

COMPUTING RESEARCH NEWS



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

JUNE 2021 Vol. 33 / No. 6



CRN At-A-Glance

CRA Executive Director Job Description and Advertisement

CRA is looking for its next Executive Director! Apply or nominate a colleague today.

see page 2 for full article

Tale of Two Bills: Competing Visions of NSF's Future Make Their Way Through Congress

Over the last two months, competing visions of the future of the National Science Foundation have been making their way through the House and Senate. And much like the famous opening line of Tale of Two Cities, their paths could not be more dissimilar. On the House side, [the National Science Foundation for the Future Act](#) has made deliberative and bipartisan progress through the House Science, Space, and Technology Committee. Meanwhile, on the Senate side, the Endless Frontier Act has been introduced; pulled, reworked, and reintroduced; heavily amended during a marathon Senate Commerce Committee hearing; and is now before the full Senate undergoing another round of amendments. Very different paths.

see page 16 for full article

Registration Open for First CRA-Industry Committee Virtual Roundtable: Corporate Responsibility and Computing Research

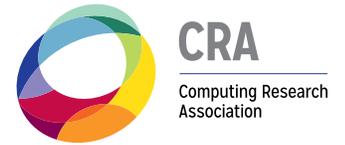
The CRA-Industry Committee is hosting a series of virtual roundtable meetings focused on issues of interest to our computing research industry partners. The first roundtable, "Corporate Responsibility and Computing Research" will be held on July 14, 2021 from 4:00-5:30 PM ET. In order to attend this event, please register [here](#).

see page 3 for full article

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CRA Executive Director Job Description and Advertisement



The Computing Research Association (CRA)—the nation’s premier member organization of academic departments, laboratories, and industry centers aimed at advancing computing research to change the world—seeks an inclusive, transparent, and enterprising leader to serve as its next Executive Director (ED). CRA counts among its members more than 200 North American organizations active in computing research: academic departments of computer science and computer engineering; laboratories and centers in industry, government, and academia; and affiliated professional societies. The next Executive Director has a unique opportunity to lead CRA to effect change that benefits both computing research and society at large.

Formed in 1972, CRA is the largest organization of its kind in the country. It has continued to grow and offer new programs and services under an ever-widening umbrella of committees and strategic initiatives collectively focused on supporting pathbreaking, expansive, and inclusive computing research in North America. Its complex mission is supported by diverse funding streams, and its operations and strategic directions serve a wide range of stakeholder groups including academic research programs, industry groups, and the federal government. As computing becomes increasingly ubiquitous across society, CRA will play an ever more important role in fostering connection with its constituent partners; engaging with societal issues like privacy, security, and equity; challenging norms and rigid

hierarchies that affect the computing research pipeline; and nucleating ideas, strategies, and policies that emphasize the transformative capacities of socially responsible computing to improve the world.

In leading and sustaining CRA’s work, the ED will report to the Executive Committee of CRA’s Board of Directors. The ED will play a robust role to build on CRA’s existing renown and further grow the national visibility and leadership of the organization at this time of critical challenge for the computing field and for society. CRA seeks as Executive Director a highly accomplished, energetic, and articulate leader who brings a strong computing science background, knowledge of the computing research community, and the capacity to interact diplomatically and effectively with a wide variety of individuals. They must possess a broad and inclusive view of the computing fields, solid management capabilities and experience, outstanding communication skills, deep understanding of the funding mechanisms that affect computing research, significant leadership and change-management experience, and the capacity to lead, mentor, and guide a highly capable and accomplished staff.

CRA has retained Isaacson, Miller, a national executive search firm, to assist in the recruitment of the Executive Director. All inquiries, nominations/referrals, and CVs with cover letters should be sent electronically to the following via <http://www.imsearch.com/7971>.

John Muckle, Partner
Vijay Saraswat, Managing Associate
Raul Bernal, Senior Associate
Isaacson, Miller
263 Summer Street, Floor 7
Boston, MA 02210

<http://www.imsearch.com/7971>

Registration Open for First CRA-Industry Committee Virtual Roundtable: Corporate Responsibility and Computing Research



The CRA-Industry Committee is hosting a series of virtual roundtable meetings focused on issues of interest to our computing research industry partners. The first roundtable, "Corporate Responsibility and Computing Research" will be held on July 14, 2021 from 4:00-5:30 PM ET. In order to attend this event, please register [here](#). **Please forward this to your appropriate colleagues and encourage them to attend!**



CRA-Industry Virtual Roundtable on Corporate Responsibility and Computing Research

July 14, 2021

4:00 PM – 5:30 PM Eastern Time

Today, more companies are deliberately extending their social responsibility initiatives at the behest of investors, customers, and employees. How should industry be viewing and factoring societal equity into its research agendas? This roundtable will explore the concept, principles, and best practices of socially responsible computing research. Ideally, participants will gain a sense of considerations that might apply to their strategic research planning by developing a broad framework for the concept of research equity that goes beyond recent examples in machine learning.

About the CRA-Industry Committee

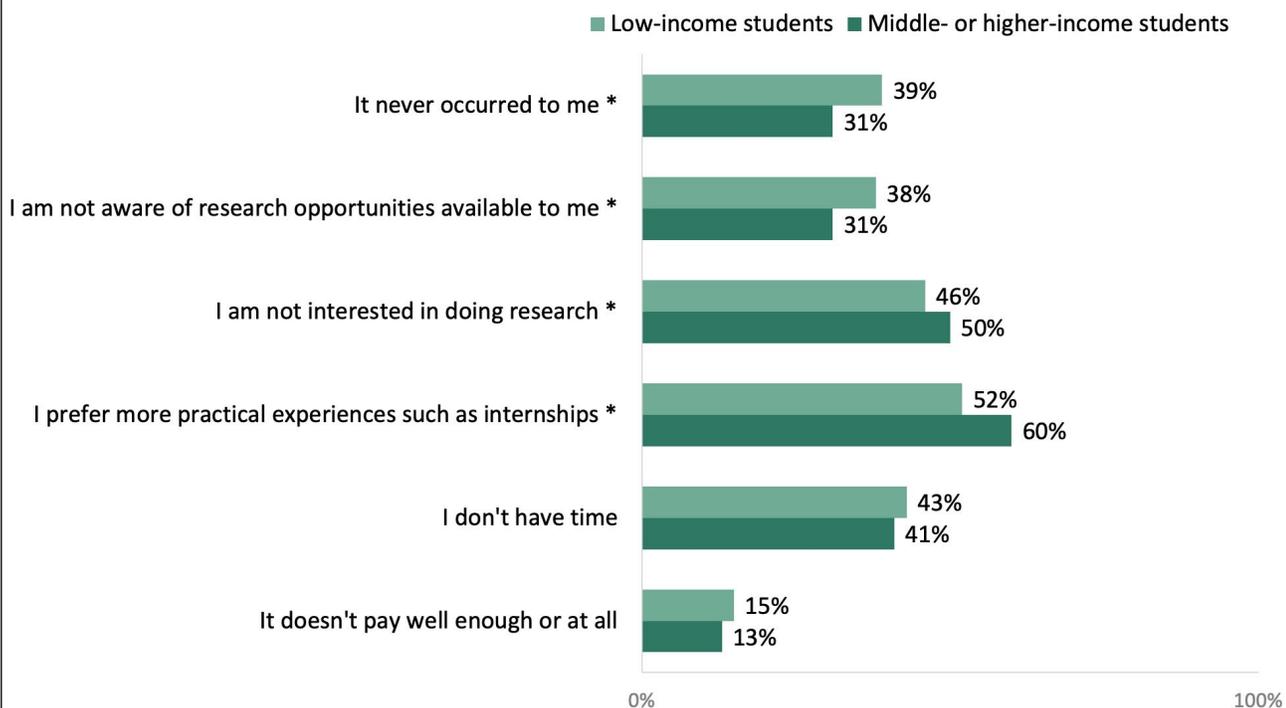
CRA-Industry, a standing committee of the Computing Research Association (CRA), was created in the Fall of 2020 with the goal of reaching out to industry partners involved in computing research and giving them new opportunities to convene and connect on topics of mutual interest. The committee also facilitates the interaction between industry partners and other organizations deeply involved in computing research, including academic institutions and government agencies.

You can learn more about CRA-Industry by visiting our [web page](#) and/or signing up for our [mailing list](#).

Compared to Peers, Students from Low-Income Backgrounds Report Less Awareness of - but Greater Interest in - Formal Research Experiences

By Kristi Kelly, Research Associate

Reasons Cited for Not Participating in Undergraduate Research, By Student SES



Source: Data Buddies Survey (DBS) 2020, Center for Evaluating the Research Pipeline, Computing Research Association
Note: * indicates differences at $p < .05$, according to z tests. See Notes section below for additional information about measures and sample sizes.

Previous CERP analyses have broadly examined why undergraduate students do not participate in formal research experiences. Findings have shown that the most commonly-cited reasons for non-participation include preferring a more applied research experience such as an internship, lack of awareness of research opportunities, and not having enough time.

The current analyses begin to unpack these findings by looking at whether reasons for not participating in research vary as a function of students' backgrounds. Specifically, using 2020 Data Buddies Survey data, CERP examined whether students from self-reported low-income backgrounds cite the same reasons for

non-participation in formal research experiences as their peers who come from middle- or high-income backgrounds.

Findings suggest that there are systematic differences in the reasons low- and high-income undergraduates are not engaging in research. Low-income students seem to be less informed about research and its potential applicability to them:

- Low-income students are significantly more likely than their peers to report that participating in research never occurred to them.
- They are also more likely than higher-income peers to report being unaware of research opportunities available to them.



Low-Income Students (*continued*)

At the same time, lack of interest in research seems to be less of an issue for low-income students than it is for higher income students:

- Low-income students are significantly less likely than their peers to say they are not interested in research.
- They are also less likely to express a preference for “more practical” experiences like internships.

Interestingly, concerns about the amount these research experiences pay, as well as concerns about having enough

time to participate in research, did not differ as a function of students’ socioeconomic background.

Taken together, these findings suggest promising opportunities for engaging more low-income students in formal research. These data suggest that low-income students are more open to these experiences than their higher-income peers, but they need more information about research opportunities, coupled with individualized encouragement to participate.

Notes:

The survey data analyzed for this infographic were collected by [Center for Evaluating the Research Pipeline via The Data Buddies Project](#).

Students responded to this question in the 2020 survey: “During your college career so far, have you participated in any formal research experiences? Formal research includes any experience you applied for and through which you worked closely with a mentor or research advisor.” Students who responded “No, I have NEVER participated in a formal research experience while I have been in college and I do not plan to” were asked: “Which of the following reasons explain why you do not plan to participate in a formal research experience? Choose up to 3 responses.”

Self-reported socioeconomic background was based on the following question: “Growing up, what do you think your family’s socioeconomic status was?” Respondents were classified as low-income if they chose either of the following responses: “Poor,” “Below average/ Lower middle class.” Respondents were classified as middle- or higher-income if they chose any of the following: “Average/middle class,” “Above average/Upper middle class,” or “Wealthy.” Responses shown are based on $N = 868$ low-income respondents and 2,306 middle- or higher-income respondents. Responses for low-income versus middle- or higher-income respondents were compared using a z-test with statistical significance indicated for $p < .05$.

This analysis 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. Subscribe to the CERP newsletter [here](#). Volunteer for Data Buddies by signing up [here](#).

This material is based upon work supported by the National Science Foundation under grant numbers CNS-1246649, DUE-1431112, DUE-1821136, and/or CNS 2036717. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Expanding the Pipeline: CRA-WP Virtual Grad Cohort Workshop for Women



CRA-WP
Computing Research Association
Widening Participation

By Susan Rodger, Maria Gini and Julia Hirschberg, CRA-WP Grad Cohort for Women Program Chairs, and Heather Wright, CERP

On April 23-24, CRA-WP was thrilled to hold the 2021 Grad Cohort Workshop for Women after canceling the previous year's event because of the COVID19 pandemic. Grad Cohort for Women 2021 was quite different than previous Grad Cohorts as it was held virtually using the Socio event platform. The workshop still consisted of advice panels by professors and research scientists, research discussion sessions, a keynote talk, one-on-one mentoring sessions, an exhibit hall, and even food breaks complete with a customized snack box delivered in advance. Attendance was strong with 375 students, 35 speakers and mentors, 36 sponsors and 14 staff present.

Rewards



- Love of research and freedom to do research that you want
- Working on research with graduate students
- Involving undergraduates in research
- Making friends across the world
- Variety and flexibility of work
- Creating the kind of career that you want – Independent (as long as you meet expectations)



CRA-WP
Computing Research Association
Widening Participation

Kim Hazelwood in the panel on “Academic Career Paths and Job Search”

Grad Cohort for Women is designed with three parallel tracks for graduate students in their first three years, with each track consisting of panels on advice appropriate for the year. Using Socio, we held several virtual panels, some pre-recorded and some live, and all sessions featured live Q&A. For first-year graduate students, there were panels on networking, finding and developing a relationship with an advisor, summer internships, and presentation and communication skills. For second-year graduate students, there were panels on the research mindset, finding a research topic, building your self-confidence, and publishing your research. For third-year graduate students, there were panels on preparing your thesis proposal, industry versus academic research positions, PhD career paths and job search, and entrepreneurship.



Expanding the Pipeline *(continued)*

Industrial Research Career Differences and similarities with academia

- Research Agenda**
 - May depend on company's interests
 - May be more applied than pure
 - May change as company changes
- Publishing Papers**
 - Typically encouraged – extent varies
 - Not always a requirement for success
- Creating Patents**
 - Strongly encouraged
 - A requirement for success
- Research Funding**
 - Internal project approval
 - External funding for joint University-Industry initiatives
- Tech Transfer**
 - Critical goal for industrial researchers - Typically hard!
 - Patents and open source contributions count
- Participate in conferences**
 - Technical Program Committees
 - Organization committees
 - Standards Committees
- Teaching/Students**
 - Interns and student mentorship
 - University collaborations
 - Ph.D./Masters student advising
 - Teaching opportunities

AJ Brush and Lisa Wu Wills during the panel on “Industry Vs. Academic Research Positions”

Several sessions brought all the students together. For example, there were panel discussions on strategies for human-human interaction, and balancing graduate school and personal life. Margo Seltzer (University of British Columbia) presented the keynote session, during which she talked about how life is like a three-legged stool, with the three legs representing the aspects of research, school and personal life. The legs may change what they represent and change their length and significance as you move through life, making the stool wobbly in different ways.



Expanding the Pipeline *(continued)*

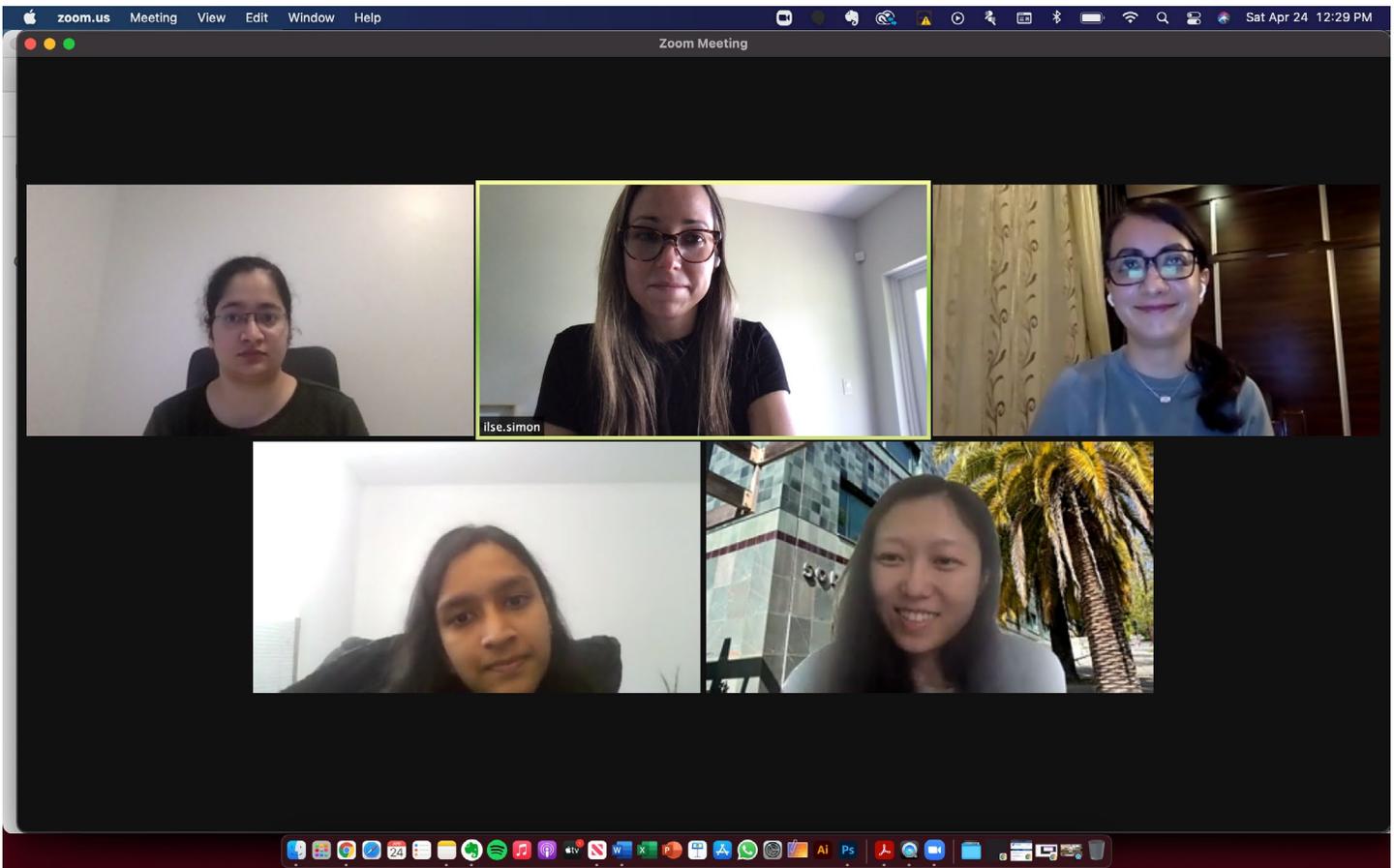


A tech talk group on Health

Grad Cohort typically has a large poster session with mostly third-year graduate students presenting their research, and people wandering through the poster room. This year, we still wanted to create some type of personal interaction with students presenting their research. Instead of a virtual poster session which had many limitations, we decided to hold small group tech talks. We asked students who wanted to present their research to prepare a one page flyer and a five minute talk about their work. Using their research areas, they were divided into 31 groups of 4-5 students with a moderator. Other students not presenting could join the tech talk group, which had a limit of ten people total. This small group size gave everyone a chance to introduce themselves and meet other students in their research area. Then the students described their research work and answered questions.



Expanding the Pipeline *(continued)*



A tech talk group on Network Architecture/OS

The participants were also able to engage with mentors and sponsor representatives. During one-on-one mentoring students had a chance to talk about issues or have their CV reviewed by a mentor. Students provided preferences from a list of mentors and were matched to several mentors for Zoom meeting appointments. Because this was held virtually, we were able to include additional mentors who were not speakers. During the workshop, there were open hours when students could enter the virtual exhibit hall and join a sponsor video room to talk with sponsor representatives. This gave students a chance to meet face-to-face with booth representatives and recruiters.

The CRA [Center for Evaluating the Research Pipeline \(CERP\)](#) provided evaluation of the event. CERP received feedback from 59% of attendees (222 of 375) on the workshop logistics, the Socio platform, and many other aspects of the workshop such as the opportunities for mentorship. Results indicated that overall, attendees were satisfied with many aspects of the workshop, with the special treat for attendees (snack box) being a clear winner with 98% of attendees expressing some level of satisfaction. Regarding Socio, 79% of respondents expressed satisfaction with the platform for the workshop. For the one-on-one mentoring, 92% of those who participated indicated they found the mentoring moderately or extremely useful for their professional development; this finding was true for both the first and second day mentoring opportunities. Further, 83% found the tech talks moderately or extremely useful for their professional development, with 93% indicating they were able to network with other attendees during the tech talks at least a little bit. Finally, CERP found that 34% of the attendees were able to connect with at least one sponsor during the workshop.



Expanding the Pipeline *(continued)*

with nearly 80% of respondents finding that time moderately or extremely useful. Taken together, these results from CERP suggest that the necessary changes Grad Cohort made to transition into a virtual format were successful overall.

We appreciate and thank all our sponsors for their contributions. Grad Cohort for Women would not be possible without their support.

Platinum

ACM, CRA, NSF, US Department of Energy

Gold

Facebook, Microsoft, NSA, Private Foundation

Silver

Access Computing, Dataminr, Google, Intel, SIGARCH ACM, SIGCHI ACM, SIGCOMM ACM, SIGGRAPH ACM, SIGHPC ACM, SIGIR ACM, SIGKDD ACM, SIGOPS ACM, SIGPLAN ACM, SIGSOFT ACM, WICARCH

Bronze

AnitaB.org, Bloomberg, D.E. Shaw Research, IEEE-CS TCCA, Raytheon BBN Technologies, SIGACT ACM, SIGCSE ACM, SIGMICRO ACM, SIGMOBILE ACM, SRC

Supporter

Oak Ridge National Lab

The Grad Cohort Workshops are supported in part by the Department of Energy (DE-SC0021328) and the National Science Foundation (CNS-1840724). Any opinions, findings, conclusions or recommendations expressed are those of the author(s)/presenter(s) and do not necessarily reflect the views of the Department of Energy or the National Science Foundation.

CRA-WP Presents the 2021 CRA-WP Early Career Awards Honoring Skip Ellis and Anita Borg



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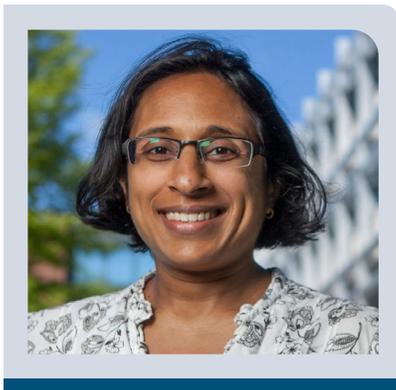
CRA-WP is honored to announce the recipients of the 2021 Skip Ellis Early Career Award and Anita Borg Early Career Award.



Sanmi Koyejo

Sanmi Koyejo of the University of Illinois, Urbana-Champaign has been selected as the 2021 **Skip Ellis Early Career Award** recipient. This year, recognition was warranted beyond the award winner, and **Shiri Azenkot** of Cornell University was selected to receive the **Distinction of Honorable Mention** for this award. CRA-WP is proud to celebrate the growing representation in computing research by highlighting Shiri Azenkot for her significant contributions and outreach in the field.

The Skip Ellis Early Career Award honors the late Clarence “Skip” Ellis, who was the first African-American to earn a Ph.D. in computer science and the first African-American to be elected a Fellow of the ACM. This award is given annually by CRA-WP to a person who identifies as a member of a group underrepresented in computing (African-American, Latinx, Native American/First Peoples, and/or People with Disabilities), who has made significant research contributions in computer science and/or engineering and has also contributed to the profession, especially in outreach to underrepresented demographics.



Finale Doshi-Velez

Finale Doshi-Velez of Harvard University has been selected as the 2021 **Anita Borg Early Career Award** recipient.

The Anita Borg Early Career Award honors the late Anita Borg, who was an early member of CRA-W (before it became CRA-WP) and is inspired by 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 the profession, especially in the outreach to women.

It is encouraging to see the growth in the excellent computing researchers from diverse backgrounds committed to scholarly excellence and equal opportunity. Thank you to everyone who took the time to submit a nomination for this year and we hope to see many more in the next cycle.

CCC Announces New Council Members Starting July 2021

By CCC Staff

The **Computing Research Association** (CRA), in consultation with the **National Science Foundation** (NSF), has appointed five new members to the **Computing Community Consortium** (CCC) Council:

- **Sven Koenig**, University of Southern California
- **Chandra Krintz**, University of California, Santa Barbara
- **William Regli**, University of Maryland
- **Mona Singh**, Princeton University
- **Ufuk Topcu**, University of Texas at Austin

Beginning July 1, the new members will each serve three-year terms. **The CCC Council** is comprised of 20 members who have expertise in diverse areas of computing. They are instrumental in leading CCC's **visioning programs**, which help catalyze and enable ideas for future computing research. Members serve staggered three-year terms that rotate every July.

The CCC encourages participation from all members of the computing research community in our various activities. Each year, the CCC issues a call for proposals for visioning activities. Each spring, the CCC issues a call for nominations for Council members effective the following July. For more information, please visit the **CCC website** or contact Dr. Ann Schwartz Drobnis, CCC Director, at adrobnis@cra.org.

Bios of New CCC Council Members

Sven Koenig

Sven Koenig is a Professor of Computer Science at the University of Southern California. Most of his research centers around techniques for decision making (planning and learning) that enable single situated agents (such as robots or decision-support systems) and teams of agents to act intelligently in their environments and exhibit goal-directed behavior in real-time, even if they have only incomplete knowledge of their environment, imperfect abilities to manipulate it, limited or noisy perception or insufficient reasoning speed. Sven is a fellow of the Association for the Advancement of Artificial Intelligence (AAAI), the Association for Computing Machinery (ACM), the Institute of Electrical and Electronics Engineers (IEEE), and the American Association for the Advancement of Science (AAAS).



Chandra Krintz

Chandra Krintz is a Professor of Computer Science at the University of California, Santa Barbara (UCSB). She joined the UCSB faculty in 2001 after receiving her M.S. and Ph.D. degrees in Computer Science from the UC San Diego. Chandra's research focuses on programming and distributed systems, including techniques that improve performance, reduce energy consumption, and automate development and deployment of software. Recently, her work has focused on the intersection of IoT, edge and cloud computing, and data analytics with applications in farming, ranching, and conservation science (cf SmartFarm and WTB). Chandra has mentored over 70 undergraduate and graduate students, has published numerous research articles, participates in efforts to broaden participation in computing,





New Council Members *(continued)*

and is the progenitor of the AppScale project. Chandra's efforts have been recognized with a NSF CAREER award, the CRA-W Anita Borg Early Career Award (BECA), and with a UCSB Sustainability Champion and Academic Senate Distinguished Teaching Award.

William Regli

William "Bill" Regli is the Executive Director of the University of Maryland's University-Affiliated Research Center for the Department of Defense: The Applied Research Laboratory for Intelligence and Security (ARLIS). From 2014 to 2017 Regli served on the leadership team of the Defense Advanced Research Projects Agency (DARPA), as Deputy Director (9/14-12/16) and Acting Director (1/17-7/17) of the Defense Sciences Office (DSO); then as Special Assistant to the DARPA Director (8/17-12/17). Bill holds a Ph.D. in Computer Science from the University of Maryland at College Park and Bachelor of Science degree in Mathematics from Saint Joseph's University. He is an elected Senior Member of both the Association of Computing Machinery (ACM) and of the Association for the Advancement of Artificial Intelligence (AAAI). As well as Fellows of both the Computer Society of the Institute of Electrical and Electronics Engineers (IEEE) and the American Association for the Advancement of Science (AAAS).



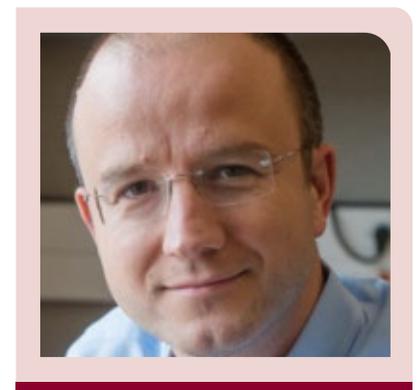
Mona Singh

Mona Singh is a Professor of Computer Science and the Lewis Sigler Institute for Integrative Genomics at Princeton University. She received her A.B. and S.M degrees from Harvard University, and her Ph.D. from MIT, all three in computer science. She works broadly in computational molecular biology, as well as its interface with machine learning and algorithms. Much of her work is on developing algorithms to decode genomes at the level of proteins and she is especially interested in developing data-driven methods for predicting and characterizing protein sequences, functions, interactions and networks, both in healthy and disease contexts. She is Editor-in-Chief of the Journal of Computational Biology. Among her awards are the Presidential Early Career Award for Scientists and Engineers (PECASE) in 2001, and the Rheinstein Junior Faculty Award from Princeton's School of Engineering and Applied Science in 2003. She was named a Fellow of the ACM in 2019, and of the ISCB in 2018.



Ufuk Topcu

Ufuk Topcu is an Associate Professor in the Department of Aerospace Engineering and Engineering Mechanics at The University of Texas at Austin. He is a core faculty member at the Oden Institute for Computational Engineering and Sciences. Ufuk obtained his Doctor of Philosophy degree from the University of California, Berkeley in 2008. Prior to joining The University of Texas at Austin, he was with the Department of Electrical and Systems Engineering at the University of Pennsylvania. He was a postdoctoral scholar at California Institute of Technology until 2012. Ufuk's research focuses on the theoretical and algorithmic aspects of design and verification of autonomous systems, typically in





New Council Members *(continued)*

the intersection of formal methods, reinforcement learning and control theory. He takes a relatively broad view on autonomy and tend to tackle abstract problems motivated by challenges cutting across multiple applications of autonomy. His research contributions have been recognized by the NSF CAREER Award, the Air Force Young Investigator Award, the IEEE CSS Antonio Ruberti Young Researcher Prize, and Oden Institute Distinguished Researcher Award.

The CCC and CRA thank those council members whose terms end on June 30 for their exceptional dedication and service to the CCC and to the broader computing research community.

- **Mark D. Hill**, Microsoft and University of Wisconsin, Madison
- **David Parkes**, Harvard University
- **Shwetak Patel**, University of Washington
- **Ronitt Rubinfeld**, Massachusetts Institute of Technology
- **Suresh Venkatasubramanian**, University of Utah

Learn more about the CCC Council and its members on [our webpage!](#)



CRA Education Committee Selects New Graduate Fellow



Nadia Ady

CRA's **Education Committee** (CRA-E) has recently selected its 2021 CRA-E Graduate Fellow – Nadia Ady from the University of Alberta.

Nadia (she/they) is a Ph.D. Candidate in Computing Science at the University of Alberta supervised by Patrick Pilarski. She earned her B.Sc. in Honors Mathematics at the University of Alberta in 2014. Nadia is thrilled to have this opportunity to serve CRA and gain experience collaborating towards an important purpose: ensuring that students receive opportunities to discover research and how fulfilling it can be.

Over her academic career, Nadia has been involved with student development as a writing tutor, teaching assistant, undergraduate conference organizer, instructional designer, and supervisor of high-school student research. She is passionate about helping others communicate their research and ideas effectively and was recently recognized as an outstanding reviewer at both NeurIPS 2020 and ICLR 2021.

Nadia researches curiosity: working both to better understand what happens when humans are curious and how we might offer machine learning algorithms the benefits of curiosity. When she's not busy succumbing to her curiosity about curiosity, you can often find Nadia involved in west coast swing—dancing, studying, or teaching.

The CRA-E **Graduate Fellows Program** was established in 2015 to give graduate students the opportunity to contribute to **CRA-E projects** and promote computer science research and undergraduate education at the national level.

Tale of Two Bills: Competing Visions of NSF's Future Make Their Way Through Congress



By Brian Mosley, CRA Senior Policy Analyst

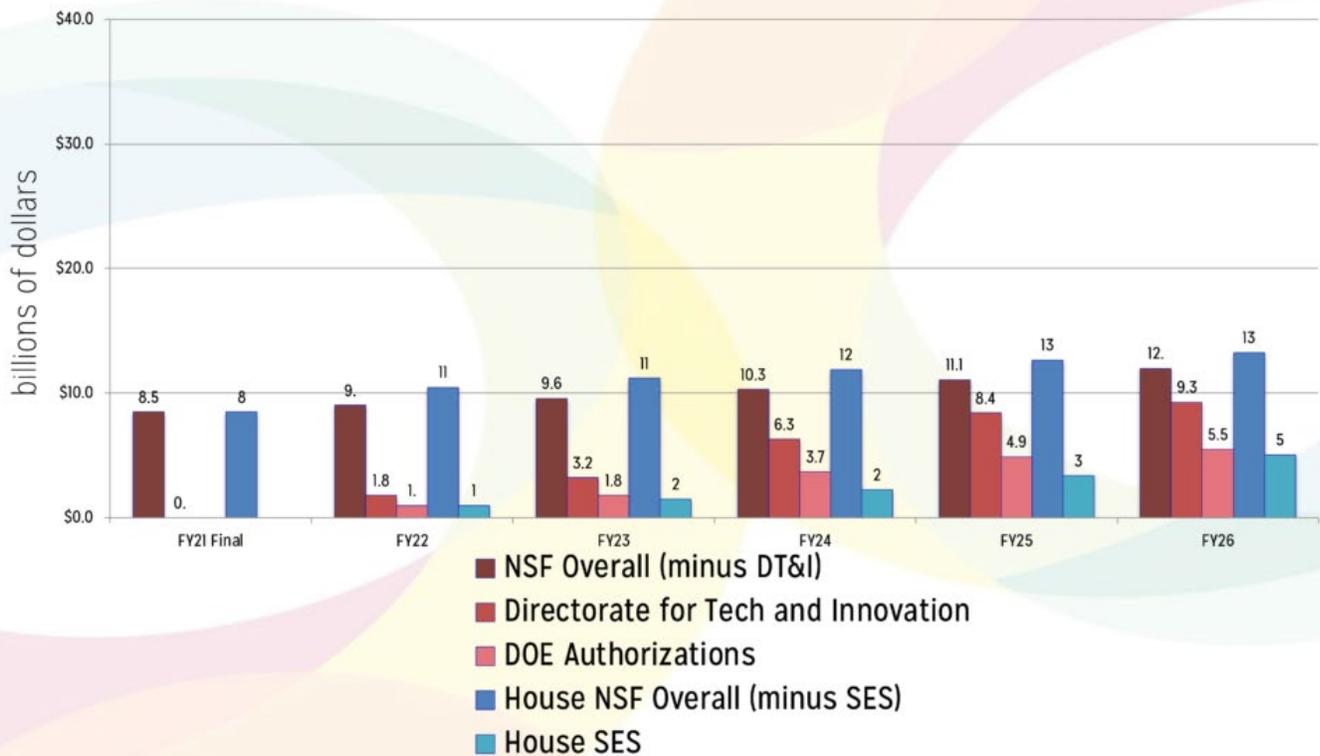
Over the last two months, competing visions of the future of the National Science Foundation have been making their way through the House and Senate. And much like the famous opening line of *Tale of Two Cities*, their paths could not be more dissimilar. On the House side, [the National Science Foundation for the Future Act](#) has made deliberative and bipartisan progress through the House Science, Space, and Technology Committee. Meanwhile, on the Senate side, the Endless Frontier Act has been introduced; pulled, reworked, and reintroduced; heavily amended during a marathon Senate Commerce Committee hearing; and is now before the full Senate undergoing another round of amendments. Very different paths.

Let's start with the Senate and the Endless Frontier Act. This has been a moving target with major changes to the bill happening at every legislative step. Regular readers will recall that the bill was [first introduced in mid-April](#); it was almost immediately pulled from a scheduled Senate Commerce Committee hearing because of a large number of amendments, which is a sign that the legislation would not progress as written. The legislation was reworked, incorporating as many amendments as possible, and was reintroduced at a marathon 6+ hour hearing of the Senate Commerce Committee. At that hearing, the bill was further changed.

The new Endless Frontier Act is quite different. The bill still establishes a new Directorate for Technology & Innovation (abbreviated TD for "Tech Directorate") with the directorate's program managers expected to operate like their counterparts at DARPA. As well, the ten Technology Focus Areas (which are largely unchanged from previous versions) are now required to be reviewed every year; it had been every three years. Additionally, the new language transfers several current efforts of NSF into the new directorate. Most make sense and aren't problematic, such as the Convergence Accelerator and the I-Corps programs; however, it does transfer the National AI Research Institutes program out of CISE with potential ramifications for the CS research community.

The funding authorizations are also different from previous versions. NSF, minus the new TD, gets a plus up of 30 percent over five years – a rough average of 5.5 percent a year. The Foundation would grow from just under \$9 billion in Fiscal Year 2022 to just over \$11 billion in 2026. In a significant change from previous versions of the bill, the new tech directorate would receive just over \$40 billion in authorizations over five years, starting out at \$2.5B in FY22 and growing to \$14.9B in FY26, well down from the \$100 billion originally proposed. As in the previous versions, that funding would be targeted to R&D activities in the key focus areas, support for scholarships and fellowships, test beds, efforts to improve academic tech transfer, and capacity building at historically black colleges and universities (HBCUs) and other minority serving institutions (MSIs). Additionally, in perhaps the most contentious change, the Department of Energy would also receive a \$16 billion funding authorization over five years to perform research in the Technology Focus Areas. Guidance to DOE on how to spend the authorization is limited to "R&D and address[ing] the energy-related supply chain activities within the key focus areas." Much of these DOE funds come directly at the expense of the new directorate; in fact, Senator Young (R-IN), one of the co-sponsors of EFA, called this amendment a "poison pill" during the committee hearing.

ENDLESS FRONTIER ACT AUTHORIZED LEVELS, AFTER MARKUP VS. NSF FOR THE FUTURE ACT



There are other provisions of note in the new language. Perhaps the most significant is a new emphasis on the geographic diversity of which states receive NSF funds. Senator Wicker (R-MS), the Ranking Member of the Senate Commerce Committee, championed this issue during previous hearings. The new language now requires NSF to use “at least 20 percent” of the funding provided to the TD to carry out the EPSCoR program, which helps states who historically receive less NSF funding to build up their research capacity. In addition, the legislation also requires that “at least 20 percent” of all NSF funding must be used to carry out EPSCoR. Senator Wicker called this a “quantum leap” in terms of providing geographic diversity; seeing as last year NSF used **about 3 percent of its research funding for EPSCoR**, the Senator’s description is close to the mark. Provisions echoing this are throughout the legislation language for almost everything that is authorized.

There are also **new provisions** concerning research security, putting potentially greater scrutiny on controls for the research funded at the new directorate. There are two sections that are potentially concerning for the research community (**legislative text in full**). One section (Sec. 2303) puts prohibitions and reporting requirements on principal investigators from taking part in foreign talent recruit programs, with complete bans on recruitment programs from China, Iran, Russia, and North Korea. The second section (Sec. 2304) is about “Additional Requirements for Directorate Research Security;” while vaguely worded, it could potentially lay the groundwork for putting controls on the research performed in the new directorate. The language is not clear as to what those controls would be, but it leans heavily on NSF to figure out how to protect the research in the technology focus areas.

Tale of Two Bills (*continued*)

While not a clean process, EFA did pass the Senate Commerce Committee with a bipartisan vote of 24-4. It was then moved quickly to the Senate floor last week, combined into a package with other legislation, and renamed the “United States Innovation and Competition Act of 2021.” The bill is now 1400+ pages and has several new sections corresponding to several pieces of other legislation considered by other Senate committees. A major addition to the package is the “Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Fund,” which provides \$52 billion in emergency appropriations for semiconductor R&D. These funds are to both help bolster and expand the semiconductor industry in the United States and to foster research on next generation chips. Much of this legislative package deals with responding to the rise of China as a peer-rival to the US, so there are many sections handling foreign policy matters. But there are also sections dealing with research security, such as subjecting foreign donations to US academic institutions to oversight by the Committee on Foreign Investment in the US (CFIUS). In short, this is no longer an authorization bill; it is much bigger.

The legislation was finally approved by the full Senate on June 8th; it passed on a bipartisan basis with a vote of 68 Yeas to 32 Nays. The authorization levels for NSF and DOE are unchanged from what was agreed to by the Senate Commerce Committee, and the CHIPS Act survived the amendment process. One amendment that was approved by the Senate, proposed by Senator Sasse (R-NE), authorized an additional \$3.5 billion per year for five years to the Defense Advanced Research Project Agency (DARPA); that would double DARPA's current budget. There were few other changes of note to the policy sections of the legislation.

On the other side of Capitol Hill, the response has been very different. After the Senate Commerce Committee passed EFA, Rep. Frank Lucas (R-OK), the Ranking Member of the House Science, Space, and Technology Committee put out a statement saying **much of the Senate bill lacks a clear vision for NSF and is weighed down by special interest provisions**. Rep. Lucas' view should be seen as a barometer of Republican support for NSF; they will advocate for increases but only to an extent, and those increases must be well justified.

To that end, the House Science, Space, and Technology Committee has been moving their own NSF bill. Regular readers will recall that Chairwoman Eddie Bernice Johnson (D-TX) and Ranking Member Lucas, along with Subcommittee on Research and Technology Chairwoman Haley Stevens (D-MI) and Ranking Member Michael Waltz (R-FL), introduced the **National Science Foundation for the Future Act** in late March and have been holding **several hearings about NSF since**. On May 13th, the Subcommittee on Research and Technology held a markup of the legislation. In contrast with the Senate, the legislation is unchanged since introduction, it received only a few non-controversial amendments during this hearing, and it was passed unanimously on a voice vote. The next step is for the full Science Committee to markup the legislation; that's likely to happen in early June. Consideration on the House floor should happen soon after. The Science Committee is also beginning the process of reauthorizing the Department of Energy's Office of Science; we'll have more details on that in a future post.

CRA endorsed the NSF for the Future Act in early May.

What happens next? At some point, these two different views on NSF's future have to be reconciled and a compromise worked out. The main draw for EFA has been its higher funding level for the agency but, because of all the amendments, it is now much closer to the levels in the NSF for the Future Act; that is actually good from a compromise perspective. But since the USICA covers so many topics, many of which the House has not begun to cover, will the House even consider a conference? Or would it attempt to break the matter up into smaller pieces? Would the Senate agree to go along with that approach? It's not unusual for legislation to remain idle before there's an agreement between the two chambers, but that idleness can last months. Since the Senate has passed the EFA/USICA bill, the likelihood that something gets worked out is now high. But the timeframe is TBD. We'll keep tracking all the developments, so please **check back** on the CRA Policy Blog for more information.

2022 SIAM Major Prizes - Nominations Open

Society for Industrial and Applied Mathematics (SIAM) is accepting nominations for major prizes that will be awarded in 2022. If you know someone who meets the criteria for one of the prizes below and deserves to be recognized for their achievements, please nominate them. Selection committees require at least three nominations to award a prize, so every nomination counts!

Nominations are due October 15, 2021. Click [here](#) to submit a nomination.

2022 SIAM Major Prizes:

- AWM-SIAM Sonia Kovalevsky Lecture
- George Pólya Prize in Mathematics
- John von Neumann Prize
- Julian Cole Lectureship
- Richard C. DiPrima Prize
- W. T. and Idalia Reid Prize

SIAM awards 50+ prizes including major awards, activity group prizes, student prizes, and more.

[Learn more about the prize program](#) and [view all prizes that currently have open calls](#).

Contact prizeadmin@siam.org with questions regarding the nomination procedure.



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Margaret Martonosi Receives the 2021 ACM/IEEE-CS Eckert-Mauchly Award

The Association for Computing Machinery (ACM) and IEEE Computer Society recently announced that former CRA and CRA-WP Board Member Margaret Martonosi is the recipient of the **2021 Eckert-Mauchly Award**. She was cited for contributions to the design, modeling, and verification of power-efficient computer architecture. The Eckert-Mauchly Award is known as the computer architecture community's most prestigious award.



Margaret Martonosi

From the [ACM news release](#):

Martonosi has made significant contributions in computer architecture and microarchitecture, and her work has led to new fields of research. She has authored more than 175 publications (with 17,000 + citations) on subjects including parallel architectures, memory hierarchies, compilers, and mobile networks.

Martonosi is the Hugh Trumbull Adams '35 Professor of Computer Science at Princeton University, where she has been on the faculty since 1994. Since February 2020, Martonosi has been serving as Assistant Director for the National Science Foundation's Computer and Information Science and Engineering Directorate. She served on the CRA Board of Directors from 2009-2017 and as Co-Chair of **CRA-WP** from 2017-2019. In 2018, she also led CRA's **Computing Community Consortium** effort to understand the next steps in Quantum Computing for computer science.

Martonosi will be formally recognized with the ACM-IEEE CS Eckert-Mauchly Award during the **ACM/IEEE International Symposium on Computer Architecture (ISCA)**, which will be held virtually this year from June 14-19.

About the ACM-IEEE CS Eckert-Mauchly Award

ACM and IEEE Computer Society co-sponsor the Eckert-Mauchly Award, which was initiated in 1979. It recognizes contributions to computer and digital systems architecture and comes with a \$5,000 prize. The award was named for John Presper Eckert and John William Mauchly, who collaborated on the design and construction of the Electronic Numerical Integrator and Computer (ENIAC), the pioneering large-scale electronic computing machine, which was completed in 1947.

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Expanding the Pipeline
Patty Lopez, Intel

Baidu USA

Postdoctoral Researchers in Cognitive Computing

Baidu Research Cognitive Computing Lab (CCL) is looking for outstanding researchers with strong background in machine learning, statistics, applied mathematics, systems, databases, NLP, computer vision, security, theoretical computer science, etc. Our mission is to develop next generation cognitive computing technologies for better connecting billions of users to services. Our postdoctoral researchers are expected to focus on basic research in broad AI-related fields. This would be an excellent opportunity for fresh PhD graduates in CS, Statistics, EE, Amath, etc., to spend 1 – 3 years in an industrial research environment to prepare for their long-term research careers either in academia or research labs.

Qualifications:

1. PhD in Computer Science, Statistics, Electrical Engineering, Mathematics, Operation Research, or related fields.
2. Excellent publication record in major CS conferences or premier Stat/EE/SIAM journals. Examples are CVPR, FOCS, KDD, ACL, WWW, ICML, SIGMOD, JMLR, PAMI, IEEE Info. Theory, major statistics/mathematics journals, SIAM J. Computing, SIAM J. Optimization, etc.
3. Strong analytical and problem-solving skills.
4. Team player with good communication skills.

Locations: Bellevue WA, Sunnyvale CA, or Beijing China. Please send CV to ccl-job@baidu.com

City University of Hong Kong

Professor/Associate Professor/ Assistant Professor

Worldwide Search for Talent

City University of Hong Kong is a dynamic, fast-growing university that is pursuing excellence in research and professional education. As a publicly funded institution, the University is committed to nurturing and developing students' talents and creating applicable knowledge to support social and economic advancement.

Professor/Associate Professor/ Assistant Professor

Department of Computer Science [Ref. A/430/09]

The Department of Computer Science has internationally known research groups in a number of areas, including bioinformatics, cloud computing, evolutionary computation, information security, machine learning and data science, mobile computing, multimedia computing and graphics, and software engineering. The Department is ranked the 13th best Computer Science Department globally by the US News & World Report (2020).

For further details, please visit

<http://www.cityu.edu.hk/hro/en/job/current/academic.asp?ref=uac-a430>.

City University of Hong Kong is an equal opportunity employer and we are committed to the principle of diversity. Personal data provided by applicants will be used for recruitment and other employment-related purposes.

Furman University

Open-Rank Tenure Track Professor in Computer Science

The Department of Computer Science at Furman University invites applications for a tenure track position at the Assistant, Associate, or Full Professor rank to begin August 1, 2022. Candidates must have a Ph.D. in Computer Science or a closely related field, and all areas of specialty will be considered. The position requires a demonstrated potential for superb teaching, including the ability to work with a diverse population of students, excellence in a scholarly and professional activity involving undergraduates with a broad spectrum of backgrounds and abilities, effective institutional service, and a willingness to work with colleagues across disciplines.

Furman Computer Science professors mentor undergraduates both formally and informally and strive to build an inclusive student-faculty community in which every member is treated with dignity, and all are welcomed to participate in the life of the department and in the respectful exploration of ideas. This involves regular interactions of both curricular and extracurricular nature. The candidate should show interest in and aptitude for contributing to this endeavor.

The Department of Computer Science confers degrees with majors in Computer Science (B.S. and B.A.) and Information Technology (B.S. and B.A.), an innovative, interdisciplinary program of study. The Department values teaching breadth and versatility, research projects that bridge Computer Science with other

disciplines, efforts to provide students with learning opportunities outside the classroom and in the community, contributing to Furman's university-wide First-Year Writing Seminar program, and a commitment to applications of algorithmic, computing, and information technology to addressing issues of accessibility, equity, and social justice.

Furman University is a selective private liberal arts and sciences college committed to helping students develop intellectually, personally, and interpersonally and providing the practical skills necessary to succeed in a rapidly-changing world. Furman professors are exceptional teacher-scholars who mentor undergraduate students within a campus community that values and encourages diverse ideas and perspectives. Our strategic vision, The Furman Advantage, promises students an individualized four-year pathway facilitated by team of mentors and infused with a rich and varied set of high-impact experiences outside the classroom that include undergraduate research, study away, internships, community-focused learning, and opportunities to engage across disciplines.

Furman is an Equal Opportunity Employer committed to advancing diversity, equity, and inclusion in all facets of university life, and strives to create an anti-racist community through excellence in teaching, mentorship, and programming. Numerous initiatives and programs are underway or planned to promote these ideals, including: historic projects, dialogue initiatives, the Center for Inclusive Communities, and a proposed major in Africana Studies. The University

aspires to create a community of people representing a multiplicity of identities including gender, race, religion, spiritual belief, sexual orientation, geographic origin, socioeconomic background, ideology, world view, and varied abilities. In keeping with our commitment to equity and inclusion, domestic partners of employees are eligible for comprehensive benefits and faculty/staff affinity groups exist to offer support for faculty/staff that identify as LGBTQIA+ and /or Black / African-American.

The successful candidate will have the ability to work with historically underrepresented students, including students of color, and be committed to assisting the university in its continuing efforts to become a model of inclusive excellence.

Furman is located in Greenville, South Carolina, which is one of the fastest-growing cities in the Southeast and is ranked among "America's Ten Best" by Forbes Magazine. The charming downtown features excellent restaurants, in-town parks, shops, museums, galleries, music venues, and theaters. The city also has excellent public and private schools and a vibrant international community. A 20-mile bike and running trail connects the university to Greenville and to Travelers Rest, which was named "one of America's coolest small towns." The surrounding area abounds with outdoor recreational activities and has some of the most beautiful lakes, rivers, and mountains in the country. Greenville is within easy reach of the Blue Ridge Mountains and Atlantic beaches. The newly renovated Greenville-Spartanburg Airport, located just 25 minutes from downtown, runs daily flights

to major cities and airline hubs. Greenville is 2 1/2 hours from Atlanta and only one hour from Asheville, North Carolina. It is an ideal place to live and work.

Applicants should submit a curriculum vitae, cover letter, statement of teaching philosophy and experience, statement of research interests, an official copy of most recent transcripts, and a diversity statement that describes how your teaching, scholarship, mentoring and/or service might contribute to a liberal arts college community that includes a commitment to diversity as one of its core values. Three letters of recommendation should be sent separately upon request.

Review of applications will commence on September 1, 2021 and will continue until the position is filled.

Questions can be directed to the chair of the Department of Computer Science, Dr. Kevin Treu, at kevin.treu@furman.edu.

To submit an application and letters of recommendation, please visit https://furman.wd5.myworkdayjobs.com/en-US/Furman_Careers/job/Main-Campus/Open-Rank-Tenure-Track-Professor-in-Computer-Science_R001166

Georgia Institute of Technology

Chair, School of Interactive Computing

The College of Computing at the Georgia Institute of Technology invites applications and nominations for the position of Chair of the School of Interactive Computing.

The School's charge is broad, ranging from robotics and machine learning to human-computer interaction and computational media, along with their applications in myriad domains, such as healthcare, education, and security, among others. The Chair, who reports to the Dean of the College of Computing, is responsible for all administrative, budgetary, and personnel decisions within the school, and will be responsible for leadership, management, and strategic vision for the next phase of the school's growth.

The ideal candidate will have a distinguished record of research; a commitment to interdisciplinary education; experience managing budgets, strategy, and people; familiarity working with campus administrators and leaders; a track record of and strong commitment to cultivating an equitable, diverse, and inclusive environment, including in faculty and staff development, hiring, and student recruitment; and a history of successfully engaging in industrial and community partnerships and external fundraising. We seek candidates with a Ph.D. degree in a computing-related field, who are appointed at the rank of full professor or who have equivalent experience in a leading research university or research laboratory.

To ensure full consideration, candidates should complete the [online](#) application form, which will require submission of a CV, letter of application, names and contact information for five references (including one student or other mentee), and other supporting documents.

This search begins immediately and will continue until the position is filled. Review of applications will begin **May 15, 2021**.

Should you have questions or interest in further discussing the position, please contact Prof. Richard Vuduc, chair of the search committee, at icchairsearch@cc.gatech.edu.

Georgia Tech provides equal opportunity to all faculty, staff, students, and all other members of the Georgia Tech community, including applicants for admission and/or employment, contractors, volunteers, and participants in institutional programs, activities, or services. Georgia Tech complies with all applicable laws and regulations governing equal opportunity in the workplace and in educational activities. Georgia Tech prohibits discrimination, including discriminatory harassment, on the basis of race, ethnicity, ancestry, color, religion, sex (including pregnancy), sexual orientation, gender identity, national origin, age, disability, genetics, or veteran status in its programs, activities, employment, and admissions. This prohibition applies to faculty, staff, students, and all other members of the Georgia Tech community, including affiliates, invitees, and guests.

Georgia Institute of Technology

School of Cybersecurity and Privacy

The Georgia Institute of Technology invites applications from qualified individuals seeking to be the first Chair of the newly founded School of Cybersecurity and Privacy (SCP). We seek

someone who wants to and can meet the challenge of leading a broad-ranging group of visionaries to build SCP into the world leader in cybersecurity and privacy. As the first interdisciplinary school at the Georgia Institute of Technology SCP will consist of 30+ tenure-track and research (including several holders of endowed chairs) faculty, postdocs, adjunct faculty, and professional classified staff. This distinguished group comes from Computing, Engineering, Liberal Arts, and Business Colleges. The School of Cybersecurity & Privacy will offer bachelor's, master's, and doctoral degrees.

The ideal candidate will: Be a Full Professor with tenure in a premier department at a research university or have an equivalent position in industry or government in Business, Computer Science, Economics, Engineering, Finance, Humanities, International Affairs, Law, Public Policy, or any other field with a proven record of high impact contributions in cybersecurity or privacy. Candidates should have a proven record of achieving external visibility and funding; have demonstrated strong leadership and team-building skills; care about the personal and educational enrichment of faculty, staff, and students; have experience with strategic planning, administrative oversight, fiscal management, and vision development; and embrace participatory management and transparent decision-making. Candidates should demonstrate a willingness to innovate, both organizationally and pedagogically. Embracing a culture of collaboration and interdisciplinary

breadth is essential to success in this new venture, and candidates should be prepared to elaborate on his/her vision for achieving those aims.

To be considered, please submit *online* your CV, a letter of application, 5 reference names and contact information, and other supporting documents. Your application will remain confidential (known only to the search committee) until its final stage, at which point, with your permission, we will contact your references and request letters of support.

Review of applications will begin on June 15, 2021. This search will continue until the position is filled.

Should you have any problems with the online submission, please contact scp-recruiting@cc.gatech.edu.

Georgia Tech provides equal opportunity to all faculty, staff, students, and all other members of the Georgia Tech community, including applicants for admission and/or employment, contractors, volunteers, and participants in institutional programs, activities, or services. Georgia Tech complies with all applicable laws and regulations governing equal opportunity in the workplace and in educational activities. Georgia Tech prohibits discrimination, including discriminatory harassment, on the basis of race, ethnicity, ancestry, color, religion, sex (including pregnancy), sexual orientation, gender identity, national origin, age, disability, genetics, or veteran status in its programs, activities, employment,

and admissions. This prohibition applies to faculty, staff, students, and all other members of the Georgia Tech community, including affiliates, invitees, and guests.

Indian Institute of Information Technology Sri City

Associate /Assistant Professors

Indian Institute of Information Technology Sri City Chittoor (IIITS) is established as an Institute of National Importance under an Act of Parliament. IIITS is located in a large industrial town Sri City (about 60 KMs from Chennai on the Nellore Highway). IIITS has a special focus on teaching/research in areas such as AI, Machine Learning, Deep Learning, Reinforcement Learning, Cyber Security, Software Engineering (with practical system development experiences), Big Data Analytics, Data Science, Natural Language Processing, etc. IIITS is looking for highly qualified and motivated individuals to join the team of faculty in Computer Science and Engineering.

For further details such as Institute Profile, Interest Areas, Pay/Reward Structure, etc., please visit the following link <http://www.iiits.ac.in/careersiits/faculty>

KAIST

Head, Graduate School Of AI

KAIST invites nominations and applications for the position of Head, Graduate School of AI, commencing September 1, 2021.

KAIST was established by the Korean government in 1971 as the nation's first graduate school specializing in science and engineering education and research. 2020 QS World University Rankings placed KAIST as the 39th overall. KAIST presents more than 11,000 students, including 500 international students and 1,000 faculties and staff.

The Graduate School of AI at KAIST (KAIST GSAI), a.k.a., "the KAIST AI" was established in Fall 2019 and is the first in Korea to offer MS, MS and PhD integrated, and PhD degrees in Artificial Intelligence. Our world-class faculty members (13 core and 30 affiliated) are both brilliant scholars and committed teachers in the field of Machine Learning, Artificial Intelligence, Data Mining, Computer Vision, Natural Language Processing, Robotics, Computer Systems Support for AI, and applied AI. KAIST ranked #7 in the world and #1 in Asia (following Berkeley, MIT, Stanford, CMU, UCLA, and UCSD) in 2020 based on the total # of ICML and NeurIPS papers according to <http://csrankings.org>. Further details can be found on our department website at <http://gsai.kaist.ac.kr/>.

Our Department is searching for a scholarly leader who has an innovative vision to support our commitment to research, teaching, and services. The new Head shall ensure that the GSAI continues to excel at graduate education and reach global research excellence. The new Head shall also provide the vision in concert with the strategic planning of the department, which aligns with the goals and plans of the institute. The candidate is expected

to be a collegial communicator who possesses strong leadership, strategic and flexible mindsets, and entrepreneurial spirit. In addition, our ideal candidate would be expected to exercise Diversity, Equity, Accessibility, and Inclusion (DEAI) support and initiatives within the department. Fluency in the Korean language would be considered beneficial.

Applications should be submitted as soon as possible and no later than June 25th, 2021 to the committee chair, Jinwoo Shin, at jinwoos@kaist.ac.kr. Application materials should include, as separate documents, a detailed, up-to-date curriculum vitae and a preliminary vision statement for our department (less than 3 pages).

Associate Professor Jinwoo Shin

Chair, Search Committee for the KAIST
GSAI Head

Email: jinwoos@kaist.ac.kr,
Phone: 82-42-350-7432

Lawrence Berkeley National Laboratory

Computer Systems Supervisor - 92347

Organization: JG-Joint Genome Institute

LBL's Joint Genome Institute has an opening for a Computer Systems Supervisor to join the team. In this exciting role, you will help build our high-performance hardware and software infrastructure. This role will be a unique blend of hands-on technical work and

strategic planning. This position also analyzes the characteristics of JGI application codes and their usage on HPC/IT systems and collaborates with NERSC/IT to monitor system utilization.

Please apply at <http://50.73.55.13/counter.php?id=198444>

Loyola University Maryland

Visiting Assistant Professor / Lecturer

The computer science department at Loyola University Maryland seeks an individual committed to excellence in undergraduate teaching to join the teaching faculty. A master's in Computer Science or a closely related field is required; a Ph.D. is preferred. Applicants should feel comfortable teaching introductory programming courses through data structures and will have the opportunity to teach upper-level electives or in our data science programs based on expertise.

Apply at <https://careers.loyola.edu/postings/5364>

McGill University

Faculty Lecturer

The School of Computer Science at McGill University invites applications for an appointment as Faculty Lecturer. Candidates must have a graduate degree in Computer Science or related discipline and demonstrated excellence in teaching computer science at the university level.

The School is looking for candidates who are able to teach a wide range of 1st and 2nd-year computer science courses, and ideally, have expertise in systems (e.g., database systems and networks), algorithms, artificial intelligence, data science, or programming languages.

The selection process will begin by July 15, 2021, but we accept applications until the position is filled.

To apply, and for more information, submit your application here: <https://www.cs.mcgill.ca/employment/301/>

For more information, email: facultylecturer.search@cs.mcgill.ca.



Instructor - Computer Science/Software Engineering

Position Summary: Monmouth University is seeking applications for an Instructor in the Computer Science/Software Engineering department. This position is for the 2021-2022 academic year and is a one year initial appointment renewable up to a maximum of three years.

To Apply, visit: <https://apptrkr.com/2251990>

Commitment to Equity and Diversity: McGill University is committed to equity and diversity within its community and values academic rigour and excellence. Canadians and permanent residents will be given priority.

NEC Laboratories America, Inc.

Researcher – AI-driven Cybersecurity

NEC Laboratories America, Inc. (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 and System Security Department has been developing novel big data solutions and service platforms that simplify the management of complex systems and optimize business operations; and aims to continue developing next-generation data-driven technologies that support more innovative applications, including those in cybersecurity, autonomous driving, and 5G. We embrace every opportunity to leverage big data and artificial intelligence technologies to improve various areas in both the real world and the cyber world. Our research has resulted in both award-winning NEC products and publications in top conferences.

To advance AI-driven cybersecurity research, the DSSS Department is looking for an outstanding cybersecurity researcher who has the passion to apply and transform state-of-the-art artificial intelligence technologies such

as machine learning and data mining to identify, address, and solve real-world cybersecurity challenges and problems.

Responsibilities

- Identify and investigate emerging research topics and challenges in cybersecurity.
- Research and transform artificial intelligence techniques to advance the state of the art in security research
- Demonstrate research outcomes by developing prototypes and producing patents and/or publications.
- Collaborate across teams and business units to develop synergy between our research and NEC business.

Minimum Qualifications

- PhD in Computer Science with a strong publication record in security, systems, or related fields.
- Expertise and experience in programming in one or more of these languages: Python, Java, C, C++.
- Expertise and experience in at least one of the following areas: (1) vulnerability/attack analysis, (2) cloud/network/5G security, (3) intrusion/anomaly detection via system data, e.g., logs and system-call traces, (4) machine learning and data mining, (5) real-world system building.

Preferred Qualifications

- Work experience in a university, industry, or government lab(s), with a primary focus on security research.
- Interdisciplinary research spanning cybersecurity and machine learning.
- Experience with and fundamental

understanding of machine learning techniques.

- Experience with threat modeling and threat hunting.
- Experience with offensive security and red team operations.
- Experience in building security defense systems, such as patch management, firewalls, intrusion detection, and prevention.
- Experience in designing, architecting, and building secure systems.
- Experience in processing large databases and high-volume data.

NEC Labs 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 <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=3123535.

Equal Opportunity Employer

Northwestern University

Lead Data Scientist

Kellogg School of Management (Northwestern) is seeking exceptional candidates for a full-time, Lead Data Scientist position at the Center for Science of Science and Innovation (CSSI). The Lead Data Scientist will work on projects that

collect and analyze large-scale datasets to advance our understandings of innovation and creativity.

For details including required qualifications and application instructions, please visit <https://bit.ly/3gG1deZ>

Ohio University

Postdoctoral Research Associate

The Postdoctoral Research Associate will conduct research and teaching in the areas of hardware security, System-on-Chips (SoCs), embedded systems, and trusted computing systems. Responsibilities associated with the position include research in the areas of trustworthy integrated circuit (IC) design, electronic design automation (EDA) for secure systems, hardware trojans, coarse-grain reconfigurable arrays (CGRA), implementing dynamic policies, software verification, and security assessment of embedded systems. Further, the candidate will also be responsible for writing high-quality research conference papers, journals and reports to document the outcomes of the funded grant. The candidate will also be responsible for developing curriculum and introductory courses in cybersecurity with hands-on exercises for K-12 teachers and undergraduates. Further, the successful candidate will also be responsible for delivering short courses and undergraduate/graduate courses in cybersecurity. The candidate will support group work in the general area of security of embedded computing platforms and may exercise functional supervision over supporting undergraduate and graduate students.

For more information or to apply:
<https://www.ohiouiversityjobs.com/postings/36990>

Please apply by May 31st, 2021.

Oregon State University

College of Engineering

Multiple Faculty Positions In Computer Science

The School of Electrical Engineering and Computer Science at Oregon State University invites applications for several full-time, nine-month, tenure-track faculty positions. As a land grant institution committed to teaching, research, and outreach, and engagement, Oregon State University promotes economic, social, cultural, and environmental progress for the people of Oregon, the nation, and the world. In support of this mission, the College of Engineering recently updated its strategic plan to advance its achievement in high impact research, excellent preparation of all our students, and developing a community of faculty, students, and staff that is increasingly more inclusive, collaborative, diverse, and centered on student success. Faculty candidates are sought in areas that include the following: Software Engineering, Artificial Intelligence/Machine Learning, Cybersecurity, Systems, and Theoretical Computer Science. Applicants should demonstrate a strong commitment and capacity to initiate newly funded research as well as to expand and complement existing research programs in the OSU College of Engineering and beyond. Furthermore, applicants should

demonstrate a strong commitment to undergraduate and graduate teaching; some successful candidates may also have the opportunity to teach in the school's highly ranked online computer science program. Applicants are expected to mentor students and promote equitable outcomes among learners of diverse and underrepresented identity groups. Appointment is anticipated at the Assistant Professor rank, but candidates with exceptional qualifications may be considered for appointment at the rank of Associate or Full Professor. Applicants must hold a Ph.D. degree in Computer Science, Electrical and Computer Engineering, or a closely related discipline.

Oregon State University is located at the heart of Oregon's Willamette Valley and close to Portland's Silicon Forest with numerous collaboration opportunities. The School of EECS has 60 tenured/tenure-track faculty members and 435 graduate students (225 Ph.D. students). Among the faculty, we have two members of the National Academy of Engineering, 18 professional society (IEEE and ACM) Fellows, and 25 Young Investigator/CAREER Award recipients. Among our several areas of distinction is a widely recognized program in usability engineering aimed at eliminating gender bias in software and promoting inclusive technology. We have recently launched Masters and Ph.D. degrees in Artificial Intelligence with the first cohort of students to start in the Fall of 2021. Many faculty members of the School of EECS are also active participants in the recently established Collaborative Robotics and Intelligent Systems (CoRIS)

Institute and the Pervasive Personalized Intelligence Center.

Corvallis has been ranked #1 on a list of "Best Places for Work-Life Balance", and is within easy reach of Portland, Eugene, the Cascade mountain range, and the Oregon Coast. Oregon State University has a strong institutional commitment to diversity and multiculturalism and provides a welcoming atmosphere with unique professional opportunities for leaders from underrepresented groups. We are an Affirmative Action/Equal Opportunity employer, and particularly encourage applications from members of historically underrepresented racial/ethnic groups, women, individuals with disabilities, veterans, LGBTQ community members, and others who share our vision of an inclusive community. The College of Engineering ranks high nationally in terms of the percentage of women faculty, and the university actively supports dual-career opportunities.

Apply online at <https://jobs.oregonstate.edu/postings/96527> (posting #P04080UF) with the following documents: A letter of interest; vita; a two-page statement of research interests; a one-page statement of teaching interests; a one-page statement on the candidate's experiences with and future plans towards equity and inclusion; and names and contact information for at least three references.

Review of applications will continue up until **August 31, 2021**.

Saint Louis University

Visiting Instructor/Assistant Professor of Computer Science

Saint Louis University, a Catholic, Jesuit institution dedicated to student learning, research, health care, and service, seeks dynamic applicants who can engage and inspire a diverse student body as a non-tenure-track instructor or assistant professor in the Department of Computer Science. This one-year position begins in August 2021 to fill a vacancy; a broad search for a new full-time faculty member will commence this fall. Candidates must hold an M.S. in Computer Science or closely related field for rank of Instructor, or Ph.D. for rank of Assistant Professor; salary will be commensurate with experience.

The faculty member will have primary responsibility leading three classes per semester, including introductory computer science courses and selected topics that highlight the person's expertise and interests. Opportunities also exist to mentor student teams as part of our innovative and interdisciplinary capstone projects.

Applications must be submitted at <https://slu.wd5.myworkdayjobs.com/Careers> and include a cover letter, CV, contact information for three or more potential references, and a statement of teaching philosophy that addresses areas of interest as well as experience supporting equity and inclusion across a diverse student body.

Review of applications will begin immediately and continue until the

position is filled. Additional information about the position and the department can be found at cs.slu.edu/hiring.

Saint Louis University is an equal opportunity/affirmative action employer. All qualified candidates will receive consideration for the position applied for without regard to race, color, religion, sex, age, national origin, disability, marital status, sexual orientation, military/veteran status, gender identity, or other non-merit factors. We welcome and encourage applications from minorities, women, protected veterans, and individuals with disabilities (including disabled veterans). If accommodations are needed for completing the application and/or with the interviewing process, please contact Human Resources at 314-977-5847.

SUNY Korea

Assistant/Associate/Full Professor and Teaching Professor Positions

The Computer Science Department of SUNY Korea (<https://sunyk.cs.stonybrook.edu/>) invites applications for tenure-track and teaching-track positions, to start in Fall 2021 or Spring 2022.

(A) Tenure-Track Faculty Position: An excellent faculty member is sought at all levels in all core areas of computer science. The position will be tenured or tenure-track at SUNY Korea, and will carry an affiliated faculty position with the Computer Science Department at Stony Brook University – State University of New York (SUNY), Stony Brook, NY (<https://www.cs.stonybrook.edu/>). Applicants

should hold a PhD in Computer Science or closely related area and exhibit a strong commitment to research and teaching.

(B) Teaching-Track Faculty Position:
An excellent full-time teaching faculty is sought at the junior or senior level. The candidate is expected to teach introductory and advanced CS undergraduate and possibly graduate courses. It is possible for an excellent candidate to be converted into tenure-track at SUNY Korea at a later time. Engaging in research is encouraged but not mandatory. Applicants should hold a PhD or MS in Computer Science or a closely related area and exhibit a strong commitment to teaching.

The SUNY Korea CS department offers BS, MS, and PhD degrees and is tightly integrated with the highly ranked CS department at Stony Brook University. The academic degrees awarded at SUNY Korea are identical to those of Stony Brook University, and the language at SUNY Korea is English.

SUNY Korea (<http://www.sunykorea.ac.kr/>) is located in the new master-planned city of Songdo, Korea, hosting both global organizations and multinational corporations. Incheon international airport is just 25 minutes away and Seoul with its fascinating blend of Asian cultures is less than 1 hour away.

More information about the positions and application instructions can be found at <https://sunyk.cs.stonybrook.edu/about-us/career/>. Review of applications will start immediately and will continue

until the positions are filled. Applications from non-Korean citizens, women, and minorities are encouraged.

Trinity College

Visiting Assistant Professor of Computer Science

Applications are invited for a two-year, non-tenure-track, full-time position in computer science at the rank of Visiting Assistant Professor or Visiting Lecturer to start in the fall of 2021. Teaching and research interests in all areas will be considered.

A Ph.D. in computer science at the time of appointment is required for the rank of Visiting Assistant Professor, but

candidates with a master's in computer science will also be considered for the rank of Visiting Lecturer. Candidates must already have legal permission to work in the United States.

Trinity College is a coeducational, independent, nonsectarian liberal arts college located in, and deeply engaged with, Connecticut's capital city of Hartford. Our approximately 2,200 students come from all socioeconomic, racial, religious, and ethnic backgrounds across the United States, and seventeen percent are international. We emphasize excellence in both teaching and research, and our intimate campus provides an ideal setting for interdisciplinary collaboration. The teaching load is five courses per year.



UNIVERSITY OF
ARKANSAS

College of Engineering
*Computer Science &
Computer Engineering*

Assistant Professor

The College of Engineering at the University of Arkansas, Fayetteville, invites applications for one tenure-track assistant professor position in the Department of Computer Science and Computer Engineering beginning in January 2022. All candidates must have Ph.D. in computer science, computer engineering, or a closely related discipline by the start of employment. For this position, we are interested in cybersecurity, which includes, but not limited to, software system security, cyber-physical system security, and security in machine learning and artificial intelligence.

The responsibilities of the position include teaching, research, and service in the Computer Science and Computer Engineering (CSCE) Department.

How to apply

Applications should be submitted via the University of Arkansas job board: <https://uasys.wd5.myworkdayjobs.com/UASYS>

Direct link to job posting: https://uasys.wd5.myworkdayjobs.com/en-US/UASYS/job/Fayetteville/Assistant-Professor---Engineering_R0002699

The University of Arkansas is an equal opportunity, affirmative action institution.

We offer a competitive salary and benefits package. For information about the Computer Science Department, visit:

<http://www.cs.trincoll.edu/>

Applicants should submit a curriculum vitae and teaching and research statements and arrange for three letters of reference to be sent to:

<https://trincoll.peopleadmin.com/>

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

Trinity is an AA/EOE and warmly encourages women, members of minority groups, LGBTQ individuals and people with disabilities to apply. We are committed to enhancing our campus culture and curriculum through the diversity of its faculty, staff, and students.

UCSB

Mellichamp Chair, Mind and Machine Intelligence-Psychological & Brain Sciences

The Psychological & Brain Sciences department at UCSB would like to bring your attention to faculty recruitment for Mellichamp Chair-Mind and Machine Intelligence.

Applications received by June 7, 2021, will be given priority consideration, but the position will remain open until filled.

To apply please visit: <https://recruit.ap.ucsb.edu/JPF01966>

Please see <https://mind-machine.ucsb.edu/> for further info about The Mellichamp Initiative in Mind and Machine Intelligence.

The University of California is an Equal Opportunity/Affirmative Action Employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.

University of Manitoba, Winnipeg, Manitoba, Canada

Department of Computer Science

Faculty of Science

Assistant, Associate, or Professor in Security and Privacy - Position #30382/30383

The Department of Computer Science invites applications for one or more full-time tenured or tenure-track positions at the Assistant, Associate, or Professor level, commencing July 1, 2022, or on a date mutually agreed upon. The Department seeks an emerging scholar with a commitment to excellence in teaching and research. Exceptional candidates at any level will also be considered. Outstanding candidates in any area of Computer Science will be considered, with particular emphasis on candidates who will complement or extend the department's strengths

in cybersecurity, privacy, and related areas. The successful candidate will have a Ph.D. and preferably post-doctoral experience or other distinguishing attributes in Computer Science or a related field. Duties will include undergraduate teaching, graduate teaching and supervision, research, including the establishment of an externally funded research program, and service-related activities. The successful candidate will have a track record of high-quality scholarly research leading to peer-assessed publications; will either have or demonstrate the potential to establish, an independent, innovative, scholarly, externally fundable research program; will have demonstrated strength in or strong potential for outstanding teaching contributions; and will exhibit evidence of the ability to work in a collaborative environment. Salary and rank will be commensurate with experience and qualifications.

To enrich our Department and create role models for a diverse population of students, we particularly invite application from those who can support and enhance our diversity, including women, Indigenous Peoples, persons with disabilities and racialized persons, and those committed to a diverse environment.

The Department currently has 22 full-time tenured and tenure track faculty members and 9 Instructors, and offers a full range of both undergraduate and graduate programs in Computer Science. Further information about the Department can

be obtained from <www.sci.umanitoba.ca/cs>. Winnipeg is the largest city in the Province of Manitoba. The city has a rich cultural environment, including symphony, opera, dance, theatre, and ethnic festivals. The region provides ample opportunities for outdoor recreation in all seasons. Learn more about Winnipeg at <winnipeg.ca>.

The University of Manitoba is strongly committed to equity and diversity within its community and especially welcomes applications from women, racialized persons, Indigenous peoples, persons with disabilities, persons of all sexual and gender identities, and others who may contribute to the further diversification of ideas. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

If you require accommodation supports during the recruitment process, please contact UM.Accommodation@umanitoba.ca or 204-474-7195. Please note this contact information is for accommodation reasons only

Applications including a curriculum vitae, a description of teaching philosophy, a summary of research interests, a three-page research plan, and contact information for three references should be sent to <search@cs.umanitoba.ca> (PDF files preferred). Please ensure to specify position numbers 30382/30383 in the application. For further information contact the Search Committee Chair at <search@cs.umanitoba.ca>.

The closing date for receipt of applications is August 25, 2021.

Application materials, including letters of reference, will be handled in accordance with the Freedom of Information and Protection of Privacy Act. Please note that curricula vitae may be provided to participating members of the search process.

University of Vermont

Lecturer in Computer Science

The College of Engineering and Mathematical Sciences at the University of Vermont (UVM) invites applications for a full-time non-tenure-track lecturer in Computer Science for a Fall 2021 start date. We seek a highly motivated candidate with strong computer science education credentials who can teach a variety of required undergraduate courses including theory-based concepts and applied programming, with experience and interest in project-based and active learning. Qualifications for this position include a minimum of an M.S. or similar degree level in computer science or a related field and a demonstrated commitment to educating the next generation of computer scientists.

Prior experience teaching undergraduate-level computer science is highly desirable, as is prior experience or willingness to teach in hybrid or online formats. The successful candidate will be expected to teach a typical course load during each of two semesters per year. A modest amount of service and academic advising is also expected. The appointment period is nine months per year, but opportunities for teaching additional summer courses may be available for additional compensation.

UVM offers generous benefits packages, including health, dental, retirement contributions, and tuition remission.

The University of Vermont is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other category legally protected by federal or state law. The University encourages applications from all individuals who will contribute to the diversity and excellence of the institution. Applicants should address how they will further this goal in their cover letter.

Applications must be submitted online at www.uvmjobs.com (position number 015749). Applicants should provide a cover letter that highlights the expertise and teaching experience, a diversity statement, a current CV, and the names of three references. A background check will be conducted on the final candidate.

Evaluation of applications will begin June 14, 2021, and continue until the position is filled.

Please address any questions about this position, or the application process, to cssearch@cems.uvm.edu.

Wake Forest University

Visiting Assistant Professor

The Department of Computer Science at Wake Forest University invites applications for a one-year visiting assistant professor position to begin

in July 2021. We are seeking candidates with a strong interest in engaged undergraduate teaching. If funding is available, and contingent on the outcome of a first-year review, a one-year extension could be possible.

Completion of a PhD in Computer Science or a closely related field prior to or within 6 months of the date of hire is preferred, although candidates with an MS in Computer Science or a related field may be considered. The expected teaching load is the equivalent of three courses a semester, with the primary responsibility of the post being the teaching of introductory (100-level) and core (200-level) courses. To support the candidate's scholarship, opportunities may also exist to teach an upper-division elective related to the candidate's area of specialization and to access departmental funding for professional development.

For detailed information about the position and application process, visit:

<https://go.wfu.edu/compscihire/>