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With undergraduate enrollment in computing majors growing, up 24% from last year as reported in this year’s Taulbee Survey, efforts focused on recruiting groups traditionally underrepresented in computing, such as women and members of certain minority groups, is especially important for diversity. Recruiting students into undergraduate computer science programs has been an ongoing area of research for many scholars and organizations given the demand for more workers trained in science, technology, engineering and math (STEM) and the increasing reliance on high-tech devices in our homes and workplaces. Despite these efforts, new challenges persist as novel influencers of prospective students emerge and cultural discourses of technical work, higher education, and employability shift—and, therefore, our messaging to prospective students must shift. In addition, new tools, such as social media and online video channel creation tools, morph and emerge, forcing researchers to constantly rethink the challenges and opportunities that exist in recruiting students into computing programs. In this article, we briefly review the background on efforts to recruit students into computing programs before discussing two specific, interconnected areas for opportunity: messaging to prospective students and using resources from influencers to increase the odds that these messages will resonate with the widest possible audience.

Expanding the Pipeline – How to Recruit More Diverse Students: Challenges and Opportunities

By Colleen Arendt and Rebecca Dohrman

Another message focuses on the fact that workers with STEM degrees earn more even when they do not work in a STEM occupation (Langdon, McKittrick, Beede, Khan, & Doms, 2010). Despite the fact that these messages are well received by some individuals, for others, these messages are not sufficient to recruit them into a computing program.

Creative Effective Messaging

For women and underrepresented groups, general messages about high salaries and excellent job placement rates are important, but may not be sufficient to encourage them to matriculate. Certainly, students from some underrepresented groups face a variety of barriers to inclusion, such as family pressure to begin work immediately after high school, family pressure to stay near one’s hometown rather than moving to a university with a strong program in computer science, or a lack of knowledge about possible computing careers. These challenges must be responded to in terms of messaging. Cohoon (2011) argues that while many messages about computing appeal to both women and men, such as economic security and job satisfaction, there are additional messages that can be specifically appealing to women. For instance, Cohoon (2011) found that women responded more strongly than men to messages that positioned computing as a profession that helped others and as a profession where self-expression was possible. For instance, this might mean that instead of talking about hacking as a possible profession on a brochure, roadshow, or admissions presentation about the computing department, instead focus on the way that computing and robotics makes it possible for people who do not have full use of their hands to regain that ability, thanks to the contemporary work on robotics. Second, demonstrating computing as self-expression may be accomplished by including messages in marketing materials and admissions presentations about the range of computer animation for children and adults that intersects with the movie and
television industry or the current efforts made in wearable technology that intersects with the fashion industry. These examples illustrate computing as both helping others and allowing self-expression.

In addition to the language used in your messaging, the media representations that are included in your department website, presentations, and on social media also communicate a great deal about what type of students you have in your program and who you seek to recruit to your program, which then may impact the confidence level that prospective students, particularly individuals from underrepresented groups, have toward their ability to complete your major (Cheryan, Plaut, Handron, & Hudson, 2013). Using resources such as the #WOCinTech stock photo set (available here for free) and the Microsoft DigiGirlz profiles of women coders (available here) are wonderful ways to ensure that the video and graphical elements of your department’s presence online, in printed marketing materials, and in formal presentations is sending the message that you want to recruit students, including women, into your program.

**The Importance of Influencers**

In addition to the messages being sent, programs must consider the range of influencers who affect prospective students’ decision whether or not to choose computing for their major. Traditional agents of socialization, such as family members (especially parents), are still very strong with contemporary prospective students, but in addition to those traditional influencers, many celebrities are crafting resources to help influence young people to consider computing. For instance, model Karlie Kloss released a YouTube video last year that talked about coding as a superpower and encouraged young women to consider a career in computing. The video has more than 100,000 views and, given her influence in the lives of many young women, it serves as a great resource for computing programs to help prospective female students feel engaged in the study of computing. In addition, useful resources for reaching out to underrepresented minority students include TECHNOLOchicas.org, a website and video database geared toward young Latina women to engage them in computing, YouTube videos by both President Obama and actress Jessica Alba, in which they share their own interest in learning computing (Obama video here, Alba video here). These resources highlight the importance of well-known influencers in the lives of young people and provide ready-to-use formats for computing departments to link to on social media or their websites, or perhaps even to include in admissions presentations to prospective students.

**An Important Strategy Resource for Recruiting**

The National Center for Women in Information Technology Extension Services Program (NCWIT-ES), founded by Lecia Barker and Joanne Cohoon, has produced a series of documents meant to help recruit students, particularly women, into undergraduate computing programs. Tailoring messages to underrepresented groups across all marketing materials, social media, and online platforms is an important first step, and training faculty and any individuals, such as your admissions staff, to tailor their messages about your program and department is also very important.

NCWIT-ES has produced a high-quality workbook (available here) to help walk a department through the many possible interventions and steps you can take to recruit more women into your computer science or engineering program. It is an excellent resource to deepen your understanding about the many possible audiences, ways to target them, and how to evaluate your efforts. It also helps you to think through your
existing assets and evaluation practices to ensure your overall recruiting strategy is on target and has the best opportunity for success.

Another important resource from NCWIT is the Aspirations in Computing Program. It includes an awards ceremony and talent development pipeline that takes place in local communities across the country where female high school students are honored for their aspirations and achievements in computing. Corporations in the local communities act as sponsors and universities often provide scholarships to Aspirations winners if they attend the university and study computing science. Women who win this award or a runner-up for it are able to apply for the NCWIT AspireIT program, which provides these students with funds to create “near-peer” programs for younger students to engage and interest them in computing. Many Aspirations winners participate in the creation of these programs for younger students, and it is a wonderful way to keep them engaged in the computing community.

NCWIT also offers a Collegiate Award for female college-aged computing students that provides winners with a cash prize, a trip to the NCWIT Summit, and continued encouragement to persist in computing.

In short, recruiting women and underrepresented groups into your computing major is an essential component of any recruiting strategy for computing departments, and many strategies can help you in this effort. Numerous resources are available to aid you in this effort and to ensure that your efforts to recruit new students are inclusive of the many different types of students from many backgrounds and interests that exist. This work may be tedious at times, but we believe it is essential to the future of computing education in the United States.

References:

About the Authors: Colleen Arendt (Ph.D., Purdue University) is an assistant professor of communication at Fairfield University. Her research focuses on gendered careers, such as the military and nursing, and how to recruit more women into STEM. Rebecca Dohrman (Ph.D., Purdue University) is an assistant professor of communication at Maryville University and an Extension Services Consultant with the National Center for Women in Information Technology. Her research focuses on the socialization of children, particularly young girls, into high-tech careers and the ways that we can use narrative storytelling to improve math engagement for young children.
A Comparison of East Asian, South Asian, Southeast Asian, and White Undergraduate Student Familial Support

By Burçin Tamer, CERP Research Scientist

Education research focusing on diversity in computing in the United States often considers Asian/Asian American students and White students to be “advantaged” demographic groups. However, Data Buddies survey data collected during the fall of 2015 indicate Asian/Asian American versus White students’ experiences pursuing computing degrees may differ. For instance, CERP examined undergraduate students’ family support for pursuing a computing degree. Whereas South Asian students’ level of family support was statistically equivalent to that of White students, East Asian and Southeast Asian students’ family support was significantly lower than that of their White peers, \( p \leq .05 \). These findings suggest Asian/Asian American and White students may overlap in some experiences in computing, but this overlap may depend on students’ cultural identities within their Asian/Asian American identities.

Notes. For this analysis, only students who reported a single race/ethnicity among the following were included: White, East Asian, South East Asian, or South Asian. There were \( n = 6,223 \) such students (65% of the full undergraduate dataset of \( N = 9,721 \)). The racial/ethnic breakdown was: 4,228 White (68%), 1,070 East Asian (e.g., Chinese, Japanese, Korean, Taiwanese: 17%), 359 Southeast Asian (e.g., Cambodian, Vietnamese, Hmong, Filipino: 6%), 566 South Asian (e.g., Indian, Pakistani, Nepalese, Sri Lankan: 9%). The following four items were used to calculate a measure of family support: My family encourages me to pursue a computing degree; My family questions why I would pursue a computing degree (reverse scored); My family wonders why I invest so much time and effort into studying computing (reverse scored); My family emphasizes the value of earning a computing degree. Cronbach’s alpha = .76. Bars in the graphic above represent the percentage of students in a given race/ethnicity category who responded in each level of a 5-point Likert scale, (1) strongly disagree, (2) disagree, (3) neither agree nor disagree, (4) agree, (5) strongly agree. Students who responded “neither agree nor disagree” were not included in the graphic but were included while calculating the percentages. The differences illustrated in the graph were tested using an Analysis of Variance, and follow up Dunnett’s tests comparing each Asian/Asian American group to White students. Analyses used an alpha level of \( p \leq .05 \) to determine statistical significance.

This info-graphic is brought to you by the CRA’s Center for Evaluating the Research Pipeline (CERP). CERP provides social science research and comparative evaluation for the computing community. To learn more about CERP, visit our website at http://cra.org/cerp/.
The organizing committee for the Computing Community Consortium (CCC) sponsored Computer-Aided Personalized Education has released its workshop report.

The workshop, held in November 2015, brought together over 50 researchers in the fields of education, computer science, human-computer interaction, and cognitive psychology to address the challenges and future directions of computing-based educational tools. This growing agenda in computing research includes formalizing tasks such as assessment and feedback as computational problems, developing algorithmic tools to solve resulting problems at scale, and incorporating these tools effectively in learning environments.

The report examines emerging trends, such as logical reasoning, machine learning, student-computer interaction, and learning science in order to develop a research roadmap that could enable computer-aided personalized education technology to positively impact society.

The roadmap identifies an abundance of promising research topics that should be explored in the next several years. A few of these topics are:

- Mental models for feedback: Developing tools that not only give feedback based on the student submission, but also returns feedback based on a modeling of the state of the student, such as learning style and past knowledge.
- Multi-modal interfaces: Improvements in sensor technology are leading to new modes of human computer interaction, such as by text, speech, and touch. These kinds of natural modes of interactions are very important for developing personalized educational tools.
- Long-term learning outcomes: The integration of cognitive science and computing tools can help to improve not only learning over a course or semester, but also produce long-term learning outcomes.

To learn more about the workshop’s recommendations, please read the full report.

Stay tuned to the CCC Blog for reflections from the CCC Symposium on Computing Research: Addressing National Priorities and Societal Needs!
NSF-Funded Vision Assistance Technology Amazes at the 2016 CNSF Exhibition

By Brian Mosley, CRA Policy Analyst

On April 26th, the Coalition for National Science Funding (CNSF), an alliance of more than 140 professional organizations, universities, and businesses, held its 22nd Annual Capitol Hill Exhibition. CNSF supports the goal of increasing the federal investment in the National Science Foundation’s research and education programs, and the exhibition itself is a great way to show members of Congress and their staff what research the American people have funded.

This year the Computing Research Association, a member of CNSF, sponsored the research group led by Vijaykrishnan Narayanan at Penn State University, which demonstrated multiple pieces of technology under “Visual Shopping Assistance for Person with Visual Impairment.” Narayanan was assisted in exhibiting his group’s research by some of his students and colleagues, including Nandhini Chandramoorthy and Peter Zientra, Ph.D. students at Penn State; Ikenna Okafor and Gus Smith, undergrad researchers at Penn State; Kevin Irick, a former student and faculty member at Penn State and current founder and CEO of SiliconScapes; and Laurent Itti, professor of computer science, psychology, and neuroscience at the University of Southern California. The group’s research has been conducted under their “Visual Cortex on Silicon” project, which is funded by NSF’s Expedition in Computing program.

The group demonstrated two pieces of technology at the exhibition: a smart glove with tactile feedback and a visual assistance eyepiece. The smart glove was demonstrated by Ikenna Okafor and Gus Smith, the above photo, with Smith and Córdova, shows the device. You can view a demonstration of the glove on the research group’s website (first video). The device has a camera in the palm and interprets the visual data to detect a desired object and direct the user to it using tactile feedback in the glove. The eyepiece, demonstrated by Irick and Zientra, interprets data to read the labels of products in a grocery store aisle and directs the user, using audio directions, to a specific item. You can see Irick demonstrating the glasses, amidst a mock grocery aisle, in the photo above. Both of these devices have major applications for visually impaired people, as well as other computer vision uses.

The final demonstration was performed by Laurent Itti of the University of Southern California, a member of the Visual Cortex on Silicon project. Itti demoed his visual attention, face detection, and object recognition algorithm, which is able to detect both faces and movement of people. Pointing a miniaturized camera at the passing crowd at the exhibition, the system could detect the faces of anyone facing the camera and highlighted them with different colored boxes on the computer screen.

cra.org/crn
All of this work is supported from the CISE directorate at NSF. Each of the three projects were well received by the attendees of the exhibition. In fact, the students fielded questions from Congressional staffers; NSF program officers; CISE Assistant Director Jim Kurose; and even NSF Director France Córdova.

A number of other organizations demonstrated NSF-funded research involving displays at the event. From the Massachusetts Institute of Technology’s “Listening to Einstein’s Universe with LIGO,” to the American Economic Association’s “The Future of Data for Social Science Research,” to the American Mathematical Society’s “On the Movement of Cells, Birds, Fish and Other Agents: Mathematical Modeling in Biology and Ecology,” the exhibition featured a great display of the different types of research being supported by NSF. Look here to see a list of some of the participating organizations and what a few of the exhibitors were presenting.

Laurent Itti, right, explains his research to Jim Kurose, assistant director of CISE at NSF.

From left to right: Carol Frost, division director for the Division of Earth Sciences at NSF; Vijaykrishnan Narayanan, Penn State; Laurent Itti, University of Southern California; and Jim Kurose, assistant director for CISE at NSF.

From left to right: Peter Zientra, Penn State; Nandhini Chadramoorthy, Penn State; Ikenna Okafor, Penn State; Jim Kurose; assistant director for CISE; and Gus Smith, Penn State.
Technology is now enabling youth to engage in learning opportunities through their communities. In Seattle, young people are mapping the learning resources within their communities. In Chicago and several other cities, a social learning platform called iRemix connects youth with extended learning and mentorship opportunities. In New York, a major science museum is re-imagining itself as serving the needs of low-income youth by engaging with churches, community spaces, and neighborhood activists in coordinated city-scale literacy and STEM learning events.

Building on these cases, cyberlearning leaders can see the potential for technology platforms to enrich community spaces with new opportunities for learning. But what research and development activities are most needed to rapidly advance a focus on learning within the broader smart and connected community movement?

To answer this question, SRI International hosted an innovation lab as part of the Center for Innovative Research in Cyberlearning (CIRCL), which is sponsored by the National Science Foundation. SRI worked with KnowInnovation to facilitate the event. Approximately 30 participants were selected for the lab through an application process, based on their complementary expertise and their willingness to collaborate with others on challenging problems. In addition, four expert mentors were invited to guide the participants in their development of research agendas, and four speakers gave short, provocative talks to stimulate new thinking. To further generate novel ideas, the attendees also watched a film, Web, that raises questions for the digital learning community and attended an innovative digital art space.

The workshop was unusually broad, pulling together a research base covering:

- the learning sciences
- informal and community-based learning spaces
- the design of mobile, augmented reality, and other novel user experiences
- the analysis of learning data and large-scale community data
- youth development
- social activism in urban and rural communities

The participants worked intensively each day in new collaborative groupings. They followed an agenda that was intended to produce a major step forward each day, from building deep awareness of the knowledge in the room, to developing a broad range of innovative ideas, and eventually toward presentations of collaborative research agendas that could progress beyond the workshop.

A research community is born!
By the end of the week, the excitement had grown, new collaborative relationships had emerged, and any initial uncertainty was replaced with concrete plans for moving forward. One team planned to expand an existing community-scale learning tool across different cities and to investigate how different contexts change the way the tool is used. Other teams focused on how to make smart city data more useful to youth, parents, educators, mentors, and others who address learning issues in their communities.

Teams also investigated new design possibilities. One team was curious about how communities could provide more spaces for learning computational thinking and left with plans to prototype activities where youth could write code to create playful, digitally enhanced experiences in their community parks and art installations. Another design team considered how the availability of 3D printers could spread learning based on historical artifacts from museums to schools and other non-museum spaces. Teams also contemplated deep, hard-to-solve issues, such as how communities could better understand and serve the emotional needs of young people who live in challenging circumstances.

Looking back on the week, one message was clear: By focusing on unlocking the potential of youth, smart and connected communities can tackle important learning challenges while also making communities better places to live.

Thus, the vitality of a community depends not only on how it leverages smart and connected tools to solve its transportation, energy, and water problems, but also how it uses these tools to improve its opportunities for learning. Future work will need to connect with urban planners and smart city developers to build relationships to ensure this important work becomes part of a broader conversation. CIRCL has published a primer on smart and connected communities for learning, which is available here: http://circlcenter.org/smart-and-connected-communities-for-learning/.

For more information on CIRCL, contact Jeremy Roschelle at jeremy.roschelle@sri.com.

About the Author

Jeremy Roschelle directs the Center for Technology in Learning at SRI International and leads the community center for all NSF-funded cyberlearning projects, called the Center for Innovative Research in Cyberlearning (CIRCL).
CRA Welcomes Satoe Sakuma as its 2016 Eben Tisdale Fellow

By Satoe Sakuma, 2016 Eben Tisdale Fellow

I am currently a rising senior at Boston University, double majoring in computer science and international relations with a focus in East Asian economics. I am very interested in high tech public policy, especially areas of cybersecurity, because it allows me to utilize both my areas of studies. My two very different majors are finally coming together during my last year as an undergraduate student through my acceptance into the senior honors program, which requires a year-long research project culminating with a thesis and defense. My thesis will examine data privacy laws in East Asia.

At Boston University, I am heavily involved in extracurricular activities that consume most of my time outside of the classroom. I was recently elected president of the Asian Studies Initiative at Boston University, which acts as a liaison for the faculty and students to promote Asian Studies through informative events, and Women in Computer Science, which provides a community as well as technical training for women in a male-dominated field. I am also involved in Boston University High Performance Computing (BUHPC), which competes in international competitions about the optimization of supercomputer applications. Through BUHPC, we ranked in the top 16 of 148 teams worldwide, and I was fortunate enough to travel to Wuhan, China to compete in the Asian Student Cluster competition in April.

Besides my hectic academic life, I find balance in yoga, traveling, and enjoying my time in nature. My travels this year include not only China, but also visiting the Burj Khalifa in Dubai, UAE and scuba diving in Bali, Indonesia. Although Boston does not provide lush forests, the past three summers I was able to escape the busy city life in exchange for fishing in Kodiak, Alaska. If you think fishing is boring, like I used to, I highly recommend fishing for salmon and halibut in Alaska, which somehow never fails to make fishing thrilling.

I am honored to be an Eben Tisdale Fellow this summer and am really looking forward to working with CRA.
2016 BECA Winners: Martha Kim and Hanna Wallach

CRA-Women (CRA-W) recently announced that Martha Kim and Hanna Wallach are the recipients of this year’s 2016 Borg Early Career Award (BECA). The award honors Anita Borg, who was an early member of CRA-W and an inspiration due to her commitment to increasing the participation of women in computing research. The annual award is given to a woman in computer science and/or engineering who has made significant research contributions and who has contributed to her profession, especially in the outreach to women.

Kim is committed to promoting diversity in computer science. She has been especially active in high school outreach, participating in high-school oriented conferences such as “Code Like A Girl,” serving on a working group that reviewed and revised her own high school’s approach to STEM education, and acting as a faculty mentor for the Artemis Project, a five-week summer school at Brown University.

Wallach is committed to increasing diversity and has worked for more than a decade to address the underrepresentation of women in computing. She co-founded two projects, which are the first of their kind, to increase women’s involvement in free and open source software development: Debian Women and the GNOME Outreach Program for Women. She also co-founded the annual Women in Machine Learning Workshop, which is now in its 11th year.

New CRA Board Member: Mario A. Nascimento

As of July 1, Mario A. Nascimento will serve as CACS/AIC’s representative on the CRA’s Board of Directors. He will replace Carey Williamson, who we would like to thank for his term of service on the CRA Board.

Mario A. Nascimento is a full professor at the University of Alberta’s Department of Computing Science and since July 2014 serves as chair of the Department. Before joining the University of Alberta in 1999, he was a researcher with the Brazilian Agency for Agricultural Research and also an adjunct faculty member with the Institute of Computing of the University of Campinas. Mario has also been a visiting professor at the National University of Singapore’s School of Computing (Fall 2005), Aalborg University’s Department of Computer Science (Winter 2006), LMU Munich (Fall 2013-Winter 2014) and at the Federal University of Ceará in Brazil (2013 and 2014). In 2007 he was recognized as a Senior Member of the ACM.

His main research interests lie in the areas of Spatio-Temporal Data Management and Data Management for Wireless Sensor Networks, and according to Google Scholar (as of June 2016) his publications have been cited 2,900+ times, earning him an H-index of 27. Besides often serving as a program committee member for the main database conferences, and as (co-) chair of several workshops and symposia, Mario has also served as ACM SIGMOD’s Information Director (2002-2005) and ACM SIGMOD Record’s Editor-In-Chief (2005-2007). He is currently a member of the VLDB Journal’s Editorial Board and of the SSTD Endowment’s Board of Directors. Finally, he finds it rather amusing writing about himself in the third person.
CRA Conference at Snowbird 2016

CRA is excited for the 2016 Conference at Snowbird just a few weeks away. We have an excellent line up of speakers and sessions.

Please visit http://cra.org/events/snowbird-2016/#agenda to check out the program.

We would like to thank the following organizations for their generous contributions:

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ACM General Election Results

ACM recently announced its newly elected officers. Vicki L. Hanson, Rochester Institute of Technology and University of Dundee, was elected president. Cherri M. Pancake, Oregon State University, was elected vice president, and Elizabeth Churchill, Google, was elected secretary/treasurer. CCC Vice Chair Elizabeth Mynatt, Georgia Tech, and former CRA board member Eugene H. Spafford, Purdue University, were among five individuals elected to be members at large, serving from July 1, 2016 to June 30, 2020.

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ACM-W supports, celebrates, and advocates internationally for the full engagement of women in all aspects of the computing field.

women.acm.org

Be Creative. Stay connected. Keep inventing.
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Column Editor

Expanding the Pipeline
Patty Lopez, Intel
Professional Opportunities

College of William and Mary
Visiting Instructor or Assistant Professor of Computer Science

The Department of Computer Science at the College of William and Mary invites applications for a one year, non-tenure-track visiting faculty position that will begin August 10, 2016. We seek an individual with expertise in areas relevant to our undergraduate curriculum. The successful candidate will be expected to be an effective teacher and will have a 3-3 teaching load. Required: A Master’s degree is required at the time appointment begins (August 10, 2016). Preferred: A Ph.D. or ABD is preferred at the time appointment begins (August 10, 2016).

Candidate must apply online at https://jobs.wm.edu. Submit a curriculum vitae and a cover letter including statement of research and teaching interests. You will be prompted to submit online the names and email addresses of three references who will be contacted by us with instructions on how to submit a letter of reference. For full consideration, submit application materials by the review date, May 15, 2016. Applications received after the review date will be considered if needed and the position will remain open until filled.

Information on the degree programs in the Department of Computer Science may be found at www.cs.wm.edu.

The College of William & Mary values diversity and invites applications from underrepresented groups who will enrich the research, teaching and service missions of the university. The College is an Equal Opportunity/Affirmative Action employer and conducts background checks on applicants for employment.

Lecturer in Discipline Positions in the Department of Computer Science

The Department of Computer Science at Columbia University in the City of New York invites applications for multiple faculty positions at the rank of Lecturer in Discipline beginning in the 2016-17 academic year. Lecturers in Discipline are full-time non-tenure-track faculty members whose primary responsibility is teaching. The Department of Computer Science is committed to hiring outstanding teachers to support the growing needs of its exceptionally strong undergraduate program. Teaching responsibilities for lecturers include courses throughout the undergraduate computer science curriculum with a typical teaching load of two courses per semester.

For additional information and to apply, please see: http://engineering.columbia.edu/faculty-job-opportunities.

Applications should be submitted electronically and include the following: a cover letter, current CV, teaching statement, brief summary of research, and three letters of recommendation. At least two of the letters of recommendation must address teaching ability. Review of applications will begin immediately and will continue until the positions are filled.

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

A Ph.D. or DES degree at the time of appointment is required. Columbia is an affirmative action/equal opportunity employer with a strong commitment to the quality of faculty life.
Professionals Opportunities

Professor in Software Technology

The School of Computer Science and Communication at KTH Royal Institute of Technology invites applications for a newly created professorship in Software Technology supported by the Wallenberg Autonomous Systems Program (WASP), a 10 year research program funded by a 1.300 MSEK donation by the Knut and Alice Wallenberg Foundation, and with additional 500 MSEK funding provided by industry and participating universities.

We are looking for a person capable of leading the development of an industrially well-supported research group in Software Technology at the Department of Theoretical Computer Science.

The successful candidate will have an outstanding research record, demonstrated through a clear and innovative research vision along with research results, including software, and publications in conferences and journals of top quality. She/he should have a documented successful academic leadership, shown through influential research projects and research groups, and through collaboration with and impact on industry and society, including the academic world.

The professorship is part of a larger effort to strengthen software technology across several schools at KTH. This includes new center constructions where the successful applicant is expected to take a leading role, and the likely creation of additional new positions at more junior level over the coming years.

The position is supported by a starting grant of roughly 25 MSEK, adequate to finance a research group core consisting of several postdocs/PhD students over a period of 4 years.

KTH, www.kth.se, and the CSC school, www.csc.kth.se, offers excellent working conditions and an attractive research environment, including a rich entrepreneurial tradition and a considerable potential for collaboration with world leading industrial companies across a range of branches. Stockholm is the center of a dynamic and attractive region with excellent living conditions for adults and children alike and a rich cultural scene.

For more information about the WASP program, see http://wasp-sweden.org.

For a more detailed announcement including information on how to apply, please visit www.kth.se/en/om/work-at-kth/lediga-jobb.

Application deadline: 22 August 2016 11:59 PM CET
Research Faculty Positions in Computer Science

The Department of Computer Science at National University of Singapore (NUS) invites applications for multiple positions of Research Assistant Professor. This is a 3-year term appointment with the prospect of transitioning into a tenure-track assistant professor position.

Candidates should demonstrate strong research potential and commitment to teaching. Successful candidates will develop an independent research program and have a reduced teaching load of 1 course per academic year.

We encourage outstanding candidates in all areas of computer science to apply, but especially those in the following areas:
- cyber security,
- machine learning,
- robotics, computer vision,
- systems, particularly, embedded systems,
- data analytics, particularly, statistical and algorithmic foundations, visual analytics

The Department of Computer Science at NUS is highly ranked internationally. It enjoys:
- ample research funding,
- full scholarship support provided by the university for all PhD students,
- moderate teaching load,
- excellent facilities, and
- extensive international collaborations.

The department covers all major research areas in computer science and boasts a thriving PhD program that attracts the brightest students from the region and beyond. More information is available at http://www.comp.nus.edu.sg.

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

Interested candidates are invited to send, via electronic submission, the following materials to the Chair of the CS Faculty Search Committee, Prof. David Hsu, at csrec@comp.nus.edu.sg:
- A cover letter that clearly indicates primary research interests
- Curriculum Vitae
- A teaching statement
- A research statement

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

Michigan Technological University

Department of Computer Science

Visiting Assistant Professor/Instructor Position

The Department of Computer Science at Michigan Tech (mtu.edu/cs) invites applications for a Visiting Assistant Professor or Instructor position beginning August 2016. Applicants must have a master’s or doctoral degree in a computing-related discipline such as Computer Science, Computer Engineering, or Software Engineering. Successful candidates are expected to provide excellent teaching. Applicants are encouraged to explore the research interests of our faculty for possible collaboration. The expected teaching load is two to three courses per semester. The term of appointment for this
New Jersey Institute of Technology

Dean: College of Computing Sciences

New Jersey Institute of Technology (NJIT) seeks applications and nominations from the academic and corporate sectors for the position of Dean of the Ying Wu College of Computing Sciences (CCS).

The College, established in 2001, is comprised of the Department of Computer Science, the Department of Information Systems, and the Information Technology Program. The College enrolls approximately 2385 students, including 1390 undergraduates, 925 master students, and 70 doctoral students, these students representing about 21 percent of NJIT’s student body. They are taught by 34 tenured and tenure-track faculty and 20 full-time, non-tenure track faculty. Undergraduate degree programs in Computer Science, Information Systems, and Information Technology are ABET accredited. CCS’s current research strengths include, but are not limited to, Cyber Security and Networking, Data Analytics, Cyber-Human Systems, and Game Design. Based on the 2015 Shanghai Rankings, TheBestSchools.org released its top 100 Computer Science programs in the world, with NJIT’s program ranked 47 in the United States and 100 globally. The Princeton Review chose NJIT as one of the top 50 undergraduate schools for Game Design in 2016.

Responsibilities: The Dean serves as the chief executive officer of the College with primary responsibility for enhancing its national leadership in computing research and education. The Dean is a senior academic officer who reports to the Provost and works closely with the President, the deans of the other five colleges and senior officers to advance the university’s mission. Specific responsibilities include strategic planning, corporate outreach, fundraising leadership to attract resources necessary to sustain and enhance the College, program evaluation and development, and recruitment of faculty. The Dean...

Secondary Computer Science Teacher – 9-12
Scout from University of California

JOB #: 1606364
Starting Salary Range: $55,500 - $77,700 annually. Salary commensurate w/qualifications and experience.

Scout from University of California is an online education program that is available for middle and high school students, teachers, schools, and school districts. Scout offers “a-g” approved college preparatory and College Board-approved Advanced Placement courses online to support our mission of reaching educationally disadvantaged students across the state of California. By doing so, Scout raises student achievement levels and helps close achievement gaps. The incumbent will prepare course materials and certify that materials adhere to state and Common Core Standards. Course materials include, but are not limited to, quizzes, exams, readings, activities, discussions, projects, course descriptions, syllabi, and teacher/student guides. The incumbent must have an educational background in computer science and hold a California single-subject credential that allows them to teach AP Computer Science and College Prep computer science. Experience with the AP Computer Science course as a teacher and an advanced degree in CS is desirable. Under the direction of the Executive Director of Scout and the Scout Teacher Supervisor, this position will ensure the integrity of courses by focusing on curricular quality and will serve as a high-quality online teacher, working with students from across California and beyond.

Worksite Location: 3175 Boxer Avenue, Santa Clara.

Qualifications include:
- Bachelor’s Degree.
- Master’s Degree or California Professional Clear Single Subject Teaching Credential in a related field.
- Strong knowledge of online teaching and learning strategies, pedagogy, and best practice.
- Strong organizational skills to prioritize a diverse workload and maintain a strong commitment to quality standards.
- Develops and maintains relationships through regular interaction and communication with all relevant stakeholders.

Position is open until filled; Initial Review Date: 05-15-2016

APPLICANTS ARE REQUIRED TO USE THE UCSC ON-LINE PROCESS

View full job description and access on-line application: http://apprkr.com/799599

To ensure review of application materials by the hiring unit they must be submitted electronically via the Staff Employment Opportunities website: (http://jobs.ucsc.edu/) or before the initial review date. Computers are available at the UCSC Staff Human Resources office located at 1201 Shaffer Road, Santa Cruz. For further information or to request disability accommodation call 831-459-2309. Hearing impaired are encouraged to use the California Relay Service 800-735-2922. The University of California, Santa Cruz is an Equal Opportunity Employer.
Professional Opportunities

manages the college’s finances and budget and leads CCS’s marketing and visibility initiatives. The Dean is also expected to foster interdisciplinary education and research programs as a priority of the University’s 2020 Vision Strategic Plan.

Qualifications: Candidates must possess an earned doctorate and a distinguished record of teaching, research, publication, funding, and service that merits appointment as a full professor with tenure in CCS. We seek an individual who can span disciplinary boundaries to build alliances and partnerships for CCS not only with other colleges, but also with private sector organizations and government agencies. The successful candidate will be a dynamic leader with a demonstrated ability to promote successful research, service, teaching and learning outcomes and offer innovative solutions to the challenges facing higher education today and into the future.

Application: To apply, please visit https://njit.jobs and search for posting # 603260.

Deadline for applications to be submitted in order to guarantee search committee’s full consideration is August 20, 2016. Please address any questions regarding this search to caudill@njit.edu or gwang@njit.edu.

To build a diverse workforce, NJIT encourages applications from individuals with disabilities, minorities, veterans and women. EEO employer.

Yale University
Postdoctoral Fellow

The Computer Science Department at Yale invites applications for a Postdoctoral Fellow position in computer networks. The postdoctoral fellow is expected to lead the design and implementation of a new networking programming system, with our growing networking and systems group. Appointments will be for one year with renewal based on performance. Applicants should have (or be close to obtaining) a Ph.D. in Computer Science or related areas.

Application Instructions: Applications should be submitted by sending email to Professor Y. Richard Yang (yry@cs.yale.edu). Please include a CV, statement of research and contact information for three references.