



## CRN At-A-Glance

### 2022 CRA Board of Directors Election Results and New Board Members

CRA members have elected three new members to its Board of Directors: Maria Gini, Gillian Hayes and Ben Zorn. Lorrie Cranor, Divesh Srivastava and Jaime Teevan were re-elected to the CRA Board. All of their terms run from July 1, 2022 through June 30, 2025. Yolanda Gil has been appointed the new AAAI representative, replacing Charles Isbell. Beginning July 1, Dan Lopresti will replace Liz Bradley as the CCC Chair and representative on the CRA Board.

*see page 2 for full article*

### Call for Coaches for the CSGrad4US Mentoring Program

Are you interested in mentoring prospective graduate students through the application and reentry process? The [mentor and coach application](#) is now available on the CSGrad4US Mentoring Program webpage. Applications received by July 1st will be given preference.

*see page 16 for full article*

### CSTB Releases Report Fostering Responsible Computing Research: Foundations and Practices Mentoring Program

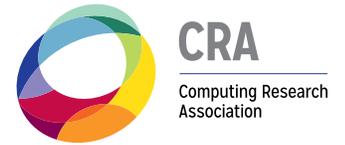
The National Academies' Computer Science and Telecommunications Board (CSTB) released a new report, *Fostering Responsible Computing Research: Foundations and Practices*. The report outlines recommendations for the computing research community to ensure ethical and societal impacts are thought through and a part of the conversation from the start.

*see page 22 for full article*

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# 2022 CRA Board of Directors Election Results and New Board Members



CRA members have elected three new members to its Board of Directors: Maria Gini, Gillian Hayes and Ben Zorn. Lorrie Cranor, Divesh Srivastava and Jaime Teevan were re-elected to the CRA Board. All of their terms run from July 1, 2022 through June 30, 2025. CRA would like to thank everyone who agreed to run for a position on the board this year. Retiring from the board as of June 30, are Penny Rheingans, Shashi Shekhar, and Marvin Theimer.

There are also changes to the appointed members to the board, who are not elected. Yolanda Gil has been appointed the new AAAI representative, replacing Charles Isbell. Beginning July 1, Dan Lopresti will replace Liz Bradley as the CCC Chair and representative on the CRA Board.

CRA would like to thank all retiring board members for contributions during their service on the board.

## Yolanda Gil



**Yolanda Gil** is Principal Scientist and Senior Director for Strategic Initiatives in Artificial Intelligence and Data Science at the Information Sciences Institute of the University of Southern California, Director of AI and Data Science Initiatives in the Viterbi School of Engineering, and Research Professor in Computer Science and in Spatial Sciences. She received her M.S. and Ph. D. degrees in Computer Science from Carnegie Mellon University, with a focus on artificial intelligence and cognitive science. Gil collaborates with scientists in many domains on semantic workflows and metadata capture, provenance and trust, social knowledge collection, computer-mediated collaboration, and automated discovery. In 2019, she co-chaired the CRA/AAAI 20-Year Artificial Intelligence Research Roadmap for the US with key strategic recommendations based on extensive community engagement. She initiated and led the W3C Provenance Group that resulted in a widely-used standard that provides the foundations for trust on the Web. She is a Fellow of the Association for Computing Machinery (ACM), the Association for the Advancement of Science (AAAS), and the Institute of Electrical and Electronics Engineers (IEEE). She is also Fellow of the Association for the Advancement of Artificial Intelligence (AAAI) and served as its 24th President.

## Maria Gini



Maria Gini received a degree in physics from the University of Milan in 1972. From 1974-1979, she was a Research Associate and from 1980-1982 a Senior Research Associate in the Department of Electronics in Politecnico of Milano in Italy. She then joined the Department of Computer Science at the University of Minnesota in 1982 as an Assistant Professor. She became the first woman to join the department. While there, she was promoted to Associate Professor in 1988 and to Professor in 1997. In 2001, Gini received the Distinguished Women Scholars Award from the University of Minnesota.

Since 2005, she has also been Associate Chair of the Department of Computer Science and Engineering. She was named an AAAI fellow in 2008 "for significant

## New Board Members *(continued)*

contributions to coordination and competition in multirobot and multiagent systems, for leadership in the AI community, and for inspiring the next generation". In 2011, she received the Mullen-Spector-Truax Women's Leadership Award from the University of Minnesota, presented annually to "a faculty or staff woman at the University who has made outstanding contributions to women's leadership development". Gini was also named an IEEE fellow in 2018. As of 2019, she has graduated 34 Ph.D. students as well as nearly 100 graduate students.

### Gillian Hayes



Gillian R. Hayes is Vice Provost for Graduate Education and Dean of the Graduate Division at UC Irvine. She is also the Robert A. and Barbara L. Kleist Professor of Informatics in the School of Information and Computer Sciences with courtesy appointments in computer science, education, and pediatrics. As dean of the Graduate Division, Dr. Hayes leads campus efforts to recruit a dynamic, diverse, and excellent set of graduate students and post-doctoral scholars, ensure their ability to thrive as scholars at UCI, and help them launch their careers. Her research interests are in human-computer interaction, assistive and educational technologies, and health informatics. She designs, develops, deploys, and evaluates technologies to empower people to use collected data to address real human needs in sensitive and ethically responsible ways.

### Dan Lopresti



Daniel Lopresti received his bachelor's degree from Dartmouth in 1982 and his Ph.D. in computer science from Princeton in 1987. In 2003, he joined the Department of Computer Science and Engineering at Lehigh where his research examines fundamental algorithmic and systems-related questions in pattern recognition, bioinformatics, and security. On July 1, 2009, he became Chair of the CSE Department and occupied the position for 10 years through several reappointments ending on June 30, 2019. Beginning on July 1, 2014, he served as Interim Dean of the P. C. Rossin College of Engineering and Applied Science for a year. On July 1, 2015, he was named Director of the Data X strategic initiative, a role he held until June 2020.

Lopresti currently serves as the President of the International Association for Pattern Recognition (IAPR). He is also currently the Vice Chair of the Computing Research Association's Computing Community Consortium (CCC). He is an Editor-in-Chief of the International Journal of Document Analysis and Recognition (IJ DAR), and as an Area Editor for Computer Vision and Image Understanding (CVIU). He has co-authored over 150 peer-reviewed publications, and is a named co-inventor on 24 U.S. patents. Over his career, Lopresti has mentored more than 70 undergraduate and graduate students and postdocs, and personally facilitated professional networking connections for hundreds more.

## New Board Members *(continued)*

### Ben Zorn



Ben Zorn is a Partner Researcher and former co-manager of the [Research in Software Engineering \(RiSE\)](#) group in Microsoft Research, Redmond WA working on programming languages and software engineering. His research interests include usability, security, and reliability, including reliability of artificial intelligence.

From 1990-1998, he was an Associate Professor of Computer Science at the University of Colorado. He has a BS from [Rensselaer Polytechnic Institute](#) (1982) and an MS (1984) and Ph.D. (1989) from the [University of California at Berkeley](#).

He has served as the Program Chair (1999) and General Chair (2010) of [PLDI](#), on the Executive Committee of [SIGPLAN](#), and as a member of the Computing Community Consortium ([CCC](#)) Council between 2014 and 2020. He co-founded the [CRA-Industry](#) committee in 2021 and is currently co-chair. In 2021, he received the [SIGPLAN Distinguished Service Award](#).

# 2022 CRA Conference at Snowbird Preliminary Agenda

## Conference theme: Socially Responsible Computing Research

This year's CRA Conference at Snowbird will explore the tremendous opportunities for computing research to dramatically benefit the human condition, as well as the related responsibility for computing research to consider the risks inherent in the work we do. Ensuring socially responsible intentions and practices is critical to realizing the future potential of computing research.

Sessions will be broken down into four tracks:

**Track 1: Computing Departments** - Undergraduate and graduate interest in computer science has skyrocketed. This track includes sessions that will explore how to support high-quality, diverse research and teaching in the context of booming enrollments.

**Track 2: Computing Education** - This track looks at areas that are emerging as an important part of the computing research curriculum, including ethics, security and privacy, and data science.

**Track 3: Computing in Industry** - As computing grows ubiquitous, computing research is increasingly important to industry. This track will cover how research is conducted in industry and the partnership between industry and academia.

**Track 4: Computing for Good** - This track will explore the ways that computing research can help create a better future by supporting social justice, removing bias, and driving environmental sustainability.

## Preliminary Agenda

### TUESDAY, JULY 19

noon - 4:30 pm

#### **Inaugural CRA-Industry Meeting**

Co-chairs: Vivek Sarkar (Georgia Tech) and Ben Zorn (Microsoft)

CRA-Industry is a new standing committee of the CRA created with the mission to convene industry partners on computing research topics of mutual interest and connect our partners with CRA's academic and government constituents for mutual benefit and improved societal outcomes. This event at Snowbird is intended to introduce potential industry partners to CRA-Industry and its ongoing activities and discuss ways in which CRA-Industry can most effectively support industry partners.

1:00 - 2:30 pm

#### **How and Why to Create a Departmental BPC Plan**

Broadening participation in computing (BPC) requires our individual and collective effort. To this end, the National Science Foundation (NSF) Directorate for Computer and Information Science and Engineering (CISE) started an initiative in 2017 to contribute to scaling up the BPC efforts of the computing community.



## Agenda (continued)

Specifically, the CISE Directorate introduced a new requirement for Principal Investigators (PIs) to submit a BPC Plan in proposals submitted to a number of their programs. Further, computing departments are also encouraged to develop departmental BPC Plans that map out their strategy for broadening participation in computing within their context, demonstrate their commitment to BPC, and help their faculty develop the BPC Plans required for the proposals submitted to the applicable CISE programs.

There are two kinds of BPC Plans: Departmental BPC Plans and Project BPC Plans. Departmental BPC Plans are 2-page documents that summarize the context, goals, and primary BPC activities of an entire department or another grant-seeking unit. Departmental plans are reviewed and verified by BPC experts who are part of [BPCnet.org](http://BPCnet.org)—a resource clearinghouse for all things related to broadening participation.

This session will give the participants information on how to write Departmental BPC Plans, highlight the resources available to prepare these plans, and discuss the importance of Departmental BPC Plans. Throughout the session, the participants will have the opportunity to ask questions from NSF representatives and BPC experts.

2:00 pm

### Registration

3:00 – 5:45 pm

### New Chairs Workshop

Co-chairs: Carla Brodley (Northeastern University) and Katie Siek (Indiana University)

This workshop will give new CS department chairs some of the skills needed to lead their organizations and work with deans, provosts, and advisory boards – the stuff they never told you in graduate school.

6:00 – 7:00 pm

### Welcome Reception

7:00 – 8:00 pm

### Welcome Dinner

Welcome from the Conference Co-Chairs  
50th Anniversary of the CRA  
Celebration of Andy Bernat  
Socializing among attendees

## WEDNESDAY, JULY 20

7:30 – 8:30 am

### Registration/Breakfast

8:30 – 10:00 am

### CRA: Looking Forward

Co-chairs: Ellen Zegura (Georgia Tech), Tracy Camp (CRA), Nancy Amato (University of Illinois), and Andy Bernat (Retired CRA)

CRA has finalized its Strategic Plan, thanks to tremendous effort and excellent input from a large number of community members. In this opening session, we'll share CRA's strategic themes, priority outcomes, and near-term initiatives. Our Strategic Plan, and its focus on socially responsible computing research, has defined CRA's direction for years to come. CRA will continue to excel in key areas, such as be a source for resources that inform the field, as well as establish itself as a catalyst for computing research

## Agenda (continued)

organizations to enhance the field. We invite you to learn where CRA is headed, both in the long-term and the short-term, as well as who will help lead us there.

10:00 – 10:30 am

### Break

10:30 am – noon

### The Trusting of Intelligent Machines: How AI Influences Human Behavior

Chair: Penny Rheingans (University of Maine)

Speaker: Ayanna Howard (The Ohio State University)

People tend to overtrust sophisticated computing devices, including robotic systems. As these systems become more fully interactive with humans during the performance of day-to-day activities, the role of bias in these human-robot interaction scenarios must be more carefully investigated. Bias is a feature of human life that is intertwined, or used interchangeably, with many different names and labels – stereotypes, prejudice, implicit or subconsciously held beliefs. In the digital age, this bias has often been encoded in and can manifest itself through AI algorithms, which humans then take guidance from, resulting in the phenomenon of excessive trust. Trust conveys the concept that when interacting with intelligent systems, humans tend to exhibit similar behaviors as when interacting with other humans; thus, the concern is that people may under-appreciate or misunderstand the risk associated with handing over decisions to an intelligent agent. Bias further impacts this potential risk for trust, or overtrust, in that these systems are learning by mimicking our own thinking processes, inheriting our own implicit biases. Consequently, the propensity for trust and the potential of bias may have a direct impact on the overall quality of the interaction between humans and machines, whether the interaction is in the domains of healthcare, job-placement, or other high-impact life scenarios. In this talk, we will discuss this phenomenon of integrated trust and bias through the lens of intelligent systems that interact with people in scenarios that are realizable in the near-term.

noon

### Lunch

1:30 – 3:00 pm

### Parallel Tracks

#### Track 1: Booming Enrollments While Broadening Participation in Computing

Co-chairs: Nancy Amato (University of Illinois) and Carla Brodley (Northeastern University)

Moderator: Nancy Amato (University of Illinois)

Speakers: Christine Alvarado (University of California, San Diego), Carla Brodley (Northeastern University), and Craig Partridge (Colorado State University)

Demand for undergraduate degrees in computing has increased rapidly in the last few years and shows no signs of abating. Many universities have put enrollment caps into place for various reasons including being unable to hire sufficient faculty to keep up with student demand, or to maintain balance between disciplines across the university. An inability to hire sufficient faculty is in part due to great demand and competition in the job market but also frequently due to lack of resources, which can be hindered by a

## Agenda (*continued*)

university's adaptability in reappportioning resources quickly. COVID has exacerbated the gap between student demand and faculty resources due to hiring freezes at some universities. In this panel we discuss the ways in which universities are handling booming enrollments and their positive/negative impact on broadening participation in computing. In particular, we will discuss how to effectively scale introductory classes, fair/unfair ways to cap enrollments, and how interdisciplinary computing majors can provide a solution to booming enrollments.

### **Track 2: Incorporating Ethics into Computer Science Education**

Co-chairs: Kathy Pham (Mozilla/Harvard) and Bobby Schnabel (University of Colorado, Boulder)

Speakers: Casey Fiesler (University of Colorado, Boulder), Helena Mentis (University of Maryland Baltimore County), Kathy Pham (Mozilla/Harvard), Atri Rudra (SUNY Buffalo), and Bobby Schnabel (University of Colorado, Boulder)

In recent years, there has been a surge of attention into incorporating ethics into education in computer science and related fields. This is taking a variety of approaches, including integrating ethics topics into core technical computer science courses, and standalone ethics and computing courses that in some cases involve partnerships with other disciplines. This panel will summarize some of these recent developments, including examples from the Responsible Computer Science Challenge that is integrating ethics into undergraduate computer science courses, and experience in standalone courses at undergraduate and graduate levels. It also will discuss repository created by an ACM Education Board task force that collects and provides materials that aid faculty in teaching ethics in computing topics. The panel will consist of fairly brief presentations followed by considerable time for discussion with the audience.

### **Track 3: Computing Research in Industry**

Chair/Moderator: Jaime Teevan (Microsoft)

Speakers: Susan Dumais (Microsoft), Fernando Pereira (Google), Lisa Amini (IBM) and Kristin Lauter (Meta)

Computation is in the process of transforming all areas of a business, from the way work gets done to the products and services that are created. As a result, companies are increasingly investing in fundamental computer science research in support of their strategic goals. This panel will look at what it means to do computing research in an industrial setting. Panelists will describe how research is conducted in their organizations, highlighting how problems are selected, how research is incentivized, and how results have internal and external impact. They will also discuss some of the key differences of doing research in an industrial setting compared with an academic setting, and share ideas for how universities might best prepare their students for a career in industrial research.

## Agenda (continued)

### Track 4: Climate-Smart Computing to Address a Grand Challenge Facing Our Changing Planet

Co-chairs: Kate Larson (University of Waterloo) and Shashi Shekhar (University of Minnesota)

Speakers: Andrew A. Chien (University of Chicago), Vandana Janeja (University of Maryland, Baltimore County), Vipin Kumar (University of Minnesota) and Ran Libeskind-Hadas (Claremont McKenna College)

Climate change has been declared as the defining crisis of our time and concrete actions are needed now. Many communities have started major initiatives to address climate change. For example, the Biden administration has made it a central priority for all federal agencies resulting in initiatives for reducing greenhouse gases (GHG) emissions (e.g., electric vehicles), absorbing GHG (e.g., forests), increasing resilience (sea level rise, forest fires, extreme cold/hot weather), etc. This panel will bring together thought leaders in academia, industry and government to explore climate-smart computing opportunities by addressing questions such as the following:

- What is climate-smart computing? What may it help understand, mitigate, and adapt to climate change? How may we reduce computing's carbon footprint?
- What are computing research success stories in this area?
- What are major computing opportunities in this area?
- How may new computing researchers get involved?
- What are key research infrastructures (e.g., datasets, cyberinfrastructure, funding)?
- Is there a need for computing research community action? If so, recommend one.

3:00 – 3:30 pm

#### Break

3:30 – 6:30 pm

#### Networking Activities

Guided Hikes  
Lightning Talks

Computing leaders from Minority Serving Institutions (MSIs) will each give a short presentation about their institution, research portfolio, and areas for collaborations/partnerships.

6:30 pm

#### Dinner

Reboot!

The CCC Council embarked on a new activity this year to generate new ideas for us to explore as a community. In this session, we will have a set of lively, provocative conversations about three of these “blue sky” topics.

Organizer: CRA's Computing Community Consortium - Ann Schwartz (CRA)

Speakers: Sujata Banerjee (VMWare), Nadya Bliss (Arizona State University), Bill Gropp (University of Illinois) and Dan Lopresti (Lehigh University)

Moderator: Liz Bradley (University of Colorado Boulder)

## Agenda (continued)

THURSDAY, JULY 21

7:30 – 8:30 am

### Breakfast

8:30 – 9:30 am

### Reports from the Computing Research Community

Speakers: Amruth Kumar (Ramapo College of New Jersey), Rajendra Raj (Rochester Institute of Technology), Kristen Shinohara (Rochester Institute of Technology), Elizabeth Mynatt (Northeastern University), Amanda Stent (Colby College), Liz Bradley (University of Colorado), Jaime Teevan (Microsoft) and Christine Alvarado (UC San Diego)

This session will highlight recent developments and reports from across the computing research community. Each presenter will provide a brief overview of their report and findings, and then audience members will participate in short, guided table-discussions around the themes introduced in the presentation. The goal of the session is to spur conversation at Snowbird on topics that are important to the computing research community and provide a teaser into a larger body work that inspires audience members to learn more after the session.

The reports covered will be:

- CS202X: Computer Science Curricula (ACM, IEEE-CS, AAAI)
- Accessible Computing Education in Colleges and Universities
- Depicting Innovation in Information Technology (National Academies)
- Responsible Computing Research (National Academies)
- Climate Change (CCC) by Liz Bradley (University of Colorado)

9:30 – 10:00 am

### Award Presentations

10:00 am

### Break

10:30 am

### Parallel Tracks

#### Track 1: Development of Teaching Faculty

Chair/Moderator: Ran Libeskind-Hadas (Claremont McKenna College)

Speakers: Christine Alvarado (University of California, San Diego), Nancy Amato (University of Illinois), Dan Grossman (University of Washington) and Susan Rodger (Duke University)

Teaching faculty play a critically important role in undergraduate CS education at large research universities. These faculty members contribute to their departments in multiple ways including, but not limited to, teaching very large introductory sequence courses and promoting pedagogical innovations that can benefit the entire department. This session addresses effective practices in recruiting, retaining, and mentoring teaching faculty. Among the questions that will be addressed are:

- What are effective models for teaching track faculty positions in terms of teaching, scholarship, and service expectations and responsibilities?

## Agenda (continued)

- What are effective practices in recruiting and mentoring teaching track faculty members?
- What are good practices in reviewing, renewing, and promoting teaching faculty?
- What are good practices and trends with respect to contract duration and security of employment for teaching track faculty?

### **Track 2: Security and Privacy Education**

Chair/Moderator: Lorrie Cranor (Carnegie Mellon University)

Speakers: Patrick McDaniel (The Pennsylvania State University), Bo Yuan (Rochester Institute of Technology), Matt Bishop (University of California, Davis) and Michael Bailey (Georgia Tech)

Companies are reporting a growing shortage of qualified cybersecurity professionals, with hundreds of thousands of jobs going unfilled. New privacy laws around the world are also leading to rapid growth in the privacy profession, with an increased demand for privacy engineers. The demand for security and privacy professionals has prompted the creation of new degree programs at all levels. In addition, some universities are finding ways to incorporate security and privacy lessons throughout their computer science curricula. Panelists will discuss security and privacy undergraduate and graduate education, including course modules, full courses, and entire degree programs devoted to these areas.

### **Track 3: Industry-Academia Partnerships**

Chair/Moderator: Divesh Srivastava (AT&T)

Speakers: Elizabeth Mynatt (Northeastern University), Chris Ramming (VMWare), Jennifer Rexford (Princeton University), Vivek Sarkar (Georgia Tech), and Benjamin Zorn (Microsoft)

In 2015, the CCC co-sponsored an industry round table that produced the document “The Future of Computing Research: Industry-Academic Collaborations.” Since then, several important trends in computing research have emerged as described in the CCC document “Evolving Academia/Industry Relations in Computing Research.” These trends include: (i) significant increases in the level of interaction between professors and companies in certain computing disciplines such as currently AI, which take the form of extended joint appointments, and (ii) increasingly, companies are highly motivated to engage both professors and graduate students working in specific technical areas, because companies view computing research and technical talent as a core aspect of their business success. This increasing connection between faculty, students, and companies has the potential to change (either positively or negatively) numerous things, including: (a) the academic culture in computing research universities, (b) the research topics that faculty and students pursue, (c) the ability to solve bigger problems with bigger impact than what academia can do alone, (d) the ability of universities to train undergraduate and graduate students, (e) how companies and universities cooperate, share, and interact, and (f) the potential for principles and values from academia informing products and R&D roadmaps in new ways through these unique joint arrangements. A recent survey carried out by CRA measures the degree and impact of this trend. This session brings together a diverse set of participants from industry and academia to understand these trends and help identify best practices that can be shared widely among computing research institutions.

## Agenda (continued)

### Track 4: From Fairness to Responsibility: Actioning and Advancing the Discussion around “Algorithmic bias”

Co-chairs: Brent Hecht (Microsoft)

Moderator: Brent Hecht (Microsoft)

Speakers: Miranda Bogen (Meta), Michael Kearns (University of Pennsylvania) and Maria De-Arteaga (UT Austin)

At the beginning of the last decade, the domain popularly known as “algorithmic bias” was a niche research area being advanced by a tiny group of scholars. By the end of the decade, “algorithmic bias” had become one of the most prominent domains of computing and a subject of great interest to policymakers and the general public. Anytime a field grows this quickly, it can be useful to stop and reflect on the field’s strategic directions. In this panel, we will take part in this reflection. Some of the questions we will debate include:

- Is the computing community focusing on symptoms of problems related to “algorithmic bias” rather than their causes?
- Rather than attempting to tweak models, is our time better spent developing new technologies and systems that directly address societal harms?
- How can industry and academia productively collaborate on responsible AI, especially given concerns about “ethics washing”? How can industry productively contribute more generally?
- Can a repositioning of the field around responsibility rather than fairness encourage more robust solutions to the problems at the core of “algorithmic bias”?
- How can the research and engineering practices around fairness (and responsibility) match the urgency and needs emerging from AI systems entering the world in diverse ways?
- Are there ways in which productizing ideas in the fairness literature can lead to more harm than good, e.g., through a belief that a model’s “bias can be fixed”? If so, how can we prevent this from happening?

noon

### Lunch

1:30 pm

### Parallel Tracks

#### Track 1: Undergraduate Research and Booming Enrollments: Who Wins

Co-chairs: Christine Alvarado (UC San Diego) and Kelly Shaw (Williams College)

Moderator: Kelly Shaw (Williams College)

Speakers: Edward Coyle (Georgia Tech), Sarah Heckman (North Carolina State), Joe Hummel (University of Illinois, Chicago) and Brandon Fain (Duke University)

While the boom in enrollment has created significant challenges to CS units, it also provides opportunity to increase the supply of talented and well-educated computing researchers.

## Agenda (continued)

The challenge faced by units with surging enrollments is how to scale undergraduate research opportunities to reach the increasing number of exceptionally capable and well-motivated students. The major goals for this session are: (1) increasing awareness of different approaches/programs that units have established towards scaling undergraduate research in CS and CS-related fields and (2) enabling replication of such programs with best practices.

The session will highlight successful scaling strategies with particular focus on successful research training support courses, incentive structures for faculty and students, mentoring structures, and recruitment and matching models. Panelists will discuss what activities can be done in groups for training and mentoring undergraduate researchers and models for offering those activities as well as promising approaches for faculty incentives to participate in undergraduate research.

### **Track 2: Data Science in Computer Science Education**

Chair/Moderator: David Ebert (University of Oklahoma)

Speakers: Michael Franklin (University of Chicago), Magda Bałazinska (University of Washington), and Atul Prakash (University of Michigan)

The 2016 CRA Report on Computing Research and the Emerging Field of Data Science, highlighted the fact that data science will drive fundamentally new research in computer science and that the computing community has the opportunity to shape the emerging field of data science. Numerous schools have created minors and majors in data science. This session will explore how data science has impacted the educational programs in computer science and consider experiences, approaches, and answers to questions including:

- Which courses should change/have changed to include data science issues?
- What new course and requirements are the most effective?
- Are most departments creating a series of specialized topic courses (e.g., ICR)?
- Should we create new specializations/degrees or integrate into core programs?
- How has student interest in specialization shifted to data science or is the shift just specifically to Machine Learning and AI?
- How should we manage the growing demand, and will it continue?

### **Track 3: Techlash in Context: What Should CS Departments and Tech Companies Do?**

Chair/Moderator: Vivek Sarkar (Georgia Tech)

Speakers: Lorrie Cranor (Carnegie Mellon University), Alfred Spector (Google), Moshe Vardi (Rice University) and Nirit Weiss-Blatt (Author of “The Techlash and Tech Crisis Communication”)

In past decades, CS departments and tech companies have been admired as drivers of positive change. However, there is now a growing undercurrent of negative associations with tech companies, which is also being transferred to CS departments in their interactions with industry. Several recent mainstream

## Agenda (continued)

news articles have documented on-campus student protests criticizing various actions by tech companies, both in how their products are used and in how companies have responded to internal missteps. In some cases, these protests also target CS departments and faculty members involved in partnering with or hosting these companies. Adding fuel to fire, the current rapid growth and adoption of AI technologies threatens to further amplify this backlash. While our community has always benefited from members who have advocated for increased social responsibility in computing, a broader response is needed to address the growing techlash on campus and in society. In this interactive session, we will place techlash in context, and discuss what actions CS departments and tech companies can take to rebuild a positive image for tech in academia and industry. Much of the discussion will be driven by audience questions, so audience participation will be highly welcomed!

### Track 4: Addressing the Challenge of Mis- and Disinformation, Online and Beyond

Chair/Moderator: Kate Starbird (University of Washington)

Speakers: Amy Zhang (University of Washington), Laura Edelson (NYU) and Yasmin Green (Jigsaw)

Mis- and disinformation are a critical challenge for democratic societies. Acute misinformation can lead to poor decision making, for example about whether or not to take a vaccine. At scale, it can render a society unable to effectively respond to collective crises, from pandemics to climate change. Pervasive disinformation (intentionally misleading information) erodes trust in institutions, including science, journalism, government, and democracy – and can make it difficult for citizens of democratic societies to come together to do the difficult work of governing themselves. In recent years, we seem to be experiencing an acceleration and expansion of mis- and disinformation, with many pointing to the role of the Internet and social media in particular in their spread. As we continue to come to terms with the scale and nature of the issue, the work of identifying potential “solutions” looms. It’s clear that there is no one, simple solution – but there is hope that we can mitigate its damage by productively chipping away at the problem from multiple angles. This conversation explores some of the proposed solutions to the challenge of mis- and disinformation, addressing them along several distinct dimensions – e.g. from education, to policy, to platform (re)design.

3:00 – 3:30 pm

**Break**

3:30 – 5:00 pm

### Making a Federal Case for Computing

Speaker: Peter Harsha (CRA)

CRA’s Peter Harsha will discuss how CRA is supporting the computing research community’s interests in Washington. He will attempt to make sense of this seemingly chaotic political landscape and discuss how CRA and our partners in the science advocacy community are contending with it. Harsha will also talk about opportunities for members of the computing research community to engage in the process at a variety of different levels and intensities.

5:00 – 6:30 pm

**Break**

6:30 pm

**Dinner**

## Agenda *(continued)*

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### **2022 Conference at Snowbird Organizing Committee:**

- Penny Rheingans (University of Maine) Co-Chair
- Shashi Shekhar (University of Minnesota) Co-Chair
- Jaime Teevan (Microsoft) Co-Chair
- James Allan (University of Massachusetts, Amherst)
- Christine Alvarado (University of California, San Diego)
- Carla Brodley (Northeastern University)
- Peter Harsha (CRA)
- Kate Larson (University of Waterloo)
- Ran Libeskind-Hadas (Claremont McKenna College)
- Divesh Srivastava (AT&T)



# Call for Coaches for the CSGrad4US Mentoring Program



## Are you interested in mentoring prospective graduate students through the application and reentry process?

The coach application is now available on the [CSGrad4US Mentoring Program](#) webpage. The goals of the CSGrad4US Mentoring Program are:

- To guide returning students through the application process towards a successful CS PhD admission and school selection
- To mentor them through the transition to PhD graduate study in the first year towards high retention.

Specific topics include the admissions process, preparation of all components of a strong graduate application, differences between graduate programs at different institutions, how to compare programs with respect to the Fellow's goals and background, and general guidelines on making a selection among admission acceptances.

Access the coach application [here](#). **Applications received by July 1st** will be given preference. For questions regarding eligibility, please email [csgrad4us@cra.org](mailto:csgrad4us@cra.org).

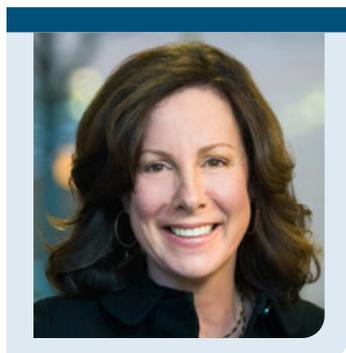
# Expanding the Pipeline: Addressing the distribution of prior experience in CSI



CRA-WP

Computing Research Association  
Widening Participation

By Carla Brodley



Imagine you walk into Japanese 101 and on the first day the professor asks, “Has anyone taken Japanese before?” and *everyone* raises their hand but you and a handful of other students. Imagine then that your classmates not only raise their hands but respond to the professor in *Japanese!* At age 18, I would have been intimidated and likely would have dropped the class. This is how many of our students feel in the first course for computing majors – overwhelmed by the sense that they are already behind when in theory they have only just begun.

The trouble is that prior experience in CS is not uniformly distributed across all genders, races and ethnicities, and further CS is only offered in approximately half of U.S. high schools (with more of those high schools in regions of economic privilege). Thus, the individuals experiencing

the first course required for a computing major (CSI) in this way are more likely to be from less privileged geographies and from genders and races/ethnicities historically marginalized in tech.

There is substantial evidence in the computing education literature that universities that actively manage the distribution of prior knowledge, *can* create a culture in their introductory sequence where everyone feels welcome and can thrive. This is important for both students with prior experience and those without, and ultimately for our faculty. It is challenging to teach a class when students come with widely differing prior knowledge; one runs the risk of that neither group is engaged. We just need to agree on the best practices for doing this.

At the [Center for Inclusive Computing \(CIC\)](#) we have performed dozens of site visits at universities across the U.S., during which we meet with faculty, departmental/college leadership, advisors, teaching assistants, and, most importantly, students. These site visits are designed to determine if a school is ready for a CIC Implementation Grant to implement systemic and sustainable changes such that all students can discover, enjoy, and persist in computing in university. During site visits, the students who came to university with no coding experience share how they felt when they took the intro sequence. Some of the more memorable phrases used were: “pit of alligators”, “made me feel like I was stupid” and “I felt like I did not belong.” Many reported feeling like they were already behind on the first day. Others reported that when other students ask questions like “Is that a Boolean”, “Is that an inherited class” or “Is that a conditional expression” that it was indeed like a foreign language to them. Students further shared that CSI has a reputation on campus as being overly difficult and unfriendly.

It is imperative that computing departments address the distribution of prior experience in coding, but how they respond will depend on the context of the department and the university. In this article, we outline five of the more popular approaches, illustrating the contexts in which they work best, and possible pitfalls.

## 1. For universities at which Java is the first language, allow students to skip CSI if they have prior Java coding experience as measured either by placement test, results of the AP exam, community college articulation agreement, or even by student preference.

A potential pitfall is that if a university is implementing a GPA-based enrollment cap to admit students to the major,<sup>1</sup> then students with prior experience will decide to take CSI in the hopes of an easy A that will bolster their GPA and help guarantee them a spot in the major. Thus, care must be taken to avoid this pitfall (perhaps by not counting the CSI grade for students with either an AP credit or who have CS on their high-school transcript).

## 2. Split students by prior experience into two different sections of CSI (for our purposes, let’s call these sections “prior experience” and “no prior experience”), and let the students decide for themselves which they prefer.

The course outcomes for

<sup>1</sup> A GPA-based enrollment cap is when a university requires students meet a minimum grade-point average (GPA) threshold for entry to the major (typically calculated from the student’s grades in the first 2-3 courses of the major, plus a few co-requisites like Calculus 1 and 2, and, occasionally, Physics I). In a forthcoming op-ed in the August 2022 issue of the CACM, we discuss why GPA-based enrollment caps are at odds with broadening participation in computing – namely because they favor students with prior computing experience.



## Expanding the Pipeline *(continued)*

both classes are identical, but the student populations differ in terms of prior experience. For the “prior experience” section, instructors can add material from further along in the curriculum (e.g., P vs. NP, as opposed to bringing in material from the next course) so as to not put the students ahead. A pitfall here is that students with prior experience might opt for the “no prior experience” section because they perceive it will be easier – again, something that can be particularly problematic for schools with GPA-based enrollment caps. Indeed, at one large public university, the section for students without prior experience fills up first (with the majority of those students having prior experience). Thus, this approach demands active management of registration and in how grades are counted for determining who gets to major in CS.

### **3. Add a CS0 for non-majors or students without experience (often in Python) to offer students an engaging introduction.**

Many of these courses use “computing in context” to ground the material in one or more fields. Ideally, this course satisfies a general-education requirement at the university (which serves as a way to attract students to \*try\* computer science in the first place). But, in this strategy, three issues must be addressed. First, advisors need to understand who should be taking CS0 and advise students accordingly. Second, CS0 must have a pathway to the major (if not, what’s the point of inviting discovery...). Indeed, at one university, a student could not get credit for both of CS0 and CS1 as they were perceived as having too much overlap. At another, CS0 is taught in Python and CS1 is taught in Java but no support was provided to make the transition from one language to the other. Third, computing majors are often perceived as challenging to get through in four years, and making students wait until (at least) their second semester to start the major might scare away some students, even if in reality they can easily complete it. Thus, care must be taken to have appropriate messaging across the university on why starting with CS0 will not impact a student’s ability to complete their degree in four years, particularly if CS0 is taken in the first or second semester of a four-year degree.

**4. Implement two intro sequences: a two-course sequence for people with prior experience (CS1 and CS2) and a three-course sequence for those without (CSI-A, CSI-B and CS2), with students merging back together into CS2 (or, sometimes, in CS3).** Care must be taken to ensure that the students don’t create a culture of thinking those in the CSI-CS2 sequence are “better” than those in the CSI-A, CSI-B, CS2 sequence or that people in the three-course sequence are somehow “behind.” Here again, advising is critical for how to ensure people are steered to the right sequence, and there must be a way for students to switch tracks if they made the wrong initial estimation of their skills. Additionally, care must be taken in universities with GPA-based enrollment caps that students don’t opt for the 3-course sequence because of a perception that it will be easier. One school we worked with removed CSI-A from the GPA calculation with the dual goals of incentivizing students without experience to try computer science with no penalty and *dis*-incentivizing students with experience from gaming the pathway to the major. On the other hand, schools must guard against the tendency of students to opt into the shorter path when they do not have the background because they view it as overall less work.

**5. A particularly challenging issue for most universities is how to handle the prior experience of students transferring from community college (CC).** In some cases, there are articulation agreements and the curriculum of the CC and the 4-year institution are in sync. In other cases, a different language is taught in CC than in the 4-year institution, and when a student transfers, no credit is given toward progression in the major (although general education credits might be given), adding time to degree completion because computer science has a strong pre-requisite chain. In other cases, credit is given, but students then struggle in the subsequent course. The problem can be particularly acute when students from many community colleges attend the same 4-year institution or vice versa (indeed, getting all CS educators to agree to one teaching language is likely impossible). Thus it is important that 4-year institutions work with their local CC(s) to ensure they use the same language/curriculum on the intro sequence, and that attention is paid to this agreement on an annual basis since either or both institutions might change the language/curriculum in the intro sequence. And if synching the initial programming language is not possible, then a transition course or module will do much to help in the transition.

Our experience working with universities across the U.S. is that when schools actively manage the distribution of prior experience, they observe dramatic reductions in drop/fail/withdraw rates and more consistent persistence rates across all intersectional



## Expanding the Pipeline *(continued)*

identities. These changes, in turn, have positive reputational benefits if the changes are shared across the university advising system. Indeed, when I was Dean of Khoury College of Computer Sciences at Northeastern University – after we made certain changes (we implemented Option 2 for our CS and cybersecurity degrees and Option 3 for our data science degree), I went on an “apology tour” at all the other colleges to assure the academic advisors that their students would now feel welcome and would enjoy exploring computing. As a result, in the ensuing years about 40% of the students in our intro courses are non-majors from across the university.

There are few silver bullets available to us in CS education, and I do not use the phrase “best practice” lightly when so much of our ability to make sustainable changes is context-specific and resource-driven, but in the case of managing the distribution of prior experience, I feel a great deal of optimism that this is a challenge that is eminently surmountable.

**“Our experience working with universities across the U.S. is that when schools actively manage the distribution of prior experience, they observe dramatic reductions in drop/fail/withdraw rates and more consistent persistence rates across all intersectional identities. These changes, in turn, have positive reputational benefits if the changes are shared across the university advising system.”**

### About the Author

Carla E. Brodley is the Dean of Inclusive Computing at Northeastern University, where she serves as the Executive Director for the Center for Inclusive Computing and holds a tenured appointment in Khoury College of Computer Sciences. Dr. Brodley served as dean of Khoury College from 2014-2021. A fellow of the Association for Computing Machinery, the Association for the Advancement of Artificial Intelligence (AAAI), and the American Association for the Advancement of Science (AAAS), Brodley’s interdisciplinary machine learning research led to advances not only in computer science, but in areas including remote sensing, neuroscience, digital libraries, astrophysics, content-based image retrieval of medical images, computational biology, chemistry, evidence-based medicine, and predictive medicine. She was recently recognized for her BPC work with the ACM Frances E. Allen Award for Outstanding Mentoring.

### Acknowledgments

I would like to thank Catherine Gill, Sally Wynn, Megan Giordano, Manuel Pérez-Quñones, Christine Alvarado, and Benjamin Hescott for their help in formulating these ideas over the years and for their edits on this article.

### Side note on the CIC

Founded in 2019, the Center for Inclusive Computing at Northeastern University partners with U.S. universities to materially increase the representation of women computing graduates. These partnerships focus on addressing and removing the institutional barriers that exclude women of all races and ethnicities from discovering and thriving in computing programs. In order to accelerate change, the CIC partners with schools through grantmaking, technical advising, and data collection and analysis. You can learn more about the CIC at <https://cic.northeastern.edu/>

# DEAPening Employer Academic Partnerships



CERP

Computing Research Association  
Evaluation



CRA-I

Computing Research Association  
Industry

*By Helen Wright, CRA-Industry Senior Program Associate*

*Contributions to this article were provided by CERP Director, Burçin Tamer.*

**The Computing Research Association (CRA)-Industry's mission is to increase interaction between industry partners and other organizations involved in computing research for the benefit of all.**

In that light, we would like to bring your attention to a project called DEAP, initiated by a group of computer science faculty from eleven different universities, which stands for "DEAPening Employer Academic Partnerships." It is a [National Science Foundation](#)-funded project centered on the development of a national alliance of partners that are either (a) academic programs and institutions, or (b) companies or other organizations that employ graduates of academic programs and institutions – all involving jobs (or training for jobs) in the computing/technology field.

DEAP seeks to develop the academic-industry partnership needed to prepare graduates for long-term success in industry careers. It is made up of a team of academics with industry partners aiming to address a long-standing disconnect: that these two types of entities do not communicate frequently and substantially enough to shape the academic curricula that currently prepare students. Too frequently, universities are producing graduates that employers perceive as not ready for jobs, and companies are sometimes less than realistic in their expectations of those graduates. They want both sides to come together to work collaboratively on a long-lasting solution that continually adapts to the ever-evolving computing landscape.



DEAP recently held two faculty workshops (one at SIGCSE) attended by faculty from over 100 computing departments, with a majority of participants interested in further engagement.

CRA is represented in the DEAP project advisory committee by Burçin Tamer, the Director of CRA's [Center for Evaluating the Research Pipeline](#) (CERP). CERP has experience with large scale student surveys and helps to connect DEAP to CRA's computing science research community. DEAP is also engaged with CRA-Industry and has representation on their advisory committee from ABET, ACM, and IEEE, and other members.

Learn [more about DEAP](#) and [join their community here](#). CRA-Industry and CERP look forward to working with DEAP going forward and helping them achieve their similar goals.

# Building Stronger Regional Academia-Industry-Government Computing Research Partnerships



**CRA-I**

Computing Research Association  
Industry

By Helen Wright, CRA-Industry Senior Program Associate



In April 2022, CRA-Industry held its third roundtable event focused on **Building Stronger Regional Academia-Industry-Government Computing Research Partnerships**. The purpose of this roundtable was to convene partners across academia, industry, and government to understand successful approaches and to discuss the value of partnerships and best practices. The session was moderated by two members of the CRA-Industry steering committee: Mary Hall (University of Utah) and Ben Zorn (Microsoft). The panelists were Erwin Gianchandani (National Science Foundation), Charles Isbell (Georgia Institute of Technology), Greg King (Georgia Institute of Technology), and Phyllis Schneck

(Northrop Grumman). In order to pinpoint success and call out specific interactions, the moderators decided to pick academia, industry, and government speakers from one city. Atlanta is known for their close partnerships among academia and industry so it was an easy guinea pig for this roundtable.

Due to what Charles Isbell called the city's well developed and maintained ecosystem, it is clear that the strength of Atlanta's partnerships is because of their collaborative nature. Isbell distinguished between partnerships and ecosystems, where a partnership is a one time transactional relationship and an ecosystem builds a long term relationship on which many collaborations can develop due to the trust that it creates. Greg King hypothesized that this multisector collaboration goes back decades. One of the most visible examples is the teamwork that led to the 1996 Summer Olympics being held in Atlanta and the culture it created in the city 25 years ago. The city, in preparation for the Olympics, looked for areas to improve and realized that in order for the investments to make an impact they needed many partners bringing their best - this included Georgia Tech, the private sector and the city of Atlanta. This collaborative culture has continued and has led to the thriving tech hub ecosystem, home now to some of the fastest growing startups, that Atlanta is known for today.

Within this ecosystem, Phyllis Schneck emphasized the importance of convening. Convening together around a common idea or goal is very powerful. Academic departments are natural conveners and can nurture these academia, industry, and government relationships by bringing in industry or government experts into projects or reaching out to those in the community to come teach guest lectures. You can bring everyone together, as Erwin Gianchandani said, if you offer the right projects and everyone has an openness and willingness to work together. He remarked that these broad potential projects can engage the community and create socio-technical solutions where everyone can learn from one another while benefiting the ecosystem and growing the community. But they do require building trust among the stakeholders, which takes time, dedication, and commitment.

CRA-Industry would like to keep the momentum from this roundtable going. A similar event highlighting another city and its academia, industry, and government partnerships would be beneficial to the computer science research community. If you are interested in organizing one for your city, please email the CRA-Industry leadership ([industryinfo@cra.org](mailto:industryinfo@cra.org)).

# CSTB Releases Report Fostering Responsible Computing Research: Foundations and Practices



CCC

Computing Community Consortium  
Catalyst

*By Maddy Hunter, CCC Program Associate*

The National Academies' Computer Science and Telecommunications Board (CSTB) released a new report, *Fostering Responsible Computing Research: Foundations and Practices*. The report outlines recommendations for the computing research community to ensure ethical and societal impacts are thought through and a part of the conversation from the start.

The National Academies' CSTB was created to advise the nation on technical and public policy issues pertaining to computing. This includes social and economic implications, sustaining leadership in computing innovation, and using computing in desirable and beneficial ways. The board is comprised of leading experts in the field, one of which is CCC Council Member **David Danks**.

On May 2nd, the project's Committee Chair, **Barbara Grosz**, discussed the key findings and recommendations from the report. You can see the webinar recording [here](#). In Grosz's talk, she stressed that the report and its recommendations carry no expectation that computer scientists and engineers become experts in areas of scholarship such as ethics, psychology, sociology etc.

"As computing technologies play central roles in increasingly many spheres of daily life and affect societies ever more widely, computing research, which provides the foundations enabling these technologies, must grapple with their sociotechnical nature—in shaping the research itself and to yield solid foundations for technology development. The report's recommendations enable it to do so, and they identify multiple routes for computing researchers and students to acquire understanding of relevant ethics and social science expertise and their value for addressing challenges of responsible computing." - Barbara Grosz

As it stands now, the computing research community deals with issues as retrospective damage control. In order to mitigate risks and negative impacts, ethical and societal implications must be considered and baked into the design phase of technology development. This requires an interdisciplinary approach with abundant resources and expertise. The report highlights eight recommendations outlining initial steps to making this vision a reality.

- **Recommendation 1.** The computing research community should reshape the ways computing research is formulated and undertaken to ensure that ethical and societal consequences are considered and addressed appropriately from the start.
- **Recommendation 2.** The computing research community should initiate projects that foster responsible computing research, including research that leads to societal benefits and ethical societal impact and research that helps avoid or mitigate negative outcomes and harms. Both research sponsors and research institution should encourage and support the pursuit of such projects .
- **Recommendation 3.** Universities scientific and professional societies, and research and education sponsors should support the development of the expertise needed to integrate social and behavioral science and ethical thinking into computing research.
- **Recommendation 4.** Computing research organizations - working with scientific and professional societies and research sponsors - should ensure that their computing faculty, students, and research staff have access to scholars with the expertise to advise them in examining potential ethical and societal implications of proposed and ongoing research activities, including ways to engage relevant groups of stakeholders. Computing researchers should seek out such advice.
- **Recommendation 5.** Sponsors of computing research should require that ethical and societal considerations be interwoven into research proposals, evaluated in proposal review and included in project reports.



## CSTB Report *(continued)*

- **Recommendation 6.** Scientific and professional societies and other publishers of computing research should take steps to ensure that ethical and societal considerations are appropriately addressed in publications. The computing research community should likewise take steps ensure that these considerations are appropriately addressed in public release of artifacts.
- **Recommendation 7.** Computing researchers who are involved in the development or deployment of systems should adhere to established best practices in the computing community for system design, oversight and monitoring.
- **Recommendation 8.** Research sponsors, research institutions and scientific and professional societies should encourage computing researchers to engage with the public and with the public interest and support them in doing so.

You can read the full report [here](#).





# CRA Opportunity Board

*By Maddy Hunter, CCC Program Associate*

Last year the Computing Research Association (CRA) launched an **Opportunity Board** to enable recent new PhD graduates and members of the community that are looking for postdocs to connect. This is a continuation of the Opportunity Board used to match potential postdocs and mentors during the **CIFellows 2021** process. The board allows for the posting of postdoc opportunities by potential mentors and posts by those looking for a postdoc opportunity. We encourage members of the community to use this as a resource.

## Postdoc Opportunity Board

**This Opportunity Board is provided for the community to use to find potential mentor / postdoc pairings.**

- This board will be monitored by CRA, but we will not be endorsing any posts or making any recommendations.
- Please use the options below to either post a profile or search through opportunities by research area.
- We ask that you remove your post once you have found someone to work with on an application.

FIND  
MENTOR

FIND  
POSTDOC

POST  
MENTOR PROFILE

POST  
POSTDOC PROFILE

The Opportunity Board lists four options:

- Find Mentor
- Find Postdoc
- Post Mentor Profile
- Post Postdoc Profile

You are able to search for potential postdocs and available postdoc positions by research area.

This board is monitored by CRA, but we will not endorse any posts or make any recommendations. Posts will remain for six months before being removed. If you find a match, please remove your profile from the Opportunity Board. You can view the board [here](#).

# NITRD 30th Anniversary Symposium Recap

*By Maddy Hunter, CCC Program Associate*

The **NITRD 30th Anniversary Symposium** was held in Washington D.C. at the National Spy Museum. The event provided an opportunity for the computing research community to come together and celebrate the impact that federal funding has had on computing technologies, innovations and the world at large. The day featured insightful remarks from key leaders in the community including **Alondra Nelson** (Deputy Assistant to the President Deputy Director for Science and Society White House Office of Science and Technology Policy), **Barbara McQuiston** (Director of Defense Research and Engineering for Research and Technology in the Department of Defense), **Kamie Roberts** (Director of the National Coordination Office for the Networking and Information Technology Research and Development Program), Sethuraman (“**Panch**”) Panchanathan (Director of the National Science Foundation), **Erwin Gianchandani** (NSF) and the Computing Community Consortium’s Chair **Elizabeth Bradley**.

The event consisted of five panels, each composed of four to five experts discussing the impact federal funding has had on their field and what entities funding should focus on going forward.

## Computing at Scale

*Moderated by Ben Zorn (Microsoft and CCC)*

- **Luiz André Barroso** (Google)
- **Ian Foster** (Argonne National Laboratory and CCC)
- **Timothy Pinkston** (University of Southern California)
- **Kathy Yelick** (University of California, Berkeley)

## Networking and Security

*Moderated by Bob Bonneau (The Office of the Secretary of Defense/Department of Defense)*

- **Deborah Frincke** (Sandia National Laboratories)
- **Jim Kurose** (University of Massachusetts Amherst)
- **Chris Ramming** (VMware)

## Artificial Intelligence and Machine Learning

*Moderated by Elizabeth Bradley (University of Colorado Boulder)*

- **Charles Isbell** (Georgia Institute of Technology)
- **Chad Jenkins** (University of Michigan and CCC)
- **Talitha Washington** (Clark Atlanta University)
- **Patti Ordóñez Franco** (University of Puerto Rico-Rio Piedras)

## Privacy and Internet of Things

*Moderated by Charles (“Chuck”) Romine (National Institute of Standards and Technology)*

- **Ed Felten** (Princeton University)
- **Marc Groman** (Groman Consulting)
- **Katerina Megas** (National Institute of Standards and Technology)
- **Sunoo Park** (Cornell University and CIFellow)

## How Technology Can Benefit Society: Broadening Perspectives in Fundamental Research

*Moderated by Alondra Nelson (Office of Science and Technology Policy)*

- **Janet Abbate** (Virginia Polytechnic Institute and State University)
- **Deborah Estrin** (Cornell Tech)
- **Charles Isbell** (Georgia Institute of Technology)
- **Ramayya Krishnan** (Carnegie Mellon University)

The symposium also incorporated voices from early career researchers during a poster session. Fifty Computing Innovation Fellows (**CIFellows**) presented a poster on their postdoc research and had the opportunity to speak with the other NITRD attendees about their work. You can check out their posters [here](#).

The event was a great way to honor the last 30 years of continued investments in Networking and Information Technology facilitated by the NITRD program. If you did not get the chance to tune into the livestream, you can view the panel recordings on the [CCC web page](#) or on [NITRD’s YouTube channel](#). We will be posting a blog series highlighting each panel over the coming weeks.

# Applications Open for BPCnet.org BPC Plan Workshop in Denver, CO (August 3-5, 2022)



By BPCnet.org Staff

## BPCnet RESOURCE PORTAL

Applications are now open for the upcoming Broadening Participation in Computing (BPC) Plan Workshop, hosted by BPCnet.org in Denver, CO from August 3-5, 2022. In this workshop, departments will have the opportunity to learn more about BPC efforts from the National Science Foundation (NSF), how to create a Departmental BPC Plan, and how to best support faculty PIs submitting NSF proposals that require a BPC Plan. Consultants from BPCnet.org will be available to answer questions and provide real-time feedback about your departments' BPC Plan during the workshop.

Please check out the [workshop website](#) for more information about the workshop.

### Eligibility

This workshop is open to all computing department faculty and administrators developing Departmental BPC Plans. We recommend (but do not require) that each department participates in the workshop in teams of 2-3. For each department, we ask that at least one participant represent the leadership (e.g., department heads, deans, etc.) at the workshop. We also encourage non-academic staff, research institute personnel, Diversity, Equity, and Inclusion (DEI) professionals, and leaders from other broadening participation-related organizations to attend. Registrants do not need to have prior experience developing Departmental BPC Plans. Each department may send up to three representatives to attend.



### Funding

This workshop is funded by the NSF. Attendees will be reimbursed for their travel expenses in accordance with [CRA's Travel Policy](#).

### Application

Each department only needs to submit one application. The person who completes the application on behalf of the department will be asked to provide information on the other representatives (e.g., name, email). Click [here](#) to complete and submit your application by midnight **Sunday, June 26th**.

If you have any questions regarding the workshop, please reach out to [bpcinfo@cra.org](mailto:bpcinfo@cra.org).

BPCnet.org Resource Portal is an initiative of the Computing Research Association (CRA) with support from the National Science Foundation (CNS-1830364, CNS-2032231, and CNS-1940460). Subscribe to the BPCnet.org newsletter & bulletin by clicking [here](#).

# The Decision to Go to Graduate School After Undergraduate Degree Completion

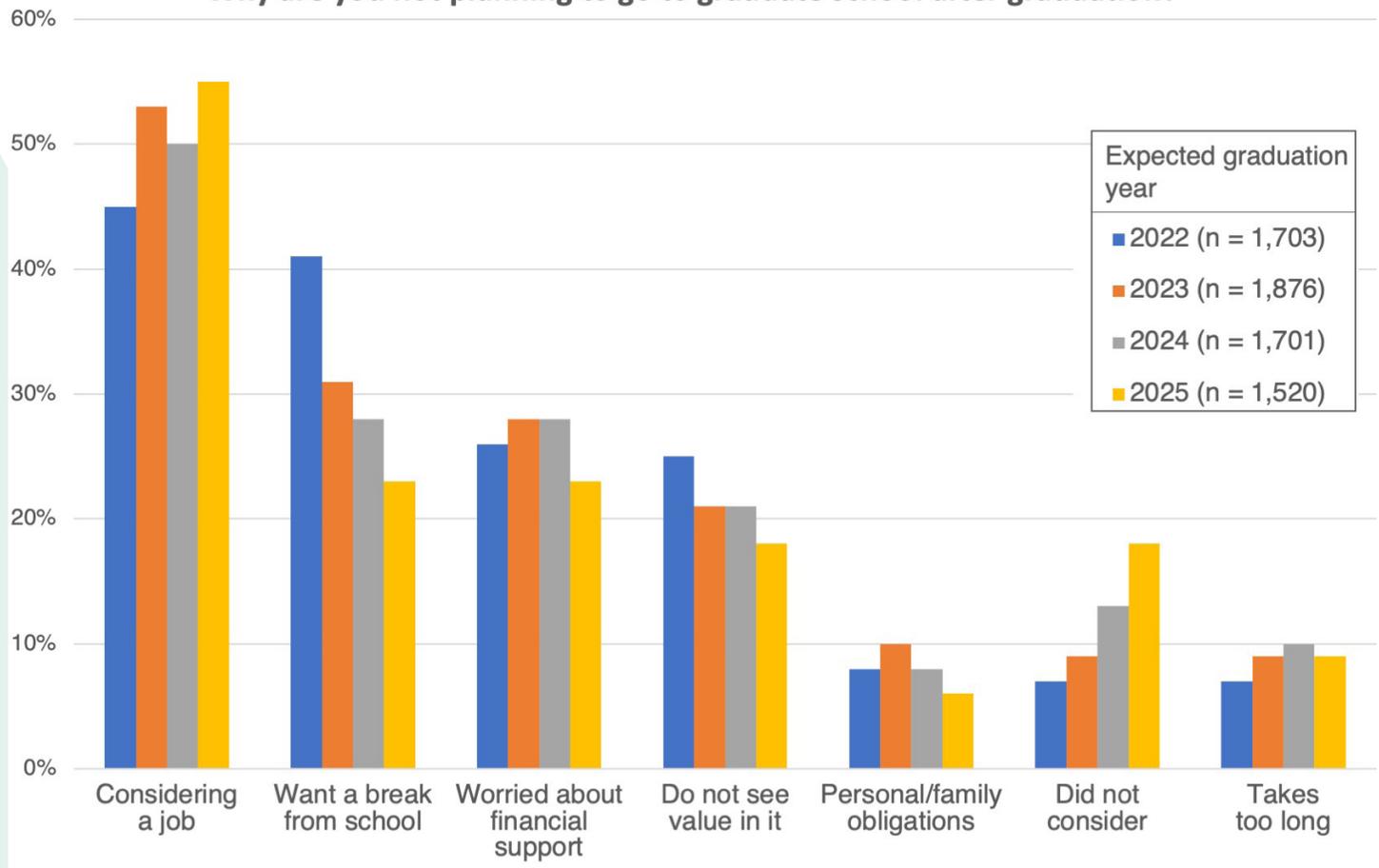


**CERP**

Computing Research Association  
Evaluation

By Burçin Tamer, Director of CERP

## Why are you not planning to go to graduate school after graduation?



Source: CRA Data Buddies Survey (2021). Center for Evaluating The Research Pipeline. Computing Research Association.  
Notes: Undergraduate students who reported that they did not intend to go to graduate school immediately after graduation are included (n = 6,990). Respondents could select up to 3 reasons. See article for additional reasons not displayed here.

Going to graduate school right after completing an undergraduate degree is among the many different pathways to a research career. In fact, according to the Data Buddies Survey 2021 data, only about 43% of students who are intending to ultimately get a doctoral degree and 65% of students who intending to ultimately get a master’s degree plan on applying to a graduate program (master’s or doctorate) after graduation.

The graphic here shows the reasons identified by undergraduate students who do not plan to go to graduate school after

graduation (regardless of their highest degree plans) for why they are not planning to do so. Students are broken down by their expected year of graduation since it is reasonable to assume that their reasons may vary at different time points throughout their degree programs.

Analysis reported here shows that the prospect of getting a job is by far the highest rated reason why students do not plan on going to graduate school immediately after completing their undergraduate degree. This was followed by the desire to take



## Graduate School (*continued*)

a break from school. Interestingly, students who are furthest away from graduating (55%) is more likely to select job prospects as a reason compared to those who are graduating within the next year (45%). In contrast, wanting to take a break from school seems to become more important for students who are close to graduation (41%) than for those who are early on in their degree program (23%).

What to do after completing an undergraduate degree is a question every student is faced with even before they begin their degree. It is a complex decision to make and to understand. This visualization suggests that job prospects weigh heavily on students' decision to skip or delay graduate education. It also shows that, while some of the reasons remain the same across students at different stages of their degree program, others vary in terms of their salience depending on how close students are to graduating.

### Notes:

- The CRA Data Buddies Survey 2021 collected data from 12,720 undergraduate students. 9,524 of this sample responded to the question about their plans immediately after completing their current degree. 7,090 students did not select going to graduate school as one of their options. Responses from 6,800 students who responded to the follow-up question regarding why they are not planning on going to graduate school and are graduating between 2022-2025 are displayed in this graphic.
- The full list of reasons available for selection included: I am considering a job, I wanted to take a break from school, I was worried about financial support, I do not see the value in it, I have personal and/or family obligations, I had not considered it, It takes too long to complete, I think school is too difficult, I have already earned the highest degree I plan to attain, I did not feel academically prepared, I am currently earning the highest degree I plan to attain, I am not interested in getting another degree, Other.

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](#). Check out CERP's activities and find out how to engage on [CERP's website](#).

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**Timothy Pinkston**, University of Southern California  
**Lori Pollock**, University of Delaware  
**Rachel Pottinger**, University of British Columbia  
**Chris Ramming**, VMWare  
**Penny Rheingans**, University of Maine  
**Vivek Sarkar**, Georgia Tech  
**Eve Schooler**, Intel  
**Shashi Shekhar**, University of Minnesota  
**Forrest Shull**, Carnegie Mellon University  
**Katie Siek**, Indiana University Bloomington  
**Eugene Spafford**, Purdue University  
**Divesh Srivastava**, AT&T Labs-Research  
**Jaime Teevan**, Microsoft/University of Washington  
**Marvin Theimer**, Amazon  
**Alexander Wolf**, University of California, Santa Cruz

## CRA Executive Committee

**Nancy Amato**, Chair  
**Dan Grossman**, Vice Chair  
**James Allan**, Treasurer  
**Ran Libeskind-Hadas**, Secretary  
**Jaime Teevan**, Appointed Member

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**Nicole Beck**, Reimbursement Specialist  
**Betsy Bizot**, Senior Research Associate  
**Daniela Cárdenas**, Senior Program Associate, CRA-WP  
**Sandra Corbett**, Senior Administrator for Events Management  
**Ann Schwartz Drobnis**, Director, CCC  
**Catherine Gill**, Program Associate, CCC  
**Haley Griffin**, Program Associate, CCC  
**Alejandra Guzman**, Senior Program Associate, CRA-WP  
**Jill Hallden**, Senior Grant Specialist  
**Peter Harsha**, Interim Executive Director, Senior Director of Government Affairs  
**Maddy Hunter**, Program Associate, CCC  
**Sabrina Jacob**, Senior Administrator for Membership and Advertising  
**Kristi Kelly**, Senior Research Associate, CERP  
**Roohia Meer**, Program Assistant, CERP  
**Brian Mosley**, Senior Policy Analyst  
**Taniya Ross-Dunmore**, Research Assistant, CERP  
**Erik Russell**, Director of Programs  
**Shar Steed**, Senior Communications Specialist  
**Burçin Tamer**, Director, CERP  
**Heather Wright**, Associate Director, CERP  
**Helen Wright**, Senior Program Associate, CRA-Industry  
**Evelyn Yarzebinski**, Senior Research Associate, CERP

## Column Editors

Expanding the Pipeline  
**Soha Hassoun**, Tufts University  
**Patty Lopez**, New Mexico State University

## Arizona State University

### *Director, School of Computing and Augmented Intelligence*

The Ira A. Fulton Schools of Engineering (Fulton Schools) at Arizona State University (ASU) seeks a highly accomplished scholar and strategic leader as Director of the School of Computing and Augmented Intelligence (SCAI).

SCAI is the largest school in the Fulton Schools of Engineering with 100 faculty members and over 9,700 students enrolled in fall 2021 across two campuses and online. With nine major research centers and highly regarded degree programs in computer science, computer systems engineering, computer engineering, engineering management, industrial engineering, Informatics, and software engineering, SCAI faculty, students, and strategic partners are exploring the ways the school brings computing, data engineering and analytics, cybersecurity, visualization, machine learning, optimization, industrial statistics and AI to bear on decision making, creativity and responsible innovation. SCAI is a key element of ASU's major evolution of the Fulton Schools to position it as one of the top 15 engineering schools in the U.S.

The Director of the school reports to the Dean of the Fulton Schools of Engineering and will be the academic and administrative leader of SCAI. Candidates will be qualified for appointment at the rank of full professor.

For more information regarding the Director opportunity, the School of Computing and

Augmented Intelligence, the Ira A. Fulton Schools of Engineering, and Arizona State University, please see the position profile here: <https://www.agbsearch.com/searches/director-school-of-computing-and-augmented-intelligence-arizona-state-university-ira-a>

### **Applications, Nominations and Expressions of Interest**

AGB Search is pleased to assist ASU with this targeted leadership search. To apply for the Director, School of Computing and Augmented Intelligence position, candidates are requested to submit the following: a curriculum vitae; a letter of interest (not to exceed two pages); and contact information for four references (to be contacted with candidate's permission at a later date).

Application materials should be sent to [ASUDirectorSCAI@agbsearch.com](mailto:ASUDirectorSCAI@agbsearch.com) by June 24, 2022 for best consideration. The search will remain open until an appointment is made.

Please direct nominations and expressions of interest to [ASUDirectorSCAI@agbsearch.com](mailto:ASUDirectorSCAI@agbsearch.com) or to the AGB search consultants listed below:

Kimberly Templeton, JD, Principal

[kimberly.templeton@agbsearch.com](mailto:kimberly.templeton@agbsearch.com);  
540.761.9494

Phillip Clay, Ph.D., Executive Search  
Consultant

[phillip.clay@agbsearch.com](mailto:phillip.clay@agbsearch.com);  
617.699.6673

## Boston University

### *Lecturer*

The Department of Computer Science invites applications for a non-tenure track full-time lecturer position beginning in Fall 2022. Qualifications required of all applicants include a Ph.D. (or at least a Master's) degree in Computer Science or a related discipline, and a commitment to teaching excellence. The position requires teaching foundational courses in computer science, mainly at the undergraduate level, in areas such as programming, computer systems, algorithms and data structures, software engineering, data science, and security.

The Department consists of a diverse group of 32 tenured and tenure-track faculty members, and offers programs leading to B.A., M.S., and Ph.D. degrees. The Department has research strengths in data mining, databases, graphics, image and video computing, machine learning, natural language processing, networking, distributed systems, operating systems, programming languages, formal methods, real-time systems, security and cryptography, and theory of computation and algorithms. In addition, members of the Department collaborate closely with faculty across the university including mathematics and statistics, computer engineering, mechanical engineering, biology, earth and environment, economics, law, medicine, among others. Candidates are encouraged to demonstrate throughout their application their attention to diversity and inclusion as these topics

relate to teaching and engagement within the academic environment.

Review of applications will begin immediately and continue on a rolling basis. Additional information about the Department is available at <http://www.bu.edu/cs>.

Qualified applicants should apply at <https://academicjobsonline.org/ajojobs/21670>. Applications should include a cover letter, CV, statement on teaching experience and three reference letters.

Review of applications will begin on May 1, 2022.

Boston University expects excellence in teaching and in research and is committed to building a culturally, racially, and ethnically diverse scholarly community (<https://www.bu.edu/info/about/diversity>). Boston University is an AAU institution with a rich tradition dedicated to inclusion and social justice. We are proud that we were the first American university to award a Ph.D. to a woman and of our record of inclusiveness. The College of Arts & Sciences includes diversity as one of five strategic goals. We are dedicated to increasing the participation of all talented students and are committed to the pursuit of Computer Science by underrepresented groups at BU and beyond. We are an equal opportunity 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. We are a VEVRAA Federal Contractor.



## Tenure-Track Assistant Professor or Instructor of Cyber Operations

Located in beautiful Charleston, S.C., The Citadel is a fully accredited, public, comprehensive, co-educational college with a student body of 2300 undergraduate and 1000 evening and graduate students. **Since 2016, The Citadel has been designated as a National Center of Academic Excellence in Cyber Defense Education by the National Security Agency and Department of Homeland Security.** The Department of Cyber and Computer Sciences has 5 full-time faculty and 7 adjunct faculty members. The department offers the B.S. in Computer Science; B.S. in Cyber Operations; M.S. in Computer and Information Sciences (jointly with the College of Charleston); graduate certificates in cybersecurity, and software engineering; and undergraduate minors in cybersecurity, cyber inter-disciplinary studies, data science, and computer programming. Teaching responsibilities include undergraduate courses in computer science and cyber operations for majors and minors and graduate-level courses in computer and information sciences and cybersecurity. A normal teaching load is 9-12 hours per week with small class sizes.

The primary role of the faculty is the education of students in the classroom and advising the students with their academic programs. Faculty members are also responsible for scholarly activity and service. The Citadel supports faculty scholarship and professional development. Internal funding is available for research, development, and travel. The contract is a full-time, 9-month position. Candidates should exemplify The Citadel's core values of honor, duty, and respect.

**Required Qualifications, Tenure-track Assistant Professor:** An earned doctoral degree in Computer Science, Cyber Operations, or closely-related discipline; and a strong aptitude for teaching courses in Cyber Operations. **Required Qualifications, Instructor:** An earned Master's degree in Computer Science, Cyber Operations, or closely-related discipline; and a strong aptitude for teaching courses in Cyber Operations.

**Additional Comments:** Salary and fringe benefits are competitive, and other benefits include convenient parking and access to the Citadel Beach House located on Isle of Palms.

In addition to the online application, please attach or send in the following materials: curriculum vitae, copies of graduate transcripts, a statement of teaching philosophy, a statement of research plans (needed for Tenure-track Assistant Professor position), and three letters of recommendation, with at least one that addresses applicant's teaching. All application materials should be submitted online at The Citadel Careers website: [www.citadel.edu/careers](http://www.citadel.edu/careers). If you have any questions or concerns while applying at the Citadel Careers web site, please call The Citadel's Human Resources Office at 843-953-6922.

Questions about the position may be directed to Dr. Michael Verdicchio, Associate Professor, Cyber and Computer Sciences Faculty Search Committee, Department of Cyber and Computer Sciences, The Citadel, 171 Moultrie Street, Charleston, SC 29409, phone: 843-953-6987, or by email: [mv@citadel.edu](mailto:mv@citadel.edu).

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

[citadel.edu/ccs](http://citadel.edu/ccs)

## Colorado State University

*Non Tenure-Track Computer Science Assistant, Associate or Full Professor of Practice - Open Pool*

The CSU (Colorado State University) Department of Computer Science is accepting applications for teaching positions for the 2022-2023 academic year. The open positions are non-tenure track and may be temporary or special assignment. Annual terms and reappointment may depend on performance and/or funding availability.

To read the full job announcement and apply to the open pool see <https://jobs.colostate.edu/postings/100191>.

References will not be contacted without prior notification to candidates.

The open pool applications are valid through September 15, 2022, at which time all applicants wishing to remain in the open pool must reapply.

CSU is an EO/EA/AA employer and conducts background checks on all final candidates.

## Colorado State University

### *Computer Science Instructor - Open Pool*

The CSU (Colorado State University) Department of Computer Science is accepting applications for teaching positions the 2022-2023 academic year. The open positions are non-tenure track and may be temporary or special assignment. Annual terms and reappointment may depend on performance and/or funding availability.

To read the full job announcement and apply to the open pool active until September 30, 2022, see <https://jobs.colostate.edu/postings/92730>.

References will not be contacted without prior notification to candidates.

The open pool is valid through September 30, 2022, at which time all applicants wishing to remain in the open pool must reapply.

CSU is an EO/EA/AA employer and conducts background checks on all final candidates.

## Emory University

### *Global Diabetes Research Center*

### *Faculty Positions in Artificial Intelligence and Diabetes & Cardiometabolic Diseases*

Woodruff Health Sciences Center, Emory University, is seeking to recruit multiple, open-rank **tenure-track faculty** (assistant, associate, or full professor) with expertise in **Artificial Intelligence (AI)** and either experience or interest in **its application to diabetes and its complications**.

Emory is making a major commitment to Artificial Intelligence (AI) with the goal of creating a vibrant and coherent research and teaching community that represents the diverse interests of Emory's schools and units and expand offerings to undergraduate, graduate, and professional school students. As part of this "AI-Humanity Initiative" supported by the Office of the Provost at Emory University, the Emory Global Diabetes Research Center (EGDRC) is committed to enabling its rich interdisciplinary research ecosystem for the application of cutting-edge AI and machine learning (ML) methods to diabetes research. We interpret AI as broadly but not limited to data analytics, image analysis and computer vision, prediction, and modeling. Some of the areas for domestic and global health applications of AI and ML to diabetes and associated cardiometabolic complications (e.g., heart, kidney, limb, and eye diseases) include: etiology; prevention; diagnosis and prognosis; precision diabetes; experiments customized to disease phenotypes and behavioral and/or pharmacological approaches; approaches to health equity,

public health, and healthcare delivery; complex systems and biology modeling to optimize discovery; and decision-making for policy and practice.

The ideal candidate should have a doctoral degree (in a relevant discipline) with a strong record of AI academic research, a demonstrated capacity to publish and the potential to secure external funding, and either have prior experience or be interested in the application of AI to diabetes-related domains. The individual should have ability to be a team player in interdisciplinary research while carving out a distinctive niche diabetes. Multiple opportunities for multidisciplinary collaboration exist across the Woodruff Health Sciences Center (WHSC) and other divisions of Emory University. The candidate's interest and scholarly discipline will determine the primary appointment (e.g., Schools of Medicine, Public Health, Nursing, or the College of Arts and Sciences), and cross-appointments within the 3 WHSC schools and/or any of the other Emory Schools (Arts & Sciences, Business, Law, Theology) will be encouraged.

To apply, [click here](#) or go to <https://faculty-emory.icims.com/jobs> and search for "91656". For additional information: Mark Hutcheson, [mhutch3@emory.edu](mailto:mhutch3@emory.edu).

## Fundação Getúlio Vargas

### *Open rank professor in Data Science*

The School of Applied Mathematics at Fundação Getúlio Vargas (FGV EMap) in Rio de Janeiro, Brazil, invites applications

for one open-rank faculty position in Data Science to strengthen and complement our existing research activity in this area.

We are looking for established researchers (associate/full professor) or outstanding young researchers (assistant professor) who have demonstrated research and teaching expertise in Data Science. We will prioritize applicants whose research focuses on natural language processing, computer vision, and scalable computing.

The successful candidate is expected to develop an externally funded research programme, publish in high impact journals, supervise research (postgraduate) students, teach at both undergraduate and graduate levels, and provide service to the department and institution. Peer reviewed external funding is expected to be obtained and sustained. Industrial partnerships are also strongly encouraged.

## Qualifications

The successful candidate will hold a Ph.D. in Computer Science or a closely related discipline, at the time of the appointment. At the assistant professor level, the applicant is expected to have a compatible track of publications and strong potential for publishing in top ranked journals. At higher levels (associate or full professor) the applicant is expected to have an established line of research with a strong publication record, proven ability to attract external funding, and an established research network.

The successful candidate will also possess excellent communication and presentation skills, being capable

of teaching both undergraduate and postgraduate students across our portfolio of Data Science courses. Fluency in Portuguese is desirable, but not required. However, by the end of the second year the applicant may be required to teach in Portuguese.

## Start-up package

A generous package is available to provide the necessary resources for starting a successful independent research programme. These include computational infrastructure, lab space as well as postdoctoral positions and graduate-student support. There is also the possibility to apply internally for core-funded projects. During the first year, it will be possible to arrange for a reduced teaching load.

## Salary and Benefits

We offer an internationally competitive salary commensurate with level of appointment. Current salaries at FGV EMap are higher than any similar academic institution in Brazil. The benefits include health and dental plans, support for young children's education and private pension fund.

## Application

Applicants should send their applications to: [emap\\_position@fgv.br](mailto:emap_position@fgv.br) including:

1. a cover letter describing their experience, interests, and suitability for the position;
2. a curriculum vitae;
3. teaching statement;
4. research statement;

5. electronic version of their best 3 publications (assistant professor) or best 5 publications (associate or full professor) in the past 5 years

Applicants must also arrange for three reference letters to be sent by the referees to [emap\\_position@fgv.br](mailto:emap_position@fgv.br) before the deadline.

To be considered at the associate or full professor level, the candidate should also include evidence of experience in directing graduate students.

Deadline for applications is June 10th, 2022. Selected applicants will be contacted for an interview by June 15th, 2022. Interviews will be scheduled starting from June 20th and will be held in person, when possible.

Further enquiries should be sent to Prof. Cesar Camacho, Head of the School, by email [emap@fgv.br](mailto:emap@fgv.br).

## Iowa State University

### *Postdoc/Research-Scientist Position in Rural Broadband, 5G and Beyond*

For exciting projects such as the \$16M ARA PAWR project (<https://arawireless.org/>) and the \$20M ICICLE AI Institute project (<https://icicle.ai/>), a Postdoc/Research-Scientist position is available for wireless and edge systems for rural broadband, 5G and beyond. One key mission is to establish a large-scale, first-of-its-kind wireless living lab encompassing bleeding-edge technologies and innovation platforms (e.g., those for free-space optical communications, mmWave, massive MIMO, LEO satcom,



## Founding Tenured/Tenure-Track Faculty

The Hong Kong University of Science and Technology (HKUST) is a leading international university ranked 3<sup>rd</sup> by Times Higher Education Young University Rankings 2022 and 34<sup>th</sup> by QS World University Rankings 2022. HKUST establishes HKUST(GZ) in Guangzhou, China ([hkust-gz.edu.cn](http://hkust-gz.edu.cn)). HKUST(GZ) synergizes with and maintains the same academic standard as HKUST. Microelectronics Thrust is an academic department in HKUST(GZ) and focuses on integrating novel devices into circuits, architecting information systems, and automating their designs and optimizations. English is the instruction and administration medium at HKUST(GZ), and a good command of written and spoken English is required.



Microelectronics Thrust is an academic department in HKUST(GZ) and focuses on integrating novel devices into circuits, architecting information systems, and automating their designs and optimizations. English is the instruction and administration medium at HKUST(GZ), and a good command of written and spoken English is required.

**OPENINGS** in Microelectronics Thrust are tenured/tenure-track positions at the ranks of Assistant Professor, Associate Professor, and Professor with the following basic requirements.

- Applicants of tenure-track Assistant Professor should demonstrate strong research and teaching potentials.
- Applicants of Associate Professor should have a proven record in research, teaching, student supervision, and funding.
- Applicants of Professor should have world-class academic achievements, international academic leadership, and an established track record in teaching, student supervision and funding.

**APPLICANTS** should have a PhD degree and research in areas such as the following.

- Electronic design automation; photonic design automation; hardware-software codesign; modeling and simulation technology
- Processor, memory, and storage system architecture; reconfigurable architecture; interconnection network; multiprocessor
- HPC and data center; embedded system; system-on-chip; system-in-package; power management; thermal management
- Quantum computing; neural computing; approximate computing
- Compilation techniques; operating system; system software
- RF/mm-Wave/terahertz technology; integrated photonic circuit; memory device; quantum device; emerging technology

**SALARY** is of international standard and highly competitive. Generous research funding, ample laboratory space, and excellent research equipment and support will be provided. All the positions are in mainland China and offered by the HKUST(GZ) in accordance with the local employment laws and regulations. The appointments to Full Professor and Associate Professor will be made on substantive basis. The initial appointments to Assistant Professor will be made on a fixed-term contract of up to three years, and re-appointments thereafter will be subject to performance and mutual agreement.

**APPLICATIONS** should be submitted at <https://facrecruit.hkust.edu.hk> which will be open until the positions are filled. If there is any question, please contact the Acting Department Head, Prof. Jiang Xu, at [jiang.xu@ust.hk](mailto:jiang.xu@ust.hk). HKUST(GZ) is committed to equal opportunity and diversity in recruitment and employment. We strongly encourage candidates of diverse backgrounds to apply. You can find a list of our existing faculty at <https://facultyprofiles.hkust-gz.edu.cn/thrust-faculties?code=10011A10000000000H22>.



URLLC, communications and networking software, AR/VR, and precision agriculture) and to collaborate with a broad ecosystem of public-private partners in advancing the frontiers of wireless systems, edge/cloud computing, and rural broadband. In addition, the position offers opportunities of shaping the development of the Center for Wireless, Communities and Innovation (<https://wici.iastate.edu/>).

Prior systems research experience in wireless, networks, and/or distributed systems is invaluable. For instance, qualifications in any of the following areas are strong pluses:

- Research experience and quality publications in advanced wireless systems (e.g., 5G and beyond);
- Hands-on experience in designing, developing, deploying, and operating field-deployed wireless, network, and/or distributed systems;
- Hands-on experience with cellular network platforms (e.g., OpenAirInterface, srsLTE, ONF SD-RAN and COMAC), edge/cloud computing platforms (e.g., OpenStack, Kubernetes), SDN, and VNF;
- Hands-on experiences in edge/cloud systems management, virtual machines/containers, Linux systems administration, shell scripting, etc;
- Capability of building systems prototypes based on reference publications and/or open-source software;
- Programming skills: Python, Web, C, C++, Java etc;
- Knowledge of wireless systems, networked/distributed systems, operating

systems, virtualization, systems and network security.

Interested candidates are encouraged to email Hongwei Zhang ([hongwei@iastate.edu](mailto:hongwei@iastate.edu)) with relevant background information (e.g., education, transcripts, experience, and/or publications) and the names of up to three references.

Applications will be considered until the position is filled.

The work will be conducted at the Department of Electrical and Computer Engineering in Iowa State University (ISU), U.S.A. ISU is a major research university, and the Department of Electrical and Computer Engineering at ISU has over 100 years of rich and distinguished history. (See <https://web.iastate.edu/sites/default/files/about/docs/facts/facts.pdf> and <http://www.ece.iastate.edu/the-department/history/>) For instance, individuals from the department have pioneered the world's first electronic digital computer, encoding process for fax machines, world's first portable phone, medical ultrasound technology, first handheld scientific calculator, and infant respiratory augmentor. As a 400+ acre development and having over 96 tenants employing over 2,250 people, the ISU Research Park (<http://www.isupark.org/>) hosts a vibrant startup community as well as R&D branches of major companies such as John Deere. In addition, many other established and start-up companies (e.g., Collins Aerospace, Emerson) are within 100 miles from ISU campus and are leaders in wireless communication and networking, AR/VR and control systems, and their applications in various

domains. ISU campus also offers a great life experience in the City of Ames, Iowa (<http://www.thinkames.com>; [https://en.wikipedia.org/wiki/Ames,\\_Iowa](https://en.wikipedia.org/wiki/Ames,_Iowa)).

## Missouri State University

### Visiting Assistant Professor

The Computer Science Department at Missouri State University invites applications for a Visiting Assistant Professor position starting Fall 2022. The selection process will begin on May 23, 2022 and will continue until the position is filled.

A Ph.D. in Computer Science or a closely related field (e.g. Software Engineering, Computer Engineering) is required (ABD will be considered). Applicants from all areas of Computer Science are invited to apply. Excellent oral and written English communication skills are essential.

Applicants must show a potential for excellence in teaching at undergraduate and graduate levels. Other expectations include service to the Computer Science Department, College of Natural and Applied Sciences, Missouri State University, the local/regional community, and the profession. The ability to develop knowledge of, respect for, and skills to engage with those of other cultures or backgrounds is required.

All applicants must submit: (1) a cover letter detailing how they meet the required qualifications and any related experiences, (2) a curriculum vitae, (3) graduate and undergraduate transcripts in English, (4) statement of teaching interests and philosophy, and (5) contact information

of at least three references. The letter of application must include a commitment to working with diverse populations.

To learn more, visit <https://jobs.missouristate.edu/postings/62193>.

Employment will require a criminal background check at University expense. EO/AA/M/F/Veterans/Disability/Sexual Orientation/Gender Identity.



## Assistant Teaching Professor in Computer Science

The School of Informatics, Computing, and Cyber Systems invites applications for an Assistant Professor of Teaching position to help lead a new CS4ALL certification program. This program will support Arizona K-12 teachers in the certification requirements for state computer science endorsements, which in turn will support a broader state goal to develop more qualified K-12 computer science teachers. The successful candidate should be able to teach introductory computer science course work, the foundations of teaching computer science, computer science electives, and have a strong background in computer science pedagogy with a preference for candidates that have experience related to teacher education and K-12 education. The successful candidate will collaborate with the Department of STEM Education and the Department of Educational Specialties to implement and deliver the CS4ALL certification program and engage both pre-service and in-service teachers.

Northern Arizona University is a committed Equal Opportunity/Affirmative Action Institution. Women, minorities, veterans and individuals with disabilities are encouraged to apply. NAU is responsive to the needs of dual-career couples. NAU is an Employer of National Service. AmeriCorps, Peace Corps, and other National Service alumni are encouraged to apply.

To apply, proceed to [NAU.edu/Careers](http://NAU.edu/Careers), follow the 'Faculty and Administrator Openings' link, locate vacancy 606246, and then "Apply" at the bottom of the page.

### Minimum Qualifications

- an earned Bachelor's degree in Computer Science or Software Engineering AND
- an earned Master's OR Ph.D. degree in Education, Educational Leadership, Engineering Education, Computer Science, Software Engineering or a closely-related field, conferred by the start date of employment.

### Preferred Qualifications

- Ph.D. in Education, Educational Leadership, Engineering Education, Computer Science, Software Engineering, or a closely related field.
- Experience with CS4ALL initiatives and/or STEM K-12 teacher education programs.
- Demonstrated experience with instructional design, effective pedagogy, team teaching, and innovative learning methodologies.
- Experience with online course development and delivery.
- Demonstrated experience with and commitment to diversity and inclusion.
- Effective communication skills.

**Salary:** Commensurate with experience.

### Benefits

This is a Faculty (FAC) position. NAU offers benefits including generous health, dental and vision insurance; participation in the Arizona State Retirement System (ASRS) or the Optional Retirement Program (ORP); sick leave accruals and 10 holidays per year; and tuition reduction for employees and qualified family members. More information on benefits at NAU is available at the NAU HR benefits page. Faculty are hired on a contract basis, renewable according to terms of the Conditions of Faculty Service.

**To apply, visit <https://apptrkr.com/3050029>**

## NYU Tandon School of Engineering

*Visiting Faculty, Computer Science and Engineering*

The Department of Computer Science and Engineering (CSE) at the NYU Tandon School of Engineering (NYU Tandon) invites applications for an open-rank 1-year visiting faculty position, beginning **September 1, 2022**. The visiting faculty member is expected to contribute to both research and teaching in the department. The teaching load will be a maximum of 3 courses for the year.

### Qualifications

You should have a Ph.D. degree in computer science or a closely related discipline. We seek individuals with evidence of excellent scholarship and teaching ability.

### Application Instructions

Please submit the following materials electronically:

- Cover letter
- Current CV
- Teaching statement
- Research Statement
- A statement of your experience with or knowledge of *inclusion, diversity, equity, and belonging efforts* and your plans for incorporating them into your teaching, research, mentoring, and service.
- Recent teaching evaluations (if available)
- Names and contact information for three references. Referees will upload confidential letters of reference in the Interfolio system.

Apply Here: <https://apply.interfolio.com/104697>

We will review applications as they are received and will continue until we fill the position. We encourage you to submit as soon as possible. Should you have any questions please contact Lisa Hellerstein at [lisa.hellerstein@nyu.edu](mailto:lisa.hellerstein@nyu.edu).

## About Us

New York University (NYU) is one of the top private universities in the United States. NYU Tandon has an illustrious past as Brooklyn Poly and NYU Polytechnic School of Engineering. Our mission is to excel in research, teaching and entrepreneurship. We aim to inspire and educate engineers for the 21st century. NYU Tandon faculty are world renowned leaders in science and technology, with a strong commitment to research, innovation, and entrepreneurship that make a difference in the world. With NYU's unrivaled global network of campuses, we promote a truly global engineering education. We are deeply committed to teaching and learning, and we lead in online education and in K-12 STEM outreach. Our students conduct Vertically Integrated Research projects and participate in an extensive undergraduate summer research program.

The Department of Computer Science and Engineering (CSE) at the NYU Tandon School of Engineering (NYU Tandon) is home to centers and research teams that are among the top groups in the country.

Departmental research areas include big data management, analysis and visualization, imaging, security and

privacy, algorithms and theory, and machine learning. We have groups working in interdisciplinary research areas like AI for games, fair and responsible data science, cybercrime, public health and social media, online political communication, urban computing, and sports analytics.

NYU Tandon is committed to substantially increase the proportion of our faculty from historically underrepresented groups in STEM and we encourage candidates from such groups to apply. We aspire to create a climate where diversity and inclusion are not only appreciated but considered an asset for creativity and innovation, and we seek faculty who have a real passion for a culturally diverse environment. We take pride in our high numbers of female students and students who are the first in their family to go to college. NYU belongs to the Higher Education Recruitment Consortium (HERC), which assists with dual-career searches, and our faculty are supported by a range of work-life balance programs provided by the [NYU Office of Work Life](#).

## Rensselaer Polytechnic Institute

### Lecturer In Computer Science

The School of Science at Rensselaer Polytechnic Institute in Troy, NY invites applications for the position of Lecturer in the Department of Computer Science (<http://www.cs.rpi.edu>) to start in August of 2022. Candidates must possess a terminal degree (Ph.D. or equivalent) and should have teaching expertise in both

introductory courses and upper level computer science electives. The initial appointment is for up to three academic years, with the expectation of subsequent renewal. The successful candidate should have strong teaching, advising, and mentoring skills. The ideal candidate will be an individual with a comprehensive vision of computer science education, as well as the skills needed to integrate into a multi-disciplinary department. Evidence of teaching effectiveness may include student evaluations, syllabi, and/or sample assignments. As Rensselaer approaches its 200th anniversary, come join our team as we guide a community of brilliant undergraduate and graduate Computer Science students toward future technological leadership.

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

Qualified applicants must submit their applications through

<https://careers.rpi.edu/en-us/job/493279/adjunct-lecturer-sr-lecturer-or-professor-of-practice-school-of-science>

We welcome candidates, who bring diverse intellectual, geographical, gender, and ethnic perspectives to Rensselaer's work and campus communities.

Rensselaer Polytechnic Institute is an Affirmative Action/Equal Opportunity Employer.

## Texas A&M University

### *Director, Global Cyber Research Institute*

At Texas A&M, the Texas A&M Global Cyber Research Institute (GCRI), a joint institute between Texas A&M University and the Texas A&M Engineering Experiment Station, has recently been established with support from a generous endowment, and we are seeking its inaugural director.

The main goal of the institute is to provide a platform for research, leadership, engagement, and education in cyber and information security. The position posting has just been released, and more details about the GCRI's mission and this position can be found here: <https://tinyurl.com/GCRIDirector>

## Texas Tech University

### *Professor of Practice*

The Department of Computer Science at Texas Tech University invites applications for Professor of Practice positions starting in Fall 2022. Applicants must have at least a master's degree in computer science or related fields by the time of appointment. We are looking for outstanding individuals who will contribute to the university's mission through teaching, mentoring students in professional and career preparation and serving as liaison with professional contacts and entities on behalf of the department or program. This is a non-tenure track, multi-year renewable appointment (can be remote teaching

for graduate programs) contingent on successful annual and cumulative performance appraisals. Summer appointments are possible but not guaranteed, contingent on the demand for courses and availability of funding. Preference is for a candidate with a Ph.D. or more than ten years of industry experience with, a background of demonstrated excellence and dedication to mentoring and teaching. The candidate must be prepared to teach large and small classes of undergraduate and graduate students. A demonstrated and ongoing commitment to serving diverse student populations and first-generation students is highly desirable. Service duties include program-building, as well as commitment to extra-curricular activities. Service to the department, college, and university is expected.

A letter of application, Curriculum Vitae, teaching statement, and three letters of references should be submitted electronically at <http://www.texasstate.edu/careers/> using requisition number 28333BR.

Applications for Professor of Practice made by May 30, 2022, will be given highest priority.

As an Equal Employment Opportunity/Affirmative Action employer, Texas Tech University is dedicated to the goal of building a culturally diverse faculty committed to teaching and working in a multicultural environment. We actively encourage applications from all those who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the academic

community at Texas Tech University. The university welcomes applications from minoritized candidates, women, veterans, persons with disabilities, and dual-career couples. Texas Tech University is a Hispanic Serving Institution (HSI).

Please direct any questions to CS Search Chair, at [cs.teachingsearch@ttu.edu](mailto:cs.teachingsearch@ttu.edu)

## TU Wien

### *Call for applications - Full Professorship for Computer Architecture*

The Faculty of Informatics at TU Wien would like to further strengthen its profile in Computer Architecture. The successful candidate will have an outstanding research and teaching record in Computer Architecture, with particular emphasis on at least one of the following fields (but are not limited to):

- Multi- and many-core architectures
- Massively parallel architectures (e.g. GPU architectures)
- Non-conventional architectures (e.g. neuromorphic computing)
- Energy-efficient architectures, power management, approximate computing
- Reconfigurable architectures
- Memory architectures, in-memory computing
- Inter-core communication
- Safety and security aspects in computer architecture
- Modeling, design and verification of computer architectures

- Domain-specific architectures

Detailed information is available at <https://informatics.tuwien.ac.at/news/2190>

Applications should be directed to <https://jobs.tuwien.ac.at/Job/179094>

**Application deadline: June 15, 2022**

## University of Central Florida

### *Postdoctoral Research Scholar*

The Interactive Computing Experiences Research Cluster (<https://www.eecs.ucf.edu/isuelab/>) in the Department of Computer Science (CS) at the University of Central Florida (UCF) has an opening for a postdoctoral scholar.

**Please see the following for more information and to apply to the position.**

<https://jobs.ucf.edu/en-us/job/502172/postdoctoral-scholar-interactive-computing-experiences-research-cluster>

Please contact Joseph LaViola ([jjl@cs.ucf.edu](mailto:jjl@cs.ucf.edu)) with any questions.

## University of Central Florida

### *Lecturer, Electrical and Computer Engineering*

The Department of Electrical and Computer Engineering (ECE) at the University of Central Florida (UCF) has an opening for a lecturer position. The primary responsibility of the position is teaching undergraduate courses related to computer engineering, embedded systems,

signal processing, and introductory programming for ECE students. The anticipated starting date will be August 8, 2022. All applicants must have a Ph.D. in an area appropriate to the ECE disciplines by the start of the appointment.

ECE has strong educational programs, with over 200 graduate students and 1,500 undergraduates, and state-of-the-art facilities, the L3Harris Engineering Center and Interdisciplinary Research 1 Building. Located in Orlando, UCF and ECE are at the center of Florida High Tech Corridor with an excellent industrial base in telecommunications, energy, computer systems, semiconductors, defense, space, laser, simulation, and software industries, as well as the world-renowned entertainment/theme park industry. Exceptional weather, easy access to seashore, one of the largest convention centers in the nation and an international airport ranked among the world's best are just a few features that make the UCF/Orlando area ideal. For more details regarding the ECE department and university, please visit [www.ece.ucf.edu](http://www.ece.ucf.edu) and [www.ucf.edu](http://www.ucf.edu).

UCF is an equal opportunity/affirmative action employer. All qualified applicants are encouraged to apply, including minorities, women, veterans and individuals with disabilities. As a Florida public university, UCF makes all application materials and selection procedures available to the public upon request.

Please send all inquiries to [ECE-FacultySearch@cecs.ucf.edu](mailto:ECE-FacultySearch@cecs.ucf.edu).

Follow the link <https://jobs.ucf.edu/en-us/job/502118/lecturer-electrical-and-computer-engineering> to apply.

## University of Chicago

### *Senior Instructional Professor*

#### **Description**

The Division of the Social Sciences at the University of Chicago invites applications for appointment as Senior Instructional Professor (SIP) in the Master of Arts Program in Computational Social Science (<https://macss.uchicago.edu/>). This is a full-time, career-track teaching position. The initial three-year appointment will begin in Academic Year 2022-23 and is renewable with an opportunity for promotion. Appointment at rank Assistant, Associate, and full Senior Instructional Professor will be considered based on the candidate's experience.

The Master of Arts in Computational Social Science (MACSS) is a two-year MA program that trains students in the theory and methods of algorithmic and statistical research using large datasets to enhance their understanding of political, economic, and social behavior. The MACSS curriculum provides opportunities to apply computational methods to fields across the social sciences, including economics, psychology, political science, sociology, anthropology, and history. Approximately 20% of our graduates go on for a Ph.D., while 80% seek research-oriented positions in industry, government, consulting, and a variety of think tanks.

This is a leadership position and the appointee will also hold the title of Assistant or Associate Director in MACSS.

The SIP will annually teach four courses, including 2-3 in our MACSS curriculum

(some combination of machine learning, modeling, simulation, data visualization, social network analysis, NLP, high-performance computing, application development, or introductions to important programming languages) and 1-2 computational social science electives. In addition, the SIP will be the first point of contact for all resuming students, serving as the primary reader for their MACSS theses and steering them to program completion, and oversee a limited number of MA theses from current students, for a combined total of approximately 10 MA theses per year.

In their administrative leadership, the appointee will, in consultation with the Faculty Director(s) of MACSS, provide leadership in vision, planning, and promotion of MACSS within and beyond the University; develop, implement, and oversee curricular and co-curricular programs to advance student learning; directly supervise and evaluate other teaching personnel and manage their reappointments; develop new programming and conduct one-on-one meetings to assist in the pedagogical training of all MACSS instructors; coordinate all MACSS course offerings, recommending which should be directed to MA students and which to the College; serve as the first point of contact for students who run into difficulty with MACSS curricular policy; devise, collect, and analyze periodic surveys and make recommendations on how best to improve program operations; lead our PhD placement team, organizing meetings with interested students, training the academic staff, and compiling individualized

placement data; and contribute to program admissions, staff hiring, student recruitment, and alumni engagement.

During the term of appointment, the Senior Lecturer will also have the opportunity to teach one or two courses as part of the Summer Institute in Social Research Methods for additional compensation.

The position includes support for professional development.

### Qualifications

Candidates must have the Ph.D. in hand before the start date, a demonstrated record of designing and teaching courses at the undergraduate or graduate level as a degreed professional, demonstrated experience in research and practice related to Computational Social Science, and promise of future achievement in the performance of all leadership, management, and supervisory responsibilities to a high standard of excellence.

### Application Instructions

The following materials must be submitted through Interfolio at [apply.interfolio.com/106171](https://apply.interfolio.com/106171): (1) a cover letter, outlining the applicant's prior training and research experience in their discipline, their prior teaching or mentoring experience, and their suggested course offerings; (2) a curriculum vitae; (3) at least one-course syllabus; (4) an article-length writing sample employing a computational research design; (5) course evaluations or other evidence of past excellence in teaching or mentoring; and (6) the names and contact information for three recommenders.

The review of applications will begin on May 23rd and will continue until the position is filled or the search is closed.

### EEO

We seek a diverse pool of applicants who wish to join an academic community that places the highest value on rigorous inquiry and encourages diverse perspectives, experiences, groups of individuals, and ideas to inform and stimulate intellectual challenge, engagement, and exchange. The University's Statements on Diversity are at <https://provost.uchicago.edu/statements-diversity>.

The University of Chicago is an Affirmative Action/Equal Opportunity/Disabled/Veterans Employer and does not discriminate based on race, color, religion, sex, sexual orientation, gender identity, national or ethnic origin, age, status as an individual with a disability, protected veteran status, genetic information, or other protected classes under the law. For additional information please see the University's Notice of Nondiscrimination.

Job seekers in need of a reasonable accommodation to complete the application process should call 773-702-1032 or email [equalopportunity@uchicago.edu](mailto:equalopportunity@uchicago.edu) with their request.

The review of applications will begin on May 23rd and will continue until the position is filled or the search is closed.

This position will be part of the Service Employees International Union.

## University of Cincinnati

*Department Head*

*Department of Computer Science*

*College of Engineering & Applied Science*

The College of Engineering and Applied Science (CEAS) at the University of Cincinnati (UC), located in Cincinnati, Ohio, invites nominations and applications for the position of Department Head to lead the new Department of Computer Science (CS) formed from the existing CS program, currently housed in the Department of Electrical Engineering and Computer Science.

The current CS enrollment is approximately 580 undergraduates and 440 graduate students, with an expected doubling over the next decade. Recent multimillion-dollar investments by an alumnus, the University of Cincinnati, and the State of Ohio provide significant resources to the new Department to grow faculty and support the increasing demand for Computer Scientists. The Department will offer an ABET-accredited five-year Bachelor of Science (BS) degree in Computer Science, with a mandatory cooperative education (co-op) program. At the graduate level, the Department will offer Masters of Engineering (M.Eng) and Masters of Science (M.S.) degrees in CS and a Ph.D. degree in Computer Science and Engineering in conjunction with the Computer Engineering program.

### ESSENTIAL FUNCTIONS

- Leadership in academic governance, including especially the collaborative

development of appropriate procedures for governance within the Academic Unit (e.g., policies and procedures regarding RPT, leaves, long-range planning, curriculum development, program review, and distribution and utilization of resources).

- Leadership in promoting the selection and retention of an outstanding and diversified Faculty.
- Collaborate across the college and campus, and work to achieve departmental, college, and university strategic goals.
- Advance the research and teaching missions of the department.
- Management and oversight of the Academic Unit's budget (all funds), class schedules, course offerings, teaching assignments and staff.
- Other duties as prescribed in Article 31 of the AAUP-UC Collective Bargaining Agreement.
- May provide direct and/or indirect supervision to exempt and non-exempt staff (i.e., hiring/firing, performance evaluations, disciplinary action, approve time off, etc.).

### REQUIREMENTS

The ideal applicant will hold a Ph.D. or Sc.D. in Engineering, Science, Mathematics, or a closely related discipline. Alternatively, the candidate will possess an advanced professional degree and the credentials to obtain an academic title and rank. Ideal applicants will have credentials commensurate with an appointment as a full professor with academic tenure in Computer Science. The ideal applicant

will also have an outstanding record of scholarly research and teaching; demonstrated leadership in academia or industry, at a national laboratory, or with a government agency; experience developing an inclusive culture; and established international visibility in one or more major professional societies in CS and related areas.

### THE COLLEGE OF ENGINEERING & APPLIED SCIENCE

Housing the most extensive mandatory cooperative education program and one of the best in the country (US News and World Report), CEAS has established strategic industry partnerships with companies like Siemens Digital Industries Software, Northrup-Grumman-Xetron, GE Aviation, Procter & Gamble, and Edaptive Computing. One of the 14 colleges at UC, CEAS has 8 departments offering 13 ABET-accredited degree programs. The College offers doctoral degrees in 11 programs, research-focused Master of Science degrees in 12 programs, and workforce-focused Master of Engineering degrees in 16 programs.

Details about the College and the history of its co-op program appear at: <http://ceas.uc.edu>.

### ABOUT UC & CINCINNATI

Today, the University of Cincinnati is classified as an R1 Research University (Very High Research Activity) by the Carnegie Commission and ranked amongst America's top 35 public research universities by the National Science Foundation. UC's rank has advanced 17 places in the US News & World Report rankings alone in the past

two years. In addition to being named a “green university” by Princeton Review, UC has been named one of the world’s most beautiful campuses by Forbes and Delta Sky magazines. Learn more at <http://www.uc.edu>.

The University of Cincinnati strives to provide a supportive environment for all its faculty. For example, it has an active Black Faculty Association, Latino Faculty Association, and LGBTQ Faculty Association. In addition, UC has an institutional membership in the National Center for Faculty Development and Diversity and is a member of the National Academies’ Action Collaborative on Preventing Sexual Harassment in Higher Education.

The City of Cincinnati has been rated a “**Best Place to Live**” by US News & World Report and provides both urban and suburban life along with river views and rolling hills. The city offers a wealth of amenities that include professional sports, world-class entertainment, a vibrant arts scene, gorgeous parks and nature trails, acclaimed museums, a famous zoo, a variety of restaurants, and a flourishing riverfront scene. In addition, it offers the features of two cities as the thriving area of northern Kentucky is just across the river. Affordable and family-friendly with excellent public and private schools, it is no wonder multiple Fortune 500 companies call Cincinnati home. Visit <http://www.cincinnatiusa.com> to learn more.

## APPLICATION PROCESS

Interested applicants are requested to apply directly at <http://jobs.uc.edu> to Requisition #82340 and submit a curriculum vitae, a cover letter addressing qualifications, and a near- and long-term

vision statement for opportunities in Computer Science. Nominations only may be sent confidentially to Dr. Paul Orkwis at [orkwispd@ucmail.uc.edu](mailto:orkwispd@ucmail.uc.edu). A review of applications will begin on May 20, 2022, and the position will stay open until filled.

## University of Copenhagen

### *PhD positions in Theoretical Computer Science and/or Combinatorial Optimization*

The Department of Computer Science at the University of Copenhagen invites applications for PhD positions in theoretical computer science and/or combinatorial optimization. The research group has a unique profile in that we are doing cutting-edge research both on the mathematical foundations of efficient computation and on state-of-the-art practical algorithms. This creates a very special environment, where we not only study theoretical and applied problems in depth, but where different lines of research cross-fertilise each other and unexpected and exciting synergies often arise.

The application deadline is June 29, 2022.

See <https://employment.ku.dk/phd/?show=156469> for the full announcement with instructions how to apply.

## University of Copenhagen

### *Postdoctoral positions in Theoretical Computer Science and/or Combinatorial Optimization*

The Department of Computer Science at the University of Copenhagen invites applications for postdoc positions in

theoretical computer science and/or combinatorial optimization. The research group has a unique profile in that we are doing cutting-edge research both on the mathematical foundations of efficient computation and on state-of-the-art practical algorithms. This creates a very special environment, where we not only study theoretical and applied problems in depth, but where different lines of research cross-fertilise each other and unexpected and exciting synergies often arise.

The application deadline is June 29, 2022.

See <https://employment.ku.dk/faculty/?show=156468> for the full announcement with instructions how to apply.

## University of Massachusetts Lowell

### *Visiting Faculty Lecturer - Computer Science (multiple positions)*

#### Position Summary:

The Computer Science Department at The University of Massachusetts Lowell invites applications for a full-time, non-tenure-track faculty position (Multiple Positions) at the rank of Visiting Faculty Lecturer to start in the Fall Semester of 2022 (an earlier start might be considered).

Primary responsibilities are to provide high-quality teaching and service to the Department. This is a one-year position with possible extensions.

#### Minimum Qualifications (Required):

- Applicants must hold a doctoral degree in Computer Science or a closely related discipline

- Experience and demonstrated excellence teaching Computer Science at the undergraduate level is required

For more information, please view the full job posting here: <https://careers.pageuppeople.com/822/lowell/en-us/job/513751/visiting-faculty-lecturer-computer-science-multiple-positions>

EOE.

## University of Memphis

Visiting Assistant Professor - Data Science

The Department of Computer Science at the University of Memphis is seeking qualified candidates for the position of Visiting Assistant Professor, beginning Fall 2022. This is a one year appointment with possible extension, dependent on need and funds.

The visiting professor will teach undergraduate/graduate courses (primarily Data Science), participate in curriculum development and improvement, and advise students.

Applicants should hold a PhD in computer science or a related field. College level teaching experience is preferred. Research in CS related areas is a plus.

The Department of Computer Science ([www.memphis.edu/cs](http://www.memphis.edu/cs)) offers BS, MS, and PhD programs, as well as graduate certificates in Data Science and Cybersecurity and Information Assurance. The Department has been ranked 55th in the nation among CS departments with federally funded research.

To apply, please visit <https://workforum.memphis.edu/postings/30739>. Include a cover letter, curriculum vitae, statement of teaching philosophy, and references. Direct all inquiries to Corinne OConnor ([cconnor2@memphis.edu](mailto:cconnor2@memphis.edu)).

A background check will be required for employment. The University of Memphis is an Equal Opportunity/Equal Access/Affirmative Action employer committed to achieving a diverse workforce.

## University of Nebraska at Omaha

*Postdoctoral Research Associate*

The College of Information Science and Technology at the University of Nebraska at Omaha invites applications for a Postdoctoral Research Associate. The Postdoctoral Research Associate position will be for a period of 1 year,

with the possibility for 1 to 2 more years of funded research work. This is a full-time, benefits-eligible position. As a Postdoctoral Research Associate, you will conduct research for 40 hours/week and supervise Ph.D., MS, and undergraduate students as needed. This position will support a research project for using rural Nebraska bridges as full-scale "testbeds." The project will involve data collection at the edge using IoT sensors and UAVs; secure data processing and management from the edge to the cloud; simulations visualizations and analytics of data using Machine Learning; sociotechnical impacts (perceived fairness of AI systems); and decision support systems.

*Apply here*

The University and the College of Information Science and Technology have a strong commitment to achieving diversity among faculty and staff.



UNIVERSITY OF  
SAN FRANCISCO



## Full-time Term Position, Computer Science

The Department of Computer Science at the University of San Francisco invites applications for a one-year nonrenewable term position to begin August 2022. The successful candidate will be expected to teach courses for our undergraduate program. The standard teaching load for this position at USF is three 4-unit courses per semester, in addition to performing service duties to the department and the university.

Please click here for more information about the requirements to apply for the position:  
<https://aptrkr.com/3017832>

*The University of San Francisco is located in the heart of one of the world's most innovative and diverse cities, and is home to a vibrant academic community of students and faculty who achieve excellence in their fields. Its diverse student body enjoys direct access to faculty, small classes and outstanding opportunities in the city itself. USF is San Francisco's first university, and its Jesuit Catholic mission helps ignite a student's passion for social justice and a desire to "Change the World From Here." For more information, visit <http://www.usfca.edu>.*

The University of Nebraska does not discriminate based on race, color, ethnicity, national origin, sex, pregnancy, sexual orientation, gender identity, religion, disability, age, genetic information, veteran status, marital status, and/or political affiliation in its programs, activities, or employment. UNO is a VEVRAA Federal Contractor and an E-Verify employer.

## West Virginia University Institute of Technology

*Assistant Professor of Computer Science*

WVU Institute of Technology invites applications for an Assistant Professor of Computer Science for Fall 2022.

[https://wvu.taleo.net/careersection/faculty/jobdetail.ftl?job=19734&tz=GMT-04%3A00&fname=America%2FNew\\_York](https://wvu.taleo.net/careersection/faculty/jobdetail.ftl?job=19734&tz=GMT-04%3A00&fname=America%2FNew_York)



### ASSISTANT VISITING PROFESSOR POSITION IN COMPUTER SCIENCE University of Wisconsin - Milwaukee

The College of Engineering & Applied Science (CEAS), University of Wisconsin-Milwaukee (UWM), invites applications for a non-tenure-track Visiting Assistant Professor position in Computer Science (CS). The successful candidate would teach computing courses as needed, conduct independent research, collaborate with CEAS faculty with existing research and grant development, assist with CS curricular development, and mentor students in thesis or capstone projects.

**Required (minimum) qualifications:** Expected doctoral degree in computer science, or a closely related STEM discipline, with ability to teach one or more core CS courses, including hardware, operating systems or security.

**Preferred Qualifications:** Ability to do research, and experience in teaching, especially in core areas. Expertise in one or more of the following areas: Architecture, Computer Science Education, Cybersecurity, Distributed Systems, Human-Computer Interaction, Networks, or Quantum Computing.

Active areas of research in Computer Science at UWM include Machine Learning, Natural Language Processing, Planning, Programming Languages, Proof Assistants, and Theoretical Computer Science. The Computer Science bachelor's program and master's program are the largest in the College of Engineering. Enrollment continues to grow and hiring of additional faculty is anticipated. The department also offers a PhD degree with a concentration in Computer Science, as well as a PhD in Biomedical and Health Informatics.

Inter-disciplinary collaborations are encouraged. Opportunities for collaboration exist through the Connected Systems Institute (CSI), the Data Sciences Institute (DSI) and the Lubar Entrepreneurship Center (LEC), and other industry-sponsored research programs on campus.

UWM is an R1 doctoral/research intensive university and Wisconsin's premier public urban institution, offering a comprehensive liberal arts, sciences and professional education at the undergraduate and graduate level to its 20,000 students.

Milwaukee is the seventh most affordable metropolitan market in the country and offers a vibrant quality of life in a globally competitive region. The city takes full advantage of its Lake Michigan location. The Southeast Wisconsin region is home to 2,360 tech companies and 14 Fortune 1,000 headquarters and is the third-ranked manufacturing center in the United States.

**Application Procedure:** Application materials should include: a letter describing your interest in and qualifications for the position, a detailed curriculum vitae, a teaching statement, a research statement, and a minimum of three references that includes names, addresses (including e-mail), and telephone numbers. This is a continuous recruitment with an initial review date of May 30, 2022. Applications received after May 29, 2022, may not receive consideration.

**The complete application package must be submitted online at:**  
<https://apptrk.com/3044908>.

Further information about UWM may be found at [www.uwm.edu](http://www.uwm.edu). UWM is an AA/EO employer: All applicants will receive consideration for employment without regard to race, color, national origin, religion, sex, sexual orientation, gender identity/expression, disability, or protected veteran status.

Employment will require a criminal background check.