilitation, education, cultural networks and enactive art. Significant federal, private foundation and industry support along with

clinical, education and cultural partnerships contribute to the development and deployment of these systems.

Required Qualifications

A PhD in Mechanical Engineering, Electrical Engineering, Computer Engineering, Computer Science, or some closely related field, with a specialization in autonomous or semi-autonomous systems, or robotics. Some teaching experience at undergraduate or master's levels. Ability to define, lead and find support for PhD research.

Desired Qualifications

Evidence of ability and willingness to collaborate on creative applications. Ability to communicate technical ideas to non-specialized audiences. Ability to mentor graduate students or advanced undergraduates in research projects. We seek a candidate with experience in research and education spanning arts, design, humanities and engineering.

Application Deadline

Application deadline is March 6, 2017; if not filled, every two weeks thereafter until search is closed.

Application Procedure

Send a letter of interest, CV, statement of research, statement of teaching vision (consistent with the transdisciplinary nature at AME), three to five representative publications and/or media products, and names, addresses and telephone numbers for three to five professional references, via one zipped attachment, to: ExpressiveRobotics_search@asu.edu. Zipped files sent to this email address are limited to 10MB. For larger files, candidates may alternatively provide a URL to which the search committee may access the candidate's materials. Please note that if a URL is provided, the site must include only the above requested documents in order for the application packet to meet the requirements. For more information, please email: panajiotis.artemiadis@asu.edu.

Professional Opportunities

ASU conducts pre-employment screening for all positions, which includes a criminal background check, verification of work history, academic credentials, licenses and certifications.

Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity/Affirmative Action Employer. All qualified

applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law.

See ASU's complete non-discrimination statement at <https://www.asu.edu/aad/manuals/acd/acd401.html>. See ASU's Title IX policy at www.asu.edu/titleIX.

Clemson University

Lecturers - School of Computing

The School of Computing at Clemson University invites applicants for two Lecturer positions beginning August 2017. Responsibilities will include teaching (primarily for undergraduate classes), student advising, participation in departmental and university committees, and other typical faculty responsibilities. Teaching assignments will be determined based on school needs and candidate interests. The ability to teach courses in operating systems, networks or software engineering is desirable, though not required. Lecturers are eligible for promotion to the rank of Senior Lecturer.

More information and application procedures may be found at <http://www.clemson.edu/computing/connect/positions.html>

Clemson University does not discriminate against any individual or group of individuals on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status or genetic information. Clemson University is an Affirmative Action/Equal Opportunity Employer

Cleveland State University

Assistant College Lecturer or Assistant Professor of Practice Positions in Computer Science/Engineering

Cleveland State University is searching for active, culturally and academically diverse faculty of the highest caliber.

The Department of Electrical Engineering and Computer Science at Cleveland State University invites applications for two non-tenure track Assistant College Lecturer or Assistant Professor of Practice positions in computer science/engineering. The anticipated start date is August 2017. Candidates with a Master's degree will be considered, however a Ph.D. in computer science, computer engineering, software



香港中文大學
The Chinese University of Hong Kong

Applications are invited for:-

Faculty of Engineering Professors / Associate Professors / Assistant Professors (Ref. 1700004N)

The Faculty of Engineering is seeking several faculty posts at Professor / Associate Professor / Assistant Professor levels with prospect for substantiation. The professors will play a significant role in the Cyber Security Center, which will be established by the Faculty of Engineering.

Cyber security is identified as one of the Faculty's strategic research areas, to be developed by both the Department of Computer Science & Engineering and Department of Information Engineering. Talented candidates are sought to complement existing efforts and create new synergies. Candidates in the following areas are encouraged to apply:

- cryptography and computational theory in security
- network, system and software security
- data security and privacy
- computer forensic
- hardware and IoT security

Applicants should have a relevant PhD degree and a good scholarly record demonstrating potential for teaching and research excellence.

Appointments will normally be made on contract basis for up to three years initially commencing August 2017, which, subject to performance and mutual agreement, may lead to longer-term appointment or substantiation later. The exact start date can be worked out with the successful applicants.

Applications will be accepted until the posts are filled.

Application Procedure

Applicants please upload the full resume with a cover letter, copies of academic credentials, publication list with abstracts of selected published papers, a research plan, a teaching statement, together with names and e-mails addresses of three to five referees to whom the applicant's consent has been given for their providing reference (unless otherwise specified).

The University only accepts and considers applications submitted online for the posts above. For more information and to apply online, please visit <http://career.cuhk.edu.hk>.

Professional Opportunities

engineering, or a closely related field at the time of appointment is preferred. Candidates are expected to contribute to the diversity, cultural sensitivity, and excellence of the academic community. A complete description of qualifications can be found at <http://hrjobs.csuohio.edu/postings/7182>.

Responsibilities include teaching at both the undergraduate and graduate level, student advising, and curriculum development. The teaching requirement is four courses per semester. Salary will be commensurate with education and experience. Opportunities for summer teaching with additional compensation might also be available. After the first year, the position will be annually renewable based on program needs.

For full consideration, candidates must submit a cover letter, detailed curriculum vitae, teaching portfolio, and names and contact information of at least three references at <http://hrjobs.csuohio.edu/postings/7182>. Review of applications will begin on March 1, 2017. Full consideration will be given to applications submitted no later than March 1, 2017.

Inquires only can be directed to Professor Nigamanth Sridhar at n.sridhar1@csuohio.edu.

The Department of Electrical Engineering and Computer Science is the largest in the Washkewicz College of Engineering, with over 550 Bachelor's students, over 400 Master's and Doctoral students, 26 full-time faculty members, and over \$5 million in research funding. Additional information about the department is available at <http://www.csuohio.edu/eecs>.

Columbia University

Post-Doctoral Research Scientist in Machine Learning in Wealth Management

The FDT Center for Intelligent Asset Management at the Department of Industrial Engineering and Operations Research, Columbia University in New York City, invites

applications for a Post-Doctoral Research Scientist position to research novel approaches for applying machine learning techniques to financial wealth management.

The Center was established in January 2017 with a generous gift from Financial Data Technologies, a Hong Kong based FinTech company. The research of the Center will focus on the exploration of theoretical underpinnings and modeling strategies for wealth management through the introduction of big data analytical techniques. The Center's research will combine modern portfolio theory, behavioral finance, machine learning and data science to study core problems including optimal asset allocation and risk management, and the research of the Center sits at the crossroad of financial engineering, computer science, statistics, and finance, aiming at providing innovative and intelligent investment solutions.

The main research objective of the holder of this position is to apply machine learning techniques, including supervised learning and reinforcement learning, to improve the existing, known asset allocation strategies and develop new, evolutionally superior strategies. Candidates must have a PhD degree in Computer Science, Control Theory, Operations Research, or Applied Mathematics, with demonstrated research experience in machine learning. Additionally, candidates familiar with financial engineering, stochastic control, optimization or statistics are highly preferred. Candidates are expected to have an outstanding research record commensurate with their level of experience.

The candidate is expected to work under the supervision of Professor Xunyu Zhou, the Director of the Center. He or she will also benefit from interactions with the faculty, practitioners and students at the Center as well as those from the IEOR Department, Business School, Statistics

Department, and Computer Science Department. This is a one-year position initially with possibility of renewal for two more years depending on the progress achieved. There is also an opportunity to be involved in a start-up company arising from the research of the Center, during or after the tenure of the position.

Candidates should apply online at: academicjobs.columbia.edu/applicants/Central?quickFind=64047 and should submit electronically the following: curriculum-vitae, a research statement, a representative research paper, and a list of three references submitted electronically. The position will remain open until filled and applications will be reviewed as they are submitted.

Applicants can consult www.ieor.columbia.edu for more information about the department.

Columbia University is an Equal Opportunity/Affirmative Action employer – Race/Gender/Disability/Veteran.

CUNY City College of New York

Assistant Professor - Computer Science

The Computer Science Department of the City College of New York is seeking outstanding candidates for a tenure track position at the Assistant Professor level.

The department is seeking candidates with experience in Advanced Computer Architecture, including embedded systems, reconfigurable computing, multiple-core architectures, systems-on-chip and networks-on-chip, programmable and adaptive architectures and digital system design and synthesis. Specialties in data-intensive and data-driven parallel computing in clustered environments, pervasive and wearable computing systems, hardware simulation tools, digital circuit and FPGA design in HDL will also be considered.

Professional Opportunities

PhD in Computer Science or related field are required as well as an outstanding academic or industrial record. All candidates must meet ICRA employment eligibility requirements for appointment.

For details of this announcement, please visit the link below, select "Faculty," and search for Job ID number 16282.

https://home.cunyfirst.cuny.edu/psp/cnyepprd/GUEST/HRMS/c/HRS_HRAM.HRS_CE.GBL

- Applied Computing disciplines.
- Documented publications and/or proposal development for external funding in a relevant field, and the ability to continue such an agenda
- Expertise in two or more of the following areas (understandably these overlap):
 - a. Defensive/offensive security
 - b. Malware analysis
 - c. Digital Forensics and Incident Response
 - d. Systems/Network Security and Administration

- e. Software Development (Web, Mobile, Cloud, Secure Dev, Architecture, etc.)
- f. Data Administration, Analytics, Mining, and/or Management

EMU offers competitive salaries. Official review of the applications will begin immediately and continue until the position is filled. All applications must be made online at <http://agency.governmentjobs.com/emichedu/default.cfm>. Application materials should include a letter of application - which contains a statement

Eastern Michigan University

Assistant Professor - Information Assurance

The School of Information Security & Applied Computing (SISAC) in the College of Technology at Eastern Michigan University invites applications for a tenure-track position in IA starting Fall, 2017. SISAC is a designated Center of Academic Excellence in Information Assurance Education with an undergraduate IA program as well as graduate and PhD concentrations in Information Assurance.

Essential Duties and Responsibilities Include:
Plan and teach courses that fulfill the SISAC curriculum goals and objectives. Responsibilities also include supporting SISAC course load, developing course syllabi, following established college policies and procedures, and supporting the mission for the program. Candidates should remain active in research in the field and shall develop externally funded research programs in IA and succeed in securing such funding.

Position Requirements:

- Candidates must possess:
- Ph.D. in Computer Science, Computer Information Systems, or a closely related field
 - Evidence of ability to deliver high-quality instruction in Information Security and



EMORY UNIVERSITY

Lecturer in Computer Science

EMORY UNIVERSITY
Atlanta, Georgia

Emory University's Mathematics & Computer Science Department invites applications for a position as Lecturer in Computer Science, to begin Fall 2017. Computer Science and Informatics is in a period of significant growth and seeks an individual to contribute to the service and scholarship of the department, which spans the core areas of theory and systems with outstanding faculty strengths in data-related areas. Appointments are for a period of three years with *renewals and promotions possible within the lecture track*, as detailed in Emory College of Arts and Sciences Guidelines for Appointment and Review of Lecture-Track Faculty: <http://college.emory.edu/home/administration/policy/lecturer.html>.

About the University and Department

Emory University is a nationally ranked research university with a tradition of excellence and an emphasis on undergraduate education, located five miles from Atlanta's downtown district. Mathematics and computer science are disciplines central to both the liberal arts curriculum and to research endeavors in the natural and social sciences. The combined department at Emory offers educational programs and supports research activities that explore the interrelations among mathematics, computer science, and the physical and life sciences, and that advance traditional areas of scholarship within each discipline. For more details about the department, please visit <http://www.mathcs.emory.edu>.

Position Particulars

Candidates must have a PhD in Computer Science or a related discipline, and will be expected to provide outstanding teaching, advising, and service related to the undergraduate programs. All areas of specialization will be considered, with preference given to applicants capable of teaching computer organization/systems. Responsibilities include, 1) teaching five courses per year; 2) advising undergraduate students; supervising and training graduate student instructors; and 3) supporting the educational mission of the college through department and college committees and programs participation.

Application materials comprising a cover letter, CV, a statement of career goals and teaching philosophy, evidence of teaching excellence, and a minimum of three letters of recommendation (one of which should address your teaching) directly from recommenders, should be submitted via Interfolio - <https://apply.interfolio.com/38368>. Informal inquiries about the position are also invited by email to cslect2016@mathcs.emory.edu. Review of applications will begin on December 1, 2016 and will continue until the position is filled.

Emory University is an Equal Opportunity/Affirmative Action/Disability/Veteran employer. Women, minorities, persons with disabilities, and veterans are encouraged to apply.

Professional Opportunities

of qualifications and teaching as well as research interests, CV and names, addresses and phone numbers of three references.

Eastern Michigan University is an Equal Opportunity Employer and Educator that is strongly committed to achieving excellence through cultural diversity.

Florida Polytechnic University

Assistant Professor, Associate Professor, or Professor of Computer Science and Information Technology

SUMMARY OF POSITION ROLE/
RESPONSIBILITIES:

The Computer Science and Information Technology Program at Florida Polytechnic University invites applications for faculty positions at the Assistant, Associate, or Full Professor level beginning August 2017. The department is seeking individuals with a rigorous foundation in Compilers and Programming Languages. Applicants with interests in any field of Computer Science are encouraged to apply. Applicants with a background and/or interest in Cyber Gaming and Augmented Reality, Compilers and Programming Languages, Cybersecurity and Computing Hardware Security, Software Engineering, and Simulation are preferred.

MINIMUM QUALIFICATIONS:

- Applicants must have a Ph.D. in Computer Science or Computer Engineering from a college or university accredited by the U.S. Department of Education or an internationally recognized accrediting organization. (earned by August 2017)
- Candidates must be willing to teach courses in Computer Science at all levels.
- Demonstrated record or the potential for excellence in research appropriate to the rank to be held and/or the experience of the candidate.

- Demonstrated record or the potential for excellence in teaching appropriate to the rank to be held and/or the experience of the candidate.

PREFERRED QUALIFICATIONS:

- Experience in obtaining external funding, grant preparation, and a record of scholarship are desirable. Industrial Experience.

EXPECTED STARTING SALARY: Commensurate with experience and qualifications

APPLICATION PROCESS: <https://floridapolytechnic.org/job-listings/>

The George Washington University

Professor of Practice

The Department of Computer Science at The George Washington (GW) University in Washington DC, invites applications for a Professor of the Practice position starting potentially as early as July 2017. The appointment will be made at the Assistant/Associate/Full Professor of the Practice rank depending on the candidate's experience. GW has a history of supporting faculty with practice-of titles who are educators, practitioners, and scholars, and the Computer Science department has set high standards in providing a teaching and work environment in which practice-of faculty thrive.

Responsibilities:

During each fall and spring semester the Professor the Practice will teach sections involving first and secondary introductory programming for CS freshmen and leadership for an introductory CS course for engineering majors. Once familiar with program requirements, the Professor of the Practice will advise undergraduate computer science majors (approximately 4 hours per week, for around nine weeks in a semester) and will participate in lower level course curriculum development or become involved in advising and educational.

An initial multi-year appointment will be offered in accordance with the University's Faculty Code. Practice-of faculty typically teach a three/two course load per year in introductory CS courses with graduate and undergraduate teaching assistant support.

Minimum Qualifications:

Candidates for the Professor of Practice position must be highly effective classroom teachers who can demonstrate excellent educational leadership and organizational skills. They must have a strong commitment to and demonstrated excellence in teaching as well as developing innovative teaching models; have the ability to help oversee an undergraduate program (advising, program oversight, and student support); and be able to teach programming in both Java and C.

Successful candidates at the Professor of the Practice level will have examples of academic, scholarly, and educational success outside the classroom that have resulted in, or have the potential to result in, significant advancements in computer science and engineering education. They must demonstrate commitment to educating a broad and diverse group of students and in working to increase the participation and success of students from groups underrepresented in computer science. Faculty with interest and experience in computing curricula are especially encouraged to apply. Candidates must have, or will have by August 15, 2017, a Ph.D. in Computer Science or a closely related field.

Enquiries and Application:

To enquire, please email to cssearch@gwu.edu or call 202-994-7181. To apply, complete the online faculty application, at <http://www.gwu.jobs/postings/40362> and upload: (1) a detailed curriculum vitae; (2) a statement of teaching interest regarding teaching philosophy and experience, including evidence of commitment to promoting inclusion and diversity; (3) teaching evaluations or summaries as evidence of

Professional Opportunities

teaching effectiveness; (4) a short cover letter describing your background and interests in teaching undergraduates at George Washington University and in promoting inclusion and diversity in computer science; (5) a statement of research interest (which may include research on pedagogical focus). Please have three references email their letters directly to cssearch@gwu.edu. Review of applications will begin on March 3, 2017 and will continue until the position is filled.

EEO/AA Policy:

The university is an Equal Opportunity/Affirmative Action employer that does not unlawfully discriminate in any of its programs or activities on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity expression, or on any other basis prohibited by applicable law.

BACKGROUND SCREENING STATEMENT:

Employment offers are contingent on the satisfactory outcome of a standard background screening.

Georgia Southern University

*Assistant Professor of Computer Science—
Search #67464*

Georgia Southern University's Department of Computer Sciences invites applications for an Assistant Professor in Computer Science. The full text advertisement, including information about the department, faculty, and the complete position announcement with all qualifications and application instructions, is available at <http://ceit.georgiasouthern.edu/facstaff/employment>. Screening of applications begins March 1, 2017, and continues until the position is filled. Georgia is an open records state. Georgia Southern is an AA/EO institution. Individuals who need reasonable accommodations under the ADA to participate in the search process should contact the Associate Provost.

Huawei R&D

*Staff Engineer - Cloud Solutions (Research/
Applied Research)*

The Programming Technologies Lab of Huawei is seeking candidates w/ expertise in the broad area of cloud computing technologies. Our lab is young but growing and has a vast technical space to explore. We welcome researchers and engineers alike. More information about Huawei can be found [here](#).

As a member of a highly talented team, you get to do creative work and make an impact by solving real customer problems. While our current projects include language design, compiler & JVM, and performance optimization, the lab continues to grow and expand to explore software technologies in new domains (e.g., cloud, distributed computing, smart devices). As such, we are not looking for people w/ a fixed set of skills, but rather for "growth-mindset" people who have versatile experience in the field and are undaunted by acquiring new skills.

Responsibilities:

- Research in: performance analysis & optimizations; program analysis tools design, prototypes and implementation; with focus on distributed and cloud computing.
- Proactively engage with customers to identify opportunities for cloud technology solutions; bootstrap projects from scratch; and turn ideas into prototypes and production.

Requirements:

- Ph.D. in Computer Science or 5+ years of work experience in the relevant areas
- Expertise/experience in one or more of the following areas:
 - Distributed and cloud system architectures, tools technologies, its challenges and solutions on these systems.
 - Methodologies of performance optimization in VM; runtime and library; and full stack

software profiling; software engineering tools on distributed or/and cloud systems.

- Performance measurement, analysis and optimization via experience in a relevant area, such as performance modeling, parallel software development.
- Strong software development skills, proficient in software engineering techniques and methodologies
- Fluency in C/C++/Java and many other cloud-based programming languages

Preferred qualifications:

- Because we develop cloud tools technology for a variety of purposes, competence in a breadth of distributed systems in heterogeneous environment is a plus
- Experience with runtime system, such as memory management and concurrent task scheduling, and in newer, cloud based languages like Go, Rust, Scala, and Swift
- Experience with developing programming technologies for the Cloud and/or distributed environment and smart devices
- Prior engagement in open-source projects, developers' community, and/or research community

Email: brian.gilmore@huawei.com

Huawei Inc. is proud to be an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, protected veteran status, or any other characteristic protected by law.

Johns Hopkins University

Research Scientist

General Description

The Human Language Technology Center of Excellence (HLTCOE) at Johns Hopkins University seeks to hire outstanding senior, junior, and post-doc researchers in all areas of speech and language processing. Located adjacent to Johns Hopkins' beautiful Homewood campus in Baltimore, Maryland,

Professional Opportunities

the HLTCOE conducts long-term and applied research on fundamental challenges driven by real-world problems. Its staff scientists publish widely in premier venues, and, through close collaboration with members of the Center for Language and Speech Processing (CLSP), make Johns Hopkins one of the world's largest and growing academic research groups in the field.

Why HLTCOE?

Research scientist positions at the HLTCOE bring together many of the best aspects of academic and industrial research. Staff scientists are charged with setting a research agenda in line with the Center's goals, working with other members of the HLTCOE research team, and publishing results. If they wish, researchers also have the opportunity to apply for external funding, to work with and advise students at CLSP, and to teach at Johns Hopkins.

Centrally located on the east coast, Baltimore is affectionately known as Charm City because of its friendly people, thriving arts scene, and multitude of restaurants and pubs. The center of the city is the Inner Harbor, home to features such as the National Aquarium, historic Federal Hill, and two professional sports teams. It is famous for its crab cakes, and rich in the arts, from a variety of museums to children's centers and a symphony orchestra. Just outside the city are abundant natural settings great for hiking, biking, and other outdoor adventures. Baltimore is part of the east coast corridor, just a short train, bus, or car ride away from Washington D.C., Philadelphia, and New York. Best of all, Baltimore is affordable: many Hopkins employees own homes in adjacent neighborhoods, close enough to the University to walk or bike to work, or to take public transportation.

Qualifications

A good candidate will have a strong general background and publishing experience in one or more of the following tasks:

Characterizing Communicants
Crowd Sourcing
Information Extraction
Information Retrieval
Machine Learning
Machine Translation
Multi-Lingual Algorithms
Parsing and Tagging
Social Media
Speaker and Language Identification
Speech Recognition
Spoken Language Applications

Applicants should hold a Ph.D in computer science, electrical engineering, linguistics or cognitive science, or a closely related field.

Application

To apply, please visit apply.interfolio.com/39944.

U.S. citizenship is required.

Applications are due on the first of every month, and will be considered in batches on a rolling basis until positions are filled.

NOTE: The successful candidate(s) for this position will be subject to a pre-employment background check.

Marshall University

Assistant Professor of Computer Science

Banner Position Number
002109

Salary Range
Commensurate with qualifications and experience.

Position Summary Information:

The College of Information Technology and Engineering at Marshall University invites applications for an Assistant Professor position in the Weisberg Division of Computer Science.

Start Date
August 17, 2017

The positions are full-time, nine-month, tenure-track.

In addition to teaching undergraduate and graduate courses, the successful applicant will report to the Chair of the Weisberg Division of Computer Science and will contribute to the following: preparation for and compliance with ABET accreditation criteria and continuous improvement process; development of new curricula and programs of study; continued expansion of the Division to support new areas of emphases; interaction with constituency groups. The successful candidate will also support the University's general education curriculum, with its emphasis on a common First-Year Seminar and core curriculum courses that enhance student's critical thinking skills and the College's support of interdisciplinary programs of study.

Background:

The Weisberg Division of Computer Science offers B.S. and M.S. degrees in Computer Science and an M.S. Information Systems degree. The Division is housed in the College of Information Technology and Engineering (CITE), a multi-disciplinary college with a wide range of faculty expertise and interests. A new building, the Weisberg Family Applied Engineering Complex opened officially August 13, 2015. An engineering laboratory facility was opened in the fall of 2008. More information can be found at www.marshall.edu/CITE.

Candidates interviewing on campus must have all official transcripts (undergraduate, graduate, PhD) forwarded directly to the Search Committee Chair prior to the date of the interview:

Dr. Wook-Sung Yoo
Computer Science Search Committee Chair
1 John Marshall Drive
WAEC 3101
Huntington, WV 25755

Pre-employment background check is required.

Close Date

Open Until Filled

Professional Opportunities

Required Qualifications:

Ph.D. degree in Computer Science, Cybersecurity, Informatics, Software Engineering, or closely related field. The candidate must exhibit a strong commitment to excellence in teaching undergraduate and graduate computer science courses. The candidate will be expected to develop a research program and actively seek external funding for research and collaborate on projects. Research experience in an area that complements existing initiatives of the Division is preferred. Industrial experience is advantageous. The candidate must have the ability to contribute to Marshall University's commitment to cultural diversity and pluralism.

Preferred Qualifications:

(1) relevant professional/industrial applied experience, (2) previous full-time or part-time teaching experience, (3) ability to develop and teach lectures and laboratory courses in the areas of Computer Science, (4) record of scholarship and participation in professional activities and (5) experience with ABET accreditation and continuous quality improvement activities.

How to Apply:

<https://marshall.peopleadmin.com/postings/6699>

Please note that you must create a PeopleAdmin profile in order to apply for this position

Special Instructions Summary:

Supplemental Questions

Required fields are indicated with an asterisk (*).

1. How did you hear about this employment opportunity?*

- Public Job Posting:
- Internal Job Posting:
- Agency Referral:
- Advertisement/Publication:
- Personal Referral:
- Website:
- Other:

Applicant Documents:

Required Documents*

1. List of three (3) references w/ contact information for each
2. Cover letter & resume
3. Curriculum vitae
4. Teaching philosophy

McDaniel College

*Tenure Track Faculty Position:
Computer Science*

McDaniel College invites applications for a tenure-track Assistant or Associate Professor position in Computer Science starting in August, 2017. The area of specialization is open, though special consideration will be given to applications from candidates whose research expertise will help students in the broad areas of data science, digital learning, or ubiquitous computing. Applicants who will help develop the future of the Computer Science program are especially encouraged to apply. A Ph.D. in computer science or related field is required at the time of appointment in August, 2017.

For more information and to apply, please visit <https://employment.mcdaniel.edu/>. Review of applications will begin immediately and continue until the position is filled.

McDaniel College is an equal opportunity employer and will not tolerate any discrimination or harassment on basis of any protected status including race, religion, color, national origin, disability, age, sex, sexual orientation, pregnancy, military status, genetic information, marital status, veteran's status or any other legally protected status.

McMaster University

Tenure-Track Faculty Positions in Computing and Software

The Faculty of Engineering at McMaster University has a reputation for innovative programs, cutting-edge research, leading

faculty, and aspiring students. It has earned a strong reputation as a centre for academic excellence and innovation. The Faculty has approximately 180 faculty members, along with close to 4,500 undergraduate and 1,000 graduate students. The Faculty of Engineering promotes a nurturing and inclusive environment where opportunities are made available for personal growth and professional development.

To enrich its flourishing research programs, the Department of Computing and Software at McMaster University is seeking outstanding individuals for multiple tenure-track faculty positions at the rank of Assistant Professor. However, a more senior level appointment may be possible for exceptional candidates. The Department is slated to grow significantly over the next few years, and new hires will have the opportunity to influence future directions.

Qualified candidates in the following areas are strongly encouraged to apply: machine learning, smart systems, high performance computing with applications to data analytics, and software engineering. Exceptional candidates in related areas will also be considered. Candidates must have demonstrated the potential for excellence in research, as well as having strong communication skills and being committed to education. They are also expected to have demonstrated an ability to work effectively with individuals from diverse communities and cultures. The successful candidates will be expected to establish a dynamic research program in their fields of expertise, to become engaging teachers and mentors at both the undergraduate and graduate levels, and to make strong commitment to curricula development. They will also be expected to explore opportunities for research collaborations across the Faculty of Engineering, and across the University. Successful candidates are expected to become registered with Professional Engineers Ontario.

Professional Opportunities

The successful candidates will have the opportunity to engage with faculty members and research staff associated with McMaster's world-class research and teaching laboratory facilities in software and data intensive systems and data analytics areas, including: the McMaster Centre for Software Certification (McSCert), the McMaster Automotive Resource Centre (MARC), the Shared Hierarchical Academic Research Computing Network (SharcNet), Advanced Optimization Laboratory (AdvOL), Computing Infrastructure Research Centre (CIRC), and the MacData Institute.

All qualified applicants are encouraged to apply. However, Canadian citizens and permanent residents will be given priority. These positions will ideally commence July 1, 2017. The selection process will begin by March 1, 2017, and continue until the positions are filled.

Applications, including cover letter, statement of research and teaching interests, curriculum vitae, research samples (published articles or other evidences of research contributions), evidence of teaching effectiveness, and names and contact information of 3 to 5 references, should be sent to Laurie Leblanc at leblanl@mcmaster.ca.

McMaster University's beautiful campus is at the north-west end of Hamilton on the western end of Lake Ontario, between the Niagara Escarpment, conservation lands, and the Royal Botanical Gardens. Hamilton, with a population of over 500,000, is a vibrant community with easy access to Toronto and the Niagara region. It is located at the northern tip of an ecological zone commonly called the Carolinian Forest that encompasses the southern-most portion of Ontario but occurs nowhere else in Canada. As a result, Hamilton is home to many unique species of plants and animals that only occur here because the summer climate approaches that of North and South Carolina in the United States.

McMaster University is strongly committed to employment equity within its community and to recruiting a diverse faculty and staff. The University encourages applications from all qualified candidates including women, persons with disabilities, First Nations, Metis and Inuit persons, members of racialized communities and LGBTQ-identified persons. If you require any form of accommodation throughout the recruitment and selection procedure, please contact the Human Resources Service Centre at (905) 525 9140, Extension 222-HR (22247).

Michigan Technological University

Department of Computer Science

Lecturer Position

Applications are invited for Lecturer positions beginning August 2017. An applicant for a Lecturer position must have a master's or doctoral degree in Computer Science or Computer Engineering, or equivalent, and is expected to demonstrate potential for excellence in teaching and the ability to contribute to the departmental service needs. The candidate should be able to teach across the CS curriculum, particularly second and third-year computer systems courses. ABET experience is a significant plus. Lecturers are appointed for two-year, renewable terms, and there is opportunity for promotion to Senior and Principal Lecturer. Review of applications will begin immediately and continue until the position is filled. The Department has 19 faculty, 450 undergraduate students in two degree programs (Computer Science and Software Engineering) and 48 M.S. and Ph.D. students. Please visit <http://www.mtu.edu/cs/> for more information.

Women and under-represented minorities are particularly encouraged to apply. Applications should be submitted online at www.jobs.mtu.edu. To learn more about

the opportunity, please visit <https://www.jobs.mtu.edu/postings/5265> or contact the Department Chair, Dr. Min Song, at mins@mtu.edu or (906) 487-2209. Michigan Tech is an ADVANCE institution, one of a limited number of universities in receipt of NSF funds in support of our commitment to increase diversity and the participation and advancement of women in STEM. Michigan Tech is a member of the AGEP network of universities dedicated to increasing the number of underrepresented minorities obtaining graduate degrees in STEM fields. Michigan Tech acknowledges the importance of supporting dual career partners and retaining a quality workforce.

Michigan Tech is an EOE which includes protected veterans and individuals with disabilities.

Missouri University of Science and Technology

Assistant Professor

The Department of Computer Science at Missouri University of Science and Technology, Rolla seeks outstanding applicants for one or more tenure-track faculty positions in all areas of computer science at the Assistant Professor rank. Stronger candidates at higher ranks may be considered. Preference will be given to cyber-security, cyber-physical systems, data science, IoT, smart and connected health. Competitive salaries commensurate with the rank of the position and qualifications will be offered.

Successful candidates must have a strong commitment to high quality research and teaching at undergraduate and graduate levels, as well as service. Applicants should have demonstrated excellent record of research publications, external funding (for senior ranks), and evidence of high-quality teaching. Applicants must hold a Ph.D. in Computer Science or a closely related field.

Professional Opportunities

The Department has 18 full-time faculty and awards BS, MS, and PhD degrees in Computer Science. Currently the Department has over 600 undergraduate and over 100 graduate students including over 40 PhD students. The enrollment at both levels is growing significantly. Research strengths of the Department include pervasive and mobile computing, security and privacy, big data analytics, wireless and sensor networking, cyber-physical systems, smart environments, and computational intelligence. The Department has currently more than \$8M funding from NSF, NSA, ARL, AFRL, NIST, DOE, DOT, USDA, Sandia National Laboratories, Los Alamos National Laboratory, Department of Education, and industries such as Google. Opportunities for interdisciplinary collaboration abound at several campus-wide research centers, including the Smart Living signature area.

Missouri S&T is one of the nation's leading research universities. Located about 100 miles west of St. Louis in the community of Rolla, Missouri S&T is an accessible, safe and friendly campus surrounded by Ozarks scenery. Missouri S&T offers degrees in engineering, the sciences, liberal arts, humanities and business, with master's and Ph.D. programs available in many of the science and engineering programs and master's degrees in biological sciences, business administration and technical communication. With nearly 9,000 students enrolled online and on campus, Missouri S&T is big enough to accommodate a diverse population but small enough for individuals to stand out.

Interested applicants must apply via <http://hraadi.mst.edu/hr/employment/> using Position Number 61042 and submit 1) a cover letter, 2) current curriculum vitae, 3) a statement of research and teaching interests and experience, and 4) complete contact information for four references. Acceptable electronic formats include PDF and MS word.

Review of applications will start from February 14, 2017 and continue until the position is filled. More information about the position can be found at <http://cs.mst.edu> or by contacting the Search Committee Chair, Dr. Sanjay Madria at madrias@mst.edu.

Missouri S&T is an AA/EEO employer. Females, underrepresented minorities, and persons with disabilities are particularly encouraged to apply.

Comments

The final candidate is required to provide copies of official transcript(s) for any college degree(s) listed in application materials submitted. Copies of transcript(s) should be provided prior to the start of employment. In addition, the final candidate may be required to verify other credentials listed in application materials. Failure to provide official transcript(s) or other required verification may result in the withdrawal of the job offer. All job offers are contingent upon successful completion of a criminal background check

NEC Laboratories America

Researcher - Big Data Analytics

NEC Laboratories America (<http://www.nec-labs.com/>) conducts research in support of NEC's US and global business. Our lab has a broad research program that covers many areas and maintains a balance of fundamental and applied research.

The Data Science Department (<http://www.nec-labs.com/research-departments/data-science/data-science-home>) performs research on all aspects of data analytics and mining. We are creating innovative analytics from big data to simplify and automate the operation of complex physical systems (e.g., automobiles, power plants, smart city etc.), as well as large-scale IT systems and services. We have several ongoing big data analytics projects including massive time series modeling, heterogeneous data analysis, and large scale graph mining etc. Our group

brings together experts in machine learning, data mining, statistics, signal processing, pattern recognition and big data processing systems. We build technologies to solve real world problems and grow NEC's business. Our research leads to both award-winning NEC products/solutions and numerous publications in top conferences.

Our group is looking for multiple researchers to work in the area of data analytics and mining. The ideal candidates must have expertise in data mining and statistical learning, and can develop algorithms to analyze massive amount of data to build innovative analytics applications. He/she must have a PhD in CS/CE with a strong publication record in at least one of the following areas:

- Data mining and statistical learning
- Time series analysis and prediction
- Text mining and information retrieval
- Graph and information network mining
- Large scale optimization and learning
- Signal processing and information theory

NEC Laboratories America is located in Princeton, NJ, home of the Princeton University and one of New Jersey's most beautiful and idyllic towns. The area offers many exciting cultural, entertainment and outdoor activities. The office is minutes away from Princeton University and an hour from New York, Philadelphia, and the Atlantic Ocean. For more information about NEC labs, access <http://www.nec-labs.com/>, and submit your CV and research statement through our career center at https://www.appone.com/MainInfoReq.asp?R_ID=1483423.
EOE-M/F/V/D

NEC Laboratories America, Inc.

Researcher - Computer Security

The Computer Security (CS) Department at NEC Labs America in Princeton, NJ, is seeking outstanding researchers who have passion to build systems that solve

Professional Opportunities

challenging real-world security problems. We are looking for candidates in the areas of security, systems, database, and big-data platforms with a strong publication record.

The CS Department has been developing innovative security solutions and grown NEC's business. We provide a vibrant environment that has produced very strong research results. We value creative research ideas, solid system building experience, and the passion to make research results impact the industry and our society. We also value interdisciplinary research.

Qualifications:

- PhD in Computer Science or Engineering
- Strong publications or system building records
- Experience with real-world system building is a plus
- Experience with big-data platforms such as database or data streaming is a plus
- Experience with security data visualization is a plus
- Experience with using security data analytics with AI or machine learning to build innovative security applications is a plus

NEC Laboratories America is located in Princeton, NJ, home of the Princeton University and one of New Jersey's most beautiful and idyllic towns. The area offers many exciting cultural, entertainment and outdoor activities. The office is minutes away from Princeton University and an hour from New York, Philadelphia, and the Atlantic Ocean. For more information about NEC Labs, please access www.nec-labs.com and submit your CV and research statement through our career center https://www.appone.com/MainInfoReq.asp?R_ID=1475426.

EOE-M/F/V/D

NEC Laboratories America, Inc.

Researcher - Machine Learning

The Machine Learning Department in Princeton, NJ, has openings for researchers with a passion for developing the next generation of machine intelligence. Expertise in machine learning with an proven track record of original research as well as a keen sense for developing practical applications are prerequisites for this position. One opening is at the level of research staff member, the second one for a postdoc position.

At NEC Laboratories America (www.nec-labs.com) we pursue forward looking research, and our nine departments cover a broad range of technologies in computer and communication science. Our focus is on projects in high-impact areas where creative research can provide strong support for NEC's business.

The Machine Learning department has been at the forefront of research in such areas as deep learning, support vector machines and semantic analysis for over a decade. Many technologies developed in our group have been integrated into innovative products and services of NEC, such as systems for recruiting, surveillance, sonar detection, and digital pathology. In addition to contributing to NEC's business, our research is published in premier venues. Among the challenges we are tackling now is how to move machine learning to more abstract reasoning and how this can enable new applications in traffic safety, video surveillance, human resource management, and automation of manufacturing. www.nec-labs.com/research-departments/machine-learning/machine-learning-home

Requirements:

- PhD in computer science, statistics, electrical engineering, or equivalent.
- Research experience in machine learning with strong publication record.
- Strong algorithm and numeric computation background.

- Programming experience in Python, Lua, C++, or any other language.
- Experience with any of the deep learning libraries and platforms, e.g. Torch, TensorFlow, Caffe, or Chainer a plus.

For more information about NEC Labs, please access www.nec-labs.com and submit your CV and research statement through our career center at https://www.appone.com/MainInfoReq.asp?R_ID=1500523.

EOE-M/F/V/D

Northeastern University

Location: Boston Main Campus, Silicon Valley, Seattle, Charlotte

Position Summary: The College of Computer and Information Science (CCIS) at Northeastern University invites applications for positions at the rank of Lecturer/Assistant Teaching Professor/Associate Teaching Professor/Full Teaching Professor in the Computer Science ALIGN Program at our main campus in Boston and for our regional campuses located in Silicon Valley, Seattle and Charlotte, beginning in September 2017 or January 2018. The ALIGN Program offers intellectually curious students who did not study computer science as an undergraduate from all backgrounds (technical to liberal arts) the opportunity to earn a Master of Science in Computer Science (MSCS) and to transition to successful careers in the dynamic field of computer science. Students first take courses in a two semester sequence to give them the background necessary to move into the MS-level classes in computer science. This innovative program is in its 4th year and its graduates now have positions at top tech companies across the country. This program was designed to increase the diversity of thought and demographics in computer science.

We are seeking highly-motivated individuals committed to excellence in teaching.

Professional Opportunities

Full-time appointments at all ranks are renewable, career-focused non-tenure-track positions with responsibilities in teaching and service. Primary responsibilities include teaching graduate courses in the Computer Science ALIGN Program. The successful candidate will create course content and materials and collaborate with colleagues to develop new academic programs and relationships with the business community. Student advising and service to the college and university are an integral component of the position. Opportunities for research and scholarship are possible. Northeastern University is a global university recognized by our renowned co-op program and our focus on experiential learning. We are experiencing dramatic growth in enrollment and academic innovation. The College of Computer and Information Science is one of the fastest growing colleges in the university.

Qualifications: Candidates must hold a PhD in Computer and/or Information Science from an accredited institution by the start date. Teaching experience at the graduate level is strongly preferred. Rank of appointment at either the Lecturer, Assistant Teaching Professor, Associate Teaching Professor, or Full Teaching Professor level will be determined on prior teaching experience and will be discussed with candidates during the interview process. Successful candidates will have demonstrated an expert grasp of knowledge of the field and be creative in their approach to teaching in an environment of experiential education. Strong written, oral and interpersonal skills are required in order to communicate effectively with diverse and exceptional students in person and online.

For more information about the College, please visit <http://www.ccs.neu.edu>. For additional information about the ALIGN Program, please see <https://www.ccis.northeastern.edu/program/align-master-of-science-in-computer-science/>.

Additional Information: Please submit a cover letter of interest highlighting teaching accomplishment and relevant professional experience, a curriculum vitae, and the names and contact information of at least three references.

[Boston Campus](#)
[Silicon Valley](#)
[Seattle](#)
[Charlotte](#)

Compensation is commensurate with qualifications and includes an outstanding benefits package.

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

Northeastern University

Lecturer/Assistant/Associate/Full Teaching Professor

Location: Boston Main Campus, Silicon Valley, Seattle, Charlotte

Position Summary: The College of Computer and Information Science (CCIS) at Northeastern University invites applications for one or more positions at the rank of Lecturer/Assistant Teaching Professor/Associate Teaching Professor/Full Teaching Professor beginning in September 2017 or January 2018 at our campus in Boston and for our regional campuses located in Silicon Valley, Seattle and Charlotte. In Boston we offer undergraduate, masters and PhD programs. In Seattle, Charlotte and Silicon Valley, we offer professional masters programs. We are seeking highly-motivated individuals committed to excellence in teaching. Full-time appointments at all ranks are renewable, career-focused non-tenure-track positions

with responsibilities in teaching and service. Primary responsibilities include teaching undergraduate and graduate courses. We are seeking faculty who can teach in one or more of the following areas: Computer Science, Data Science, Cyber Security, Health Informatics and Information Science. The successful candidate will create course content and materials and collaborate with colleagues to develop new academic relationships within the university and the business community. Student advising and service to the college and university are an integral component of the position. Opportunities for research and scholarship are possible on the teaching track and several of our faculty are research active within the field of Computer Science and within the area of Education Research in Computer Science.

Northeastern University is a global university recognized by our renowned co-op program and our focus on experiential learning. We are experiencing dramatic growth in enrollment and academic innovation. The College of Computer and Information Science is one of the fastest growing colleges in the university. It is home to over 1200+ undergraduate students and 1000+ graduate students. We have three undergraduate majors (Computer, Data and Information Science) and over 26 combined majors (CS+X). In the graduate program we offer masters in CS, Data Science, Information Assurance and Cyber Security, Health Informatics and Health Data Analytics. Many of our programs are interdisciplinary programs with other colleges here at Northeastern.

Qualifications: Candidates must hold a PhD in Computer and/or Information Science from an accredited institution by the start date. Teaching experience at the undergraduate and graduate levels is strongly preferred. Rank of appointment at either the Lecturer, Assistant Teaching Professor, Associate Teaching Professor,

Professional Opportunities

or Full Teaching Professor level will be determined on prior teaching experience and will be discussed with candidates during the interview process. Successful candidates will have demonstrated an expert grasp of knowledge of the field at all levels and be creative in their approach to teaching in an environment of cooperative, interdisciplinary and experiential education. Strong written, oral and interpersonal skills are required in order to communicate effectively with students in person and online.

For more information about the College, please visit <http://www.ccs.neu.edu>.

Additional Information: Please submit a cover letter of interest highlighting teaching accomplishments and relevant professional experience, a curriculum vitae, and the names and contact information of at least three references.

Boston Campus
Silicon Valley
Seattle
Charlotte

Compensation is commensurate with qualifications and includes an outstanding benefits package.

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

Northwestern University

Postdoctoral Fellowships in Computer Science

Northwestern University has recently announced a substantial commitment to grow and transform Computer Science (CS) [<http://www.northwestern.edu/newscenter/stories/2016/06/major-expansion-in-computer-science.html>]. We will add twenty new tenure-track faculty in the next five

years—ten in core Computer Science, and ten collaboratively with other disciplines (CS + X)—as well as a number of non-tenure track teaching faculty.

To support this growth of our faculty, increase our research impact, and meet growing student demand, we invite applications for multiple Postdoctoral Fellowships in Computer Science. Combining research with teaching duties, these positions come with attractive benefits and will have considerable autonomy, while still enabling close mentoring by and collaboration with Northwestern faculty members. The teaching load is one course per quarter over the three quarter academic year (including an advanced-level course in the candidate's research area). These are two-year positions, with the possibility of renewal for an additional year.

Northwestern is a world leading research and teaching university with an unrivaled combination of excellent schools that provide extraordinary opportunities for collaboration across a wide range of disciplines. Located just outside of Chicago – a diverse and culturally vibrant world-class city – Northwestern faculty have ample opportunities to connect with the city's growing technology sector.

We encourage candidates to send applications as soon as possible; appointments begin Fall 2017 quarter. Applications received by March 31, 2017 will be given full consideration; however, the positions will remain open until filled. Applicants should submit (1) a cover letter, (2) a curriculum vitae, (3) three to five letters of reference, (4) statement of research goals, (5) statement of teaching philosophy, and (6) two representative publications. For general questions about the search or application assistance post submission, contact facsearch@eecs.northwestern.edu

Visit our department page to learn more and apply.

<http://www.mccormick.northwestern.edu/eecs/careers.html>

Northwestern University is an Equal Opportunity, Affirmative Action Employer of all protected classes, including veterans and individuals with disabilities. Women, underrepresented racial and ethnic minorities, individuals with disabilities, and veterans are encouraged to apply. Hiring is contingent upon eligibility to work in the United States.

Purdue University

Continuing Lecturer

The Department of Computer Science at Purdue University invites applications for a Continuing Lecturer position beginning August 2017. This position is a non-tenure track instructor position. Duties include teaching and development of computer science undergraduate lecture and laboratory courses. M.S. degree in Computer Science or related field is required, PhD is preferred, with at least 3 years of teaching experience, have familiarity with computer science undergraduate curriculum, strong familiarity with common programming languages, and be able to teach lower division courses. A successful candidate will have interest in and ability to teach large lecture sections, interact with students in small laboratory sections, and train and supervise a large number of undergraduate teaching assistants. A strong commitment to excellence in teaching and exceptional organizational skills is expected.

This position carries competitive salary and benefits. A continuing lecturer will have access to world class departmental and university computing facilities in addition to computing equipment for the preparation and delivery of course material. Further information about the department can be found at <http://www.cs.purdue.edu>.

Professional Opportunities

Review of applications will begin on February 1, 2017, and continue until the position is filled. Applicants are strongly encouraged to apply online at <https://hiring.science.purdue.edu> by submitting a curriculum vitae, a statement of teaching interests and objectives, and names and contact information of at least three references. Alternatively, hardcopy applications can be sent to: Faculty Search Chair, Department of Computer Science, 305 N. University Street, Purdue University, West Lafayette, IN 47907.

A background check will be required for employment. Purdue University is an EEO/AA employer. All individuals, including minorities, women, individuals with disabilities, and veterans are encouraged to apply.

Rutgers University

Teaching Professor or Professor of Practice

The Department of Computer Science at Rutgers University invites applications for one or more positions as Teaching Professor or Professor of Practice in the area of Data Science, at the level of Assistant Professor, although exceptional candidates may be appointed at the rank of associate or full professor. These appointments may begin in either spring or fall semester 2017.

Main Responsibilities will include Teaching, Coordination of our Capstone project series, Design of short term tutorials dedicated to Data Science topics of current interest and Coordination of Data Science Workshops.

Questions can be directed to: James Abello (abello@dimacs.rutgers.edu)

To apply, please go to <http://apply.interfolio.com/37381>.

Rutgers University

Tenure-Track Assistant Professor

The Computer Science Department at Rutgers University invites applications for

several tenure-track Assistant Professor positions focusing on (a) Data Science and AI, and (b) Distributed Networks and Systems. Responsibilities include teaching undergraduate and graduate level courses in various fields of Computer Science and supervision of PhD students based on funded projects. The appointments will start September 2017.

Qualifications: Applicants should show evidence of exceptional research promise with potential for external funding, and commitment to quality advising and teaching. Hired candidates must complete their Ph.D. in Computer Science or a closely related field by August 31, 2017. Applications received by January 13, 2017 will be given priority.

To apply for the Data Science and AI positions, go to: apply.interfolio.com/39330. To apply for the Distributed Networks and Systems position, go to: apply.interfolio.com/39389.

If you have further questions, please email the hiring committee: kagarwal@cs.rutgers.edu.

St. Cloud State University

Assistant/Associate Professor of Software Engineering, Tenure-Track

St Cloud State University, CSIT department seeks tenure track Assistant/Associate Professor in Software Engineering with preferred research emphases in one or more of the following:

- mobile development
- Internet of Things computing
- visualization and gaming
- cyber security
- big data & data analytics systems
- Human Computer Interaction

Applicant review begins March 2017; Open until filled. To apply, visit <http://agency.governmentjobs.com/stcloudstate/default.cfm>.

Texas A&M

Professor of Data Science

The College of Geosciences at Texas A&M is now accepting applications for Professor of Data Science (including big data analytics, information processing, cyberGIS, and/or HPC)

We are seeking an interdisciplinary senior scholar with a record of leading innovative, cross-cutting research programs in data science (including big data analytics, information processing, cyberGIS, and/or high performance computing) pertaining to the Earth System Processes to join our team at the rank of Professor with tenure.

For more information and to apply go to: <https://apply.interfolio.com/38782>

Applicants should have a Ph.D. (or equivalent) and at least 10 years of experience. We expect this individual to take a leadership role in our current efforts to transform the disciplinary strengths at TAMU into an interdisciplinary powerhouse, by nucleating university-wide collaborations from the College of Geosciences in the areas of data science.

Texas A&M University is an affirmative action/equal opportunity employer committed to excellence through the recruitment and retention of a diverse faculty and student body and compliance with the American with Disabilities Act. The University is dedicated to the goal of building a culturally diverse and pluralistic faculty and staff committed to teaching and working in a multicultural environment. We strongly encourage applications from women, underrepresented ethnic groups, veterans, and persons with disabilities. Texas A&M University also has a policy to address the needs of dual-career partners (<https://advance.tamu.edu/dual-career-program-information/>).

Review of applications will begin on March 1, 2017 and continue until the position is filled.

Professional Opportunities

Trinity College, Hartford, Connecticut

Visiting Assistant Professor of Computer Science

Applications are invited for a two-year position of Visiting Assistant Professor of Computer Science to start in Fall 2017.

Applications should be submitted to:
<https://trincoll.peopleadmin.com/>.

Consideration of applications will begin on February 15, 2017.

University of Colorado Colorado Springs

Gallogly Endowed Chair/Professor of Cybersecurity

The University of Colorado Colorado Springs (UCCS) has a job opening for a Gallogly Endowed Chair/Professor of Cybersecurity.

For further information about UCCS and details about the position and the application process, please visit us at www.cu.edu/cu-careers.

University of Georgia

Lecturer Positions in Computer Science at UGA

The Department of Computer Science at the University of Georgia invites applications for two Lecturer positions starting August 2017. The responsibilities of this position include teaching foundational courses in the undergraduate major and periodically teaching a senior/beginning graduate level course in his/her specialty. In addition, this position allows for opportunities to develop new undergraduate courses for our expanding program.

Successful Lecturer candidates should hold a Ph.D. degree in Computer Science or a closely related field. Scholarly credentials should reflect a strong commitment to teaching Computer Science courses at

the undergraduate level. Although not tenure track, it is expected that the person holding this position will remain with the department long term.

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.org), with a student body of over 35,000. 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 country's best fitness and exercise facility for students and faculty. It has been consistently ranked among the top 20 public universities by U.S. News and World Report. Applicants will find UGA and the rapidly growing technology sectors in Athens/Atlanta supportive of professional growth.

To apply, please go to <http://facultyjobs.uga.edu/postings/1859>

The search committee will begin reviewing applications on March 20, 2017, until the two positions are 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. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, gender identity, sexual orientation or protected veteran status.

University of Massachusetts Amherst

Director of Career & Student Development

The College of Information and Computer Sciences is looking for a Director of Career & Student Development.

For a complete position announcement including minimum qualifications and application instructions, please see <https://www.interviewexchange.com/jobofferdetails.jsp?flush=true&JOBID=81393>

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 Positions in Electrical and Computer Engineering

The College of Engineering of the University of Miami (UM in Coral Gables, FL) invites applications and nominations for tenured/tenure-track faculty positions at the assistant/associate/full professor level in the Department of Electrical and Computer Engineering (ECE). The faculty hires will have expertise consistent with at least one of the following college-wide problem-based research clusters with a strong preference for applicants in the first cluster:

- Big Data, Cybersecurity, and/or Informatics
- Cognitive and Brain Engineering
- Sustainable, Resilient and Smart Systems
- Health and Healthcare Systems
- Novel Materials

Applicants must have a strong record of research accomplishments, evidence of leadership and vision, ability to excel in an interdisciplinary environment, and a strong interest in undergraduate and graduate teaching. Applicants must have an earned doctorate in electrical and computer engineering or a related field.

Professional Opportunities

Responsibilities of this position include developing a strong externally-funded research program, fostering undergraduate and graduate student development; teaching and developing new courses, as well as novel teaching methods; assessing student learning; developing new degree offerings that meet the needs of the community and industry; actively engaging with and

participating in professional societies; and strengthening the role of the department and the College in the innovation ecosystem in South Florida.

The University of Miami is a top 50 U.S. research institution committed to attracting a talented workforce to support the common purpose of transforming lives through teaching, research, innovation

and service. Faculty hired will have unique opportunities to contribute to the growth of strategic research areas through collaboration within the cluster and leveraging existing strengths at the University of Miami, which include:

- Unique geographical location providing a gateway to the Americas;
- World-class research faculty at the University of Miami, Miller School of Medicine and the Rosenstiel School of Marine & Atmospheric Science;
- Newly formed state-of-the-art makerspace research and teaching facility supported by a major medical devices company;
- A \$100 million gift to the College of Engineering together with the School of Arts and Sciences.

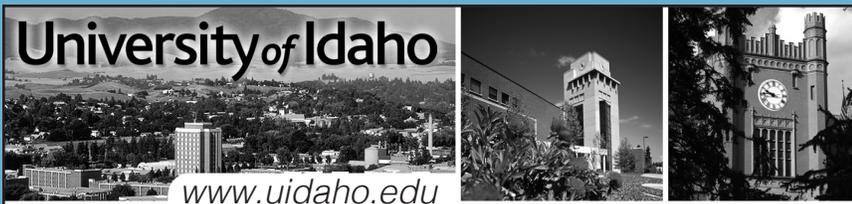
Initial screening of applications will begin immediately, with hires expected to start August 2017. Applications will be accepted until the positions are filled. Applications including curriculum vitae, statement of educational philosophy, and the names of three persons who may be asked for letters of reference; these items should be uploaded through the web portal at <http://coe.miami.edu/facultyopenings>.

The University of Miami is an equal opportunity employer; females, minorities, protected veterans and individuals with disabilities are encouraged to apply. Applicants and employees are protected from discrimination based on certain categories under federal law.

College of Engineering

*Department of Electrical and Computer Engineering
University of Miami, Coral Gables, Florida
Non-Tenure Faculty Opening*

The Department of Electrical and Computer Engineering (ECE) at the University of Miami (UM) invites applications for the position of Lecturer. The successful candidate will demonstrate a commitment to excellence



Clinical Faculty & Regular Faculty - Computer Science

The Computer Science (CS) Department at the University of Idaho (UI) invites applications for two faculty positions at our Coeur d'Alene (CdA) campus. One position is a non-tenure track clinical faculty; the other is a tenure-track assistant professor.

The clinical position requires evidence of significant teaching experience; typical teaching responsibilities include up to three undergraduate classes per semester. This is a permanent promotable faculty position.

The tenure-track assistant professor requires evidence of effective teaching, research and service. They have charge of instruction in assigned classes, including determination of course objectives and subject matter. They are expected to demonstrate the ability to conduct and direct scholarly activities, and to provide professional service. Startup funding is provided to help develop a research program.

UI is the state's land-grant institution, located in Moscow, with centers throughout the state, including scenic CdA, 90 miles north. These positions are part of a state-funded expansion of the CS program to CdA.

A requirement for either of these positions is a PhD in CS or a closely related field. Experts in the areas of robotics, artificial intelligence, embedded systems and cybersecurity are especially encouraged to apply.

We encourage candidates from underrepresented US minority groups and/or females to apply. UI is an affirmative action/equal opportunity employer and does not discriminate on the basis of age, color, disability, gender, gender identity, marital status, national or ethnic origin, race, religion, sexual orientation or veteran status.

Further Details:

Clinical Faculty
Posting Number: F000531P
<http://apptrkr.com/963602>

Regular Faculty - Computer Science
Posting Number: F000533P
<http://apptrkr.com/963526>

An Equal Opportunity/Affirmative Action Employer

Professional Opportunities

in undergraduate teaching and augment courses with professional experience.

Applicants must have at least an MS degree in Software Engineering or a related field with a minimum of one year of industrial experience. The applicant must have experience in one or more of the following Computer Engineering-related subject areas: Software Architecture and Testing, Software Development, Software and Cloud Computing Security, and Programming.

To apply, please upload your application including curriculum vitae and statement of teaching through the web portal at <http://coe.miami.edu/facultyopenings>

University of the Pacific

Tenure Track Assistant Professor in Cybersecurity / Computer Science

The University of the Pacific and the School of Engineering and Computer Science is launching a new Master of Science in Cybersecurity degree. This hands-on, laboratory-intensive program features a highly technical, interdisciplinary curriculum rooted in the fields of Computer Science and Computer Engineering. Applications are invited for an enthusiastic and skilled educator to be a founding faculty member in developing this new program. This is a full-time tenure track position in the Department of Computer Science at the Assistant Professor level, starting in August 2017.

Applications are accepted electronically at <https://pacific.peopleadmin.com/postings/8681>

Pacific is an AA/EOE employer and does not discriminate on the basis of any protected category.

University of Richmond

Visiting Instructor of Computer Science

The University of Richmond invites applications for a Visiting Instructor position in Computer Science to begin August 2017.

For additional information, and to apply, please visit: <https://richmond.csod.com/ats/careersite/JobDetails.aspx?id=1139>

University of Utah

Assistant Professor/Associate Professor

The University of Utah is seeking to hire an outstanding tenure-track faculty member in image analysis at the Assistant or Associate Professor level. The position is a joint effort between the Scientific Computing and Imaging (SCI) Institute and the School of Computing or another College of Engineering Department serving as the tenure home. Ideal candidates might have backgrounds in computer science, electrical and computer engineering, or bioengineering or related field.

The SCI Institute has established itself as an internationally recognized leader in visualization, scientific computing, and image analysis applied to a broad range of application domains. The School of Computing is an exciting, growing school with a 50-year history of excellence in computer science education, innovation, and research.

The University of Utah is located in Salt Lake City, the hub of a large metropolitan area with excellent cultural and recreational opportunities. Additional information about our research and our current faculty can be found at <http://www.sci.utah.edu> and <http://www.cs.utah.edu>.

Candidates may apply through the following URL: <http://utah.peopleadmin.com/postings/59857>

Review of applications will begin after January 31 and will continue until the position is filled.

Venture Labs

Member of Technical Staff

Drawing on its Bell Labs and Applied Communication Sciences heritage, Vencore Labs delivers advanced applied research and engineering to enable government agencies, utilities and commercial enterprises to fully exploit the future of communications, data analytics and cyber security. From smart grid to smart phones, intelligent highways to intelligent battlefields, Vencore Labs' 200 scientists, engineers and analysts are consistently creating generation-after-next technologies and solutions. In doing so, our labs are helping to transform traditional government research. We connect our customers to advanced research and technology helping them to develop solutions to their toughest challenges.

We are currently seeking research scientists in the following 4 key areas:

- Cyber Security
- Machine Learning
- Data Analytics
- Wireless Networking.

Ideal candidates will have a graduate degree in either Computer Science or Electrical Engineering. We have the flexibility to offer positions at various levels, depending upon the amount of experience, education, and capability of each candidate. Due to the requirements of some of our federal government customers, candidates should be US Citizens. Most positions are based at either our Basking Ridge or Red Bank offices in New Jersey, though we also have positions available in the Washington, D.C. metro area. Further qualifications are specific to each job and can be found at the link below.

See a complete list of open positions and apply online here: <https://careers-vencorelabs.icims.com/>

Professional Opportunities

Virginia Tech

Postdoctoral Research Associate in causal learning and automated scientific discovery

A 1-year postdoc position (with the possibility of renewal for an additional year) is available at Virginia Tech in the area of causal learning and automated scientific discovery. The position start date is June 1, 2017. The successful applicant will explore the formal connections between causal learning in the graphical causal modeling tradition and the algorithmic determination of natural kinds (classes of causal structures that

support law-like generalizations useful for prediction and control).

To view the official position announcement or to apply, see <https://listings.jobs.vt.edu/postings/72301>.

Yahoo Research

Research Scientist

Yahoo Research is growing its strategic research teams to enable the company to build new products and platforms that our customers need, now and in the future. We have exciting job openings

in several technical focus areas (data mining, optimization, machine learning, computational economics) that are located in our New York City office located one block from Times Square.

The full job description is available here <http://careers.yahoo.com> (job number 1742024) or https://tas-yahoo.taleo.net/careersection/yahoo_us_cs/jobdetail.ftl?job=1742024

Please send your CV and a short letter of interest to Maxim Sviridenko (sviri@yaho-inc.com).

Adjunct Faculty-Data Science

The Data Science program is actively seeking applicants for a part-time Adjunct Teaching Professor to teach Data Science-related courses, possibly leading to a full-time Instructor or Professor of Practice position.

There is potential need for graduate courses to be taught on campus, off campus in a corporate setting, or online. Specific topics of interest include: Introduction to Data Science, Statistical Methods for Data Science, Big Data Analytics, Big Data Management, Data Visualization, Mathematical Modeling, Regression Analysis. Course descriptions are listed in the WPI Graduate Catalog <http://www.wpi.edu/academics/catalogs/grad/flip/?page=1>

WPI is interested in applicants with teaching and project advising expertise in all areas of Data Science, but is particularly interested in applicants with industrial experience and strong background in programming, statistical methods for data analytics, predictive modeling, business intelligence, big data cleaning and integration, database management, machine learning, and other big data analytics experience.

Extensive industrial experience would be a plus so to expose students to real-world big data problems and case studies and to be versed in the best practices in industry and other organizations.

The Data Science program at WPI, a collaboration between Computer Science, Mathematical Sciences and the Robert A. Foisie School of Business, has undergone major growth since its inception in 2014 supported by a cluster hire of several faculty in Data Science and closely related disciplines last year.

The ideal applicants should have an advanced degree in Computer Science, Mathematical Sciences, Statistics, or a closely related field, the potential for excellence in teaching, and practical experience in a Data Science related field.

Principal Duties and Responsibilities

- There is a potential need for both undergraduate and graduate courses to be taught on campus, off campus in a corporate setting or online. The goal is to integrate a successful applicant into related activities at WPI with teaching assignments matched with the background and availability of the applicant. Specific areas of immediate need are:

1. Big Data Analytics
2. Data Visualization
3. Big Data Management
4. Introduction to Data Science
5. Statistical Methods for Data Science

Position Requirements

- An ideal applicant will hold an advanced degree in Computer Science or related discipline with significant practical experience in the relevant area, as well as having successful undergraduate or graduate teaching experience. Abilities to teach in other areas is also valued.

Part-time faculty positions are created to provide an available applicant pool for the department. Positions will be filled on an as needed basis. Start dates will vary by course and semester.

Qualified applicants will be contacted by the academic department when an opening is anticipated. Your application will remain in the pool until the posting closes. If you wish to be considered for positions beyond that date you must reapply.

To apply, visit: <http://apptrkr.com/951045>

We are an Equal Opportunity Employer and do not discriminate against applicants due to age, race, color, religion, sex, sexual orientation, gender identity, national origin, veteran status or disability. We are looking for individuals who value creativity, diversity, inclusion, and collaboration.



WPI