

COMPUTING RESEARCH NEWS



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

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CRN At-A-Glance

CRA Update: We Want You! Volunteer Opportunities for 2024-2025

Are you passionate about computing research and looking for ways to contribute to the community? CRA is seeking dedicated volunteers to join our committees and working groups for the 2024-2025 fiscal year. Read more about the available opportunities in this month's CRA Update.

Read more on page 2

CRA Congratulates New AAA&S, AAAI, AAAS, ACM, and IEEE-CS Fellows

CRA proudly applauds members of the computing community recently honored by AAA&S, AAAI, AAAS, ACM, and IEEE-CS for their outstanding contributions to shaping the future of technology and society. In this month's CRN, we acknowledge their achievements and highlight those who have volunteered in support of fulfilling CRA's mission.

Read more on page 3

CRA-E Announces New Co-Chair, Welcomes New Board Members, and Thanks Departing Members for Their Service

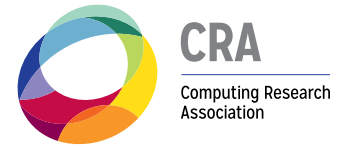
The Computing Research Association - Education (CRA-E) committee is thrilled to announce Michael Hilton (Carnegie Mellon University) as its newest Co-chair. Board members will transition in and out of their roles during CRA-E's annual board meeting this month.

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CRA Update: We Want You! Volunteer Opportunities for 2024-2025



By Tracy Camp, Executive Director and CEO

Are you passionate about computing research and looking for ways to contribute to the community? The Computing Research Association (CRA) is seeking dedicated volunteers to join our committees and working groups for the 2024-2025 fiscal year, from July 1, 2024, to June 30, 2025.

Volunteering your time and expertise can help us enhance our initiatives and expand our impact. Completing the interest form is your first step towards potentially joining us in these efforts.

CRA Volunteer Form

Volunteer opportunities are limited – please note that expressing interest does not guarantee an invitation to volunteer, but we value and appreciate your enthusiasm.

Deadline: The form will close on July 15, 2024.

Committees and Working Groups

Within the volunteer form, you can express your interest in being a part of any of the following committees and working groups.

Major Awards Committee: This new committee aims to ensure multidisciplinary award nominations are submitted from the computing research community. Members will brainstorm candidate names and identify nominators.

CRA Leadership Academy Committee: Help cultivate future leaders in computing by developing and deploying the agenda for the Leadership Academy participants, including assignments and workshops.

CRA Awards - Nominations Committee: Encourage nominations for the [CRA A. Nico Habermann Award](#) and the [CRA Distinguished Service Award](#), and decide on external awards for future nominations. This committee primarily operates during the fall semester.

CRA Awards - Selection Committee: Review nominees for the Habermann and Distinguished Service Awards and make recommendations to the Board, which votes in February.

CRA Survey Committee: Recommend strategies for making [CRA Taulbee Survey](#) data available online and interactive, iterate on the survey, and review the Taulbee Survey report.

CRA Communications Committee: Develop a communications plan with the CRA Director of Communications to effectively disseminate important information to key stakeholders.

CRA Governance Working Group: Review and propose modifications to CRA governance processes and bylaws to better fulfill our mission.

CRA Socially Responsible Computing Working Group: Recommend priorities and strategies to establish CRA as a leader in promoting socially responsible computing research.

Support the Computing Research Community by Volunteering Your Time

CRA needs you! To express your interest in any of these committees or working groups, please complete the CRA Committee/Working Group Interest Survey by **July 15, 2024**.

CRA Volunteer Form

We look forward to your participation and contribution to the computing research community!

CRA Congratulates New AAA&S, AAAI, AAAS, ACM, and IEEE-CS Fellows



By Matt Hazenbush, Director of Communications

The Computing Research Association (CRA) proudly congratulates several members of the computing research community who have recently been honored as members of the [American Academy of Arts & Sciences \(AAA&S\)](#) and Fellows of the [Association for the Advancement of Artificial Intelligence \(AAAI\)](#), the [American Association for the Advancement of Science \(AAAS\)](#), the [Association for Computing Machinery \(ACM\)](#), and the [IEEE Computer Society \(IEEE-CS\)](#). This recognition highlights their outstanding contributions to the field of computing, and reflects their dedication to innovation, excellence in scholarship, and impactful advancements that will shape the future of technology and society.

Below, we acknowledge those community members who achieved these career milestones and affirmed their willingness to be recognized by CRA in Computing Research News.

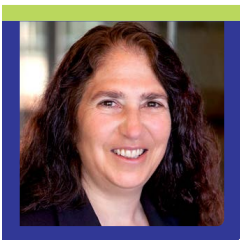
CRA is very fortunate to be led and supported by our passionate volunteers – talented computing researchers who dedicate their valuable time to bringing CRA's programs, initiatives, and events to life. We are especially pleased to acknowledge and thank new members and Fellows who have contributed to CRA's fulfillment of its mission through volunteering their time, energy, and expertise with us. Thank you, and congratulations!

Are you passionate about computing research and looking for ways to contribute to the community? CRA is currently seeking dedicated volunteers to join our committees and working groups for the 2024-2025 fiscal year. Fill out our [CRA Volunteer Form](#) to let us know which opportunities you're interested in! Responses are due July 15, 2024.

American Academy of Arts & Sciences (AAA&S) - New Academy Members Elected in 2024

AAA&S is one of the oldest and most prestigious honorary society and independent policy research centers in the United States. The Academy elects members who have made significant contributions to scholarly and public life.

The following individuals were announced as new [AAA&S members elected in 2024](#) who affirmed their willingness to be recognized by CRA.



Nancy M. Amato, University of Illinois Urbana-Champaign

Nancy M. Amato, Head of the Computer Science Department and Abel Bliss Professor of Engineering at the University of Illinois Urbana-Champaign, was elected as a new AAA&S member in the computer sciences section. Her numerous contributions to CRA include service on the [Board of Directors](#) since 2014 – including as Vice Chair (2019-2021) and Chair (2021-present). She has also long served as a leader of [CRA's Widening Participation Committee](#), including as a member of the Board of Directors (2000-present) and Steering Committee (2011-present), as well as serving as CRA-WP Co-chair (2014-2017) and Program Chair of the [DREU](#) program (2000-present). In addition, she served as a Board member to [CRA's Education Committee](#) (2011-2020). She was honored with the [2014 CRA A. Nico Habermann Award](#) in recognition of her leadership and outstanding contributions to increasing the numbers and successes of groups who have been minoritized in the computing research community.

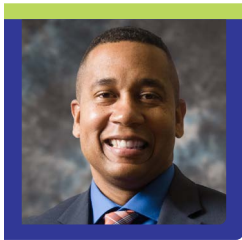
Jason (Jingsheng) Cong, University of California, Los Angeles

Jason (Jingsheng) Cong, the Volgenau Chair for Engineering Excellence, Director of the Center for Customizable Domain-Specific Computing, and Director of the VLSI Architecture, Synthesis, and Technology (VAST) Laboratory at the University of California, Los Angeles, was elected as a new AAA&S member in the computer sciences section.

New Fellows *(continued)*

Lise Getoor, University of California, Santa Cruz

Lise Getoor, Distinguished Professor and Jack Baskin Chair in Computer Engineering at the University of California, Santa Cruz, was elected as a new AAA&S member in the computer sciences section.



Juan E. Gilbert, University of Florida

Juan E. Gilbert, the Banks Family Preeminence Endowed Professor and Department Chair in the Computer & Information Science & Engineering Department and the Director of the **Computing for Social Good Lab** at the University of Florida, was elected as a new AAA&S member in the computer sciences section. He has served as a mentor in CRA-WP's **Early & Mid-Career Mentoring Workshop** and participated in several **Congressional Visit Days (CVD)** organized by CRA Government Affairs.

Read his **Policy Spotlight interview** in this month's Computing Research News.



Elizabeth Mynatt, Northeastern University

Elizabeth Mynatt, Dean of the Khoury College of Computer Sciences at Northeastern University, was elected as a new AAA&S member in the computer sciences section. She served on the **CCC Council** for 10 years, culminating as CCC Chair from 2016 to 2018, during which she simultaneously served on the **CRA Board of Directors**. During her CCC tenure, she helped lead workshops and white papers on numerous topics, including Health IT, Intelligent Infrastructure, Inclusive Online Content, Technology to Support Aging, and generally how computing can help address national societal needs.

Association for the Advancement of Artificial Intelligence (AAAI) - 2024 Fellows

AAAI is a nonprofit that aims to advance and promote research in, and the responsible use of, artificial intelligence. AAAI's elected Fellows are individuals who have made significant, sustained contributions to the field of artificial intelligence. The association's Fellows Selection Committee typically selects 5-10 new Fellows each year.

The following individual is one **AAAI Fellow elected in early 2024** who affirmed their willingness to be recognized by CRA

Jennifer Dy, Northeastern University

Jennifer Dy, Professor of Electrical and Computer Engineering in the Khoury College of Computer Sciences at Northeastern University, was elected as a AAAI Fellow for significant contributions to unsupervised and interpretable machine learning, advancing AI to address health care challenges, and service to the AI community.

American Association for the Advancement of Science (AAAS) - 2023 Fellows

AAAS is the world's largest general scientific society. Its mission is to advance science, engineering, and innovation throughout the world for the benefit of all people. AAAS Fellows are recognized for their contributions to science and technology, scientific leadership, and efforts to advance science for the benefit of society.

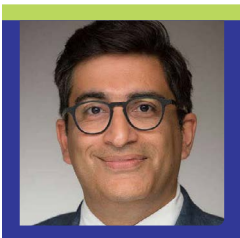
The following individuals are **2023 AAAS Fellows** (announced in early 2024) who affirmed their willingness to be recognized by CRA.

New Fellows (*continued*)



Sarita Adve, University of Illinois Urbana-Champaign

Sarita Adve, the Richard T. Cheng Professor of Computer Science at the University of Illinois Urbana-Champaign, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation. Among her many contributions to CRA include service on the **Board of Directors** (2009-2018), leadership on several committees, twice co-chairing the **CRA Career Mentoring Workshop**, and speaking at the **CRA Conference at Snowbird**. She led the first CARES committee (Committee to Aid Reporting on Discrimination and Harassment Policy Violations) as a ACM SIGARCH Officer – an effort that was honored with the **2020 CRA Distinguished Service Award**.

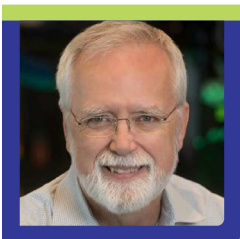


Nitesh Chawla, University of Notre Dame

Nitesh Chawla, the Frank M. Freimann Professor of Computer Science and Engineering and the Founding Director of the Lucy Family Institute for Data and Society at the University of Notre Dame, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation. He served as a PhD advisor to a past **CRA-E Graduate Fellow**.

Martín Farach-Colton, New York University

Martín Farach-Colton, Computer Science and Engineering Department Chair and Leonard J. Shustek Professor of Computer Science at the Tandon School of Engineering at New York University, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation.



Matthew T. Mason, Carnegie Mellon University

Matthew T. Mason, Professor Emeritus at the Robotics Institute at Carnegie Mellon University and Chief Scientist at Berkshire Grey, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation. He participated in the CCC's **robotics visioning effort**, which culminated in the **National Robotics Roadmap** and the **National Robotics Initiative**.

Ramesh K. Sitaraman, University of Massachusetts Amherst

Ramesh K. Sitaraman, Distinguished University Professor of Computer Science at the University of Massachusetts Amherst, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation.

Boleslaw K. Szymanski, Rensselaer Polytechnic Institute

Boleslaw K. Szymanski, the Claire & Roland Schmitt Distinguished Professor of Computer Science and Director of the Network Science and Technology Center (NeST) at the Rensselaer Polytechnic Institute, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation.

New Fellows (continued)

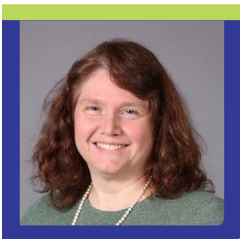


Michela Taufer, University of Tennessee, Knoxville

Michela Taufer, Dongarra Professor in High Performance Computing and Director of the Global Computing Laboratory at the University of Tennessee, Knoxville, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation. She is a current member of the **CCC Council**.

Kishor Trivedi, Duke University

Kishor Trivedi, the Hudson Chair in the Department of Electrical and Computer Engineering at Duke University, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation.



Holly Yanco, University of Massachusetts Lowell

Holly Yanco, Chair, Professor, Distinguished University Professor, and NERVE Center Director at the University of Massachusetts Lowell, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation. She is a current **CCC Council** member and has served since 2020.



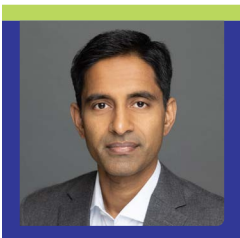
Benjamin Zorn, Microsoft Research

Benjamin Zorn, Partner Researcher at Microsoft Research, was elected as a Fellow of AAAS in the Information, Computing & Communication section affiliation. He is a current member of the **CRA Board of Directors** and **Co-chair of the CRA-Industry Committee**. He has previously served as a member of the **CCC Council** (2014-2020), the CRA Strategic Planning Committee (2019-2020), and the Industry Working Group (2019-2020).

Association for Computing Machinery (ACM) - 2023 ACM Fellows

ACM is a professional organization dedicated to advancing the field of computing. The ACM Fellows award recognizes the top 1 percent of ACM Members for their important work and contributions to the computing field.

The following individuals are **ACM Fellows named in early 2024** who affirmed their willingness to be recognized by CRA.



Aditya Akella, The University of Texas at Austin

Aditya Akella, the Regents Chair in Computer Sciences and Professor at the University of Texas at Austin, was named an ACM Fellow for contributions that improve the performance, efficiency, and robustness of cluster computing.

Akella said: *"CRA generously supported three postdocs in my research group via the **CIFellows program**. Thank you, CRA!"*

New Fellows (*continued*)

Maria-Florina Balcan, Carnegie Mellon University

Maria-Florina Balcan, the Cadence Design Systems Professor of Computer Science at Carnegie Mellon University, was named an ACM Fellow for contributions to the foundations of machine learning and its applications to algorithmic economics and algorithm design.

Nikhil Bansal, University of Michigan

Nikhil Bansal, the Patrick C. Fischer Professor of Theoretical Computer Science in the Department of Computer Science and Engineering at the University of Michigan, was named an ACM Fellow for contributions to the foundations of approximate and online algorithms, and their connections to mathematics.

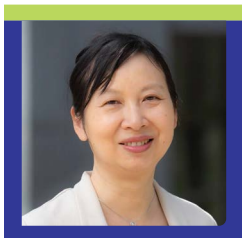
Vaughn Timothy Betz, University of Toronto

Vaughn Timothy Betz, Professor in the Department of Electrical and Computer Engineering at the University of Toronto, was named an ACM Fellow for contributions to the architecture and computer-aided design of field-programmable gate arrays (FPGAs).



Ramón Cáceres, Google

Ramón Cáceres, former Software Engineer at Google, was named an ACM Fellow for contributions to mobile and edge computing. He has served on the **CRA-Widening Participation Committee** Board of Directors (2018-2024) and co-chaired CRA-WP's **Grad Cohort for IDEALS** (2020-2024), in addition to speaking at many CRA-WP events, including Grad Cohort for IDEALS, **Grad Cohort for Women**, and the **CRA-WP Career Mentoring Workshop**.



Yingying (Jennifer) Chen, Rutgers University

Yingying (Jennifer) Chen, Department Chair and Professor of Electrical and Computer Engineering and the Peter D. Cherasia Faculty Scholar at Rutgers University, was named an ACM Fellow for contributions to the design and application of mobile sensing and mobile security systems. She participated in the **CRA-WP Early Career Mentoring Workshop**.

About her workshop experience, Chen said: *"I still remembered those encouragement from senior mentors, which have accompanied me during ups and downs. Many junior faculties that I met at the workshop have become my long-term friends and we grow together sharing both happy and bitter moments along the academic roads."*

Kenneth Ward Church, Northeastern University

Kenneth Ward Church, Professor of the Practice at the Khoury College of Computer Sciences at Northeastern University, was named an ACM Fellow for contributions to empirical methods in natural language processing.

New Fellows (*continued*)

Roger B. Dannenberg, Carnegie Mellon University

Roger B. Dannenberg, Professor Emeritus of Computer Science, Art & Music at Carnegie Mellon University, was named an ACM Fellow for contributions to the field of computer science through innovative computer music systems.

Wenliang Du, Syracuse University

Wenliang (Kevin) Du, Professor in the College of Engineering & Computer Science at Syracuse University, was named an ACM Fellow for contributions to cybersecurity education and research.

Jeffrey S. Foster, Tufts University

Jeffrey S. Foster, Professor and Chair of the Department of Computer Science at Tufts University, was named an ACM Fellow for contributions to program analysis and techniques to build more reliable and secure software.

Ian Goldberg, University of Waterloo

Ian Goldberg, Canada Research Chair in Privacy Enhancing Technologies and Professor at the Cheriton School of Computer Science at the University of Waterloo, was named an ACM Fellow for contributions to the development and deployment of privacy enhancing technologies.

Zhu Han, University of Houston

Zhu Han, Moores Professor in the Department of Electrical and Computer Engineering at the University of Houston, was named an ACM Fellow for contributions to distributed and autonomous management for large-scale communication networks.

Geoffrey Hinton, University of Toronto

Geoffrey Hinton, Professor Emeritus at the Department of Computer Science at the University of Toronto, was named an ACM Fellow for conceptual and engineering breakthroughs that have made deep neural networks a critical component of computing.

Trent Jaeger, The Pennsylvania State University

Trent Jaeger, Professor of Computer Science and Engineering at The Pennsylvania State University, was named an ACM Fellow for contributions to research and education for operating systems and software security.

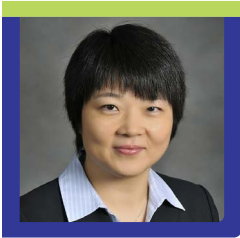
Christopher Kruegel, University of California, Santa Barbara

Christopher Kruegel, Professor in the Computer Science Department at the University of California, Santa Barbara, was named an ACM Fellow for contributions to systems security, malware detection, and vulnerability analysis.

Kwan-Liu Ma, University of California, Davis

Kwan-Liu Ma, Distinguished Professor of Computer Science, Director of the UC Davis Center for Visualization, and Head of VIDILabs at the University of California, Davis, was named an ACM Fellow for contributions to and leadership in large-scale data visualization research.

New Fellows *(continued)*



Wenjig Lou, Virginia Polytechnic University

Wenjig Lou, the W.C. English Endowed Professor in the Department of Computer Science at Virginia Polytechnic University, was named an ACM Fellow for contributions to information and network security. She has been a speaker for CRA-WP's **Distinguished Lecture Series** (DLS) as a part of the ACM Capital Region Celebration of Women in Computing.



Gerard G. Medioni, Amazon

Gerard G. Medioni, Vice President and Distinguished Scientist, AWS Applications, was named an ACM Fellow for contributions to computer vision and its consumer facing applications. He will be a speaker at the **2024 CRA Conference at Snowbird**.

Deborah McGuinness, Rensselaer Polytechnic Institute

Deborah McGuinness, Tetherless World Senior Constellation Chair, Professor of Computer Science, Cognitive Science, and Industrial and Systems Engineering at Rensselaer Polytechnic Institute, was named an ACM Fellow for contributions to knowledge technologies including ontologies and knowledge graphs.

Sharad Mehrotra, University of California, Irvine

Sharad Mehrotra, Distinguished Professor in the School of Information and Computer Science and Director of the Center for Emergency Response Technologies (CERT) at the University of California, Irvine, was named an ACM Fellow for contributions to the fields of data management, multimedia information retrieval, and emergency response.



Skrikanth Narayanan, University of Southern California

Skrikanth Narayanan, the Niki and Max Nikias Chair in Engineering at the Viterbi School of Engineering at the University of Southern California, was named an ACM Fellow for contributions to speech, language, multimedia processing, affective computing, and their human-centered applications. He was a panelist and speaker at the CCC organized event **Improving Mental Health and Supporting Self-regulation with Technology** at the AAAS Meeting in Washington DC, in June 2023.

Benjamin Raphael, Princeton University

Benjamin Raphael, Professor of Computer Science at the School of Engineering and Applied Science at Princeton University, was named an ACM Fellow for contributions to computational biology including algorithms in cancer genomics/evolution and biological network analysis.

Tim Roughgarden, Columbia University

Tim Roughgarden, Professor of Computer Science in the Fu Foundation School of Engineering and Applied Science at Columbia University, was named an ACM Fellow for contributions to algorithmic game theory.

New Fellows (*continued*)

Stefan Saroiu, Microsoft Research

Stefan Saroiu, Senior Principal Researcher at Microsoft Research, was named an ACM Fellow for contributions to memory security and trusted computing.

Noah Snaveley, Cornell Tech and Google Research

Noah Snaveley, a Professor of Computer Science at Cornell Tech and a Research Scientist at Google Research, was named an ACM Fellow for contributions to computer vision and computer graphics.

Kilian Weinberger, Cornell University

Kilian Weinberger, Professor in the Department of Computer Science at Cornell University, was named an ACM Fellow for contributions to machine learning and deep learning research.



Emmett Witchel, The University of Texas at Austin

Emmett Witchel, Professor of Computer Science at the University of Texas at Austin, was named an ACM Fellow for contributions to high-performance, concurrent, and secure systems. He is a past participant of CRA's **Leadership in Science Policy Institute (LiSPI)** workshop.

IEEE Computer Society (IEEE-CS) - 2024 Class of Fellow

IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. Its Board of Directors confers the title of Fellow upon a person of outstanding and extraordinary qualifications and experience in IEEE-designated fields, who has made important individual contributions to one or more of those fields.

The following individuals were announced as a part of the IEEE-CS **2024 Class of Fellow** late last year and affirmed their willingness to be recognized by CRA.

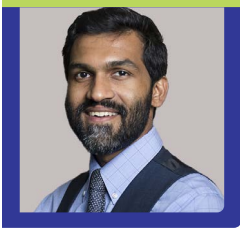
Zhipeng Cai, Georgia State University

Zhipeng Cai, Professor in the Department of Computer Science at Georgia State University, was elevated to IEEE Fellow grade for contributions to resource management and scheduling for high-performance computing.

Songqing Chen, George Mason University

Songqing Chen, Associate Professor in the Department of Computer Science at George Mason University, was elevated to IEEE Fellow grade for contributions to internet streaming, content delivery, and security.

New Fellows (*continued*)



Kaushik Chowdhury, Northeastern University

Kaushik Chowdhury, Associate Dean for Research and Professor in the College of Engineering at Northeastern University, was elevated to IEEE Fellow grade for contributions to development of cognitive radio networks and applied machine learning for wireless systems. He has partnered with CRA on advocacy for increased investment in the area of AI/ML, specifically concerning advanced communications and networking.

Min Dong, Ontario Tech University

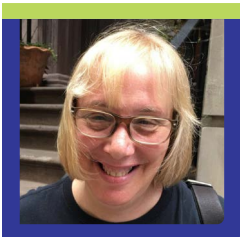
Min Dong, Professor in the Department of Electrical, Computer and Software Engineering at Ontario Tech University, was elevated to IEEE Fellow grade for contributions to transmission design and resource optimization for wireless communications.

Niklas E. Elmqvist, Aarhus University

Niklas E. Elmqvist, a Full Professor in the Department of Computer Science at Aarhus University, was elevated to IEEE Fellow grade for contributions to mobile, ubiquitous, and immersive technologies for data visualization.

Azim Eskandarian, Virginia Commonwealth University

Azim Eskandarian, the Alice T. and William H. Goodwin Jr. Dean of the College of Engineering at Virginia Commonwealth University, was elevated to IEEE Fellow grade for contributions to the communication and control of intelligent autonomous vehicles.



Joan Feigenbaum, Yale University

Joan Feigenbaum, the Grace Murray Hopper Professor of Computer Science & Economics in the School of Engineering & Applied Science at Yale University, was elevated to IEEE Fellow grade for contributions to trust-management systems and internet algorithmics. She has served on the [CRA-Widening Participation Board of Directors](#).



Alex K. Jones, University of Pittsburgh

Alex K. Jones, Professor in the Swanson Electrical & Computer Engineering Department at the University of Pittsburgh, was elevated to IEEE Fellow grade for contributions to sustainable computing. He led a CCC workshop series and report on [extreme scale design automation](#) and helped launch a workshop series on [diversity in design automation and test](#).



Hyesoon Kim, Georgia Institute of Technology

Hyesoon Kim, Professor at the School of Computer Science in the College of Computing at the Georgia Institute of Technology, was elevated to IEEE Fellow grade for contributions to resource modeling and partitioning in heterogeneous computing systems. She has served as a mentor in CRA-WP's [Distributed Research Experiences for Undergraduates](#) (DREU) program.

New Fellows (*continued*)



Ming Li, University of Arizona

Ming Li, Professor in the Department of Electrical and Computer Engineering at the University of Arizona, was elevated to IEEE Fellow grade for contributions to information and network security. He was a third place co-recipient of the the [CCC Blue Sky Ideas Award](#) for Best Vision Paper for a paper published in ACM SIGSPATIAL 2015: [Privacy-Preserving Inference of Social Relationships from Location Data: A Vision Paper](#).

Gopal Pandurangan, University of Houston

Gopal Pandurangan, Professor of Computer Science at the Hewlett Packard Enterprise Data Science Institute at the University of Houston, was elevated to IEEE Fellow grade for contributions to theory and algorithms for distributed computing and networks.



Denys Poshyvanyk, College of William and Mary

Denys Poshyvanyk, Chancellor Professor and a Graduate Director in the Computer Science Department at the College of William & Mary, was elevated to IEEE Fellow grade for contributions to integrating software analyses and machine learning. He has served on the [CRA-E Board of Directors](#) since 2018.

Rakesh Kumar, University of Illinois Urbana-Champaign

Rakesh Kumar, Professor and John Bardeen Faculty Scholar in the Electrical and Computer Engineering Department at the University of Illinois Urbana-Champaign, was elevated to IEEE Fellow grade for contributions to energy-efficient processor architecture and design.

Benjamin C. Lee, University of Pennsylvania

Benjamin C. Lee, Professor in the Department of Electrical and Systems Engineering and the Department of Computer and Information Science at the University of Pennsylvania, was elevated to IEEE Fellow grade for contributions to the design of microprocessors with machine learning and game theory.

Zhiqiang Lin, The Ohio State University

Zhiqiang Lin, Professor of Computer Science and Engineering (CSE) at The Ohio State University, was elevated to IEEE Fellow grade for contributions to automated vulnerability discovery, code hardening, and monitoring in mobile and systems security.

Bradley Malin, Vanderbilt University

Bradley Malin, the Accenture Professor of Biomedical Informatics, Biostatistics, and Computer Science and Vice Chair for Research Affairs in the Department of Biomedical Informatics at Vanderbilt University, was elevated to IEEE Fellow grade for contributions to data engineering, privacy, and security in biomedicine.

New Fellows (*continued*)



Klaus D. Mueller, Stony Brook University

Klaus D. Mueller, Professor in the Computer Science Department at Stony Brook University and Senior Scientist at the Computational Science Initiative at Brookhaven National Lab, was elevated to IEEE Fellow grade for contributions to image reconstruction and visualization. He is a past participant of CRA's [Leadership in Science Policy Institute \(LISPI\)](#) workshop.

Dimitrios Nikolopoulos, Virginia Tech

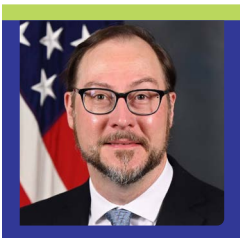
Dimitrios Nikolopoulos, the John W. Hancock Professor of Engineering in the Department of Computer Science at Virginia Tech, was elevated to IEEE Fellow grade for contributions to dynamic execution environments and multiprocessor memory management.

Sudeep Pasricha, Colorado State University

Sudeep Pasricha, Professor in the Walter Scott Jr. College of Engineering and Director of the Embedded, High Performance, and Intelligent Computing (EPIC) Lab at Colorado State University, was elevated to IEEE Fellow grade for contributions to design and optimization of chip-scale communication architectures for manycore computing.

Karthikeyan Sankaralingam, University of Wisconsin-Madison and NVIDIA

Karthikeyan Sankaralingam, the Mark D. Hill and David A. Wood Professor in the Department of Electrical & Computer Engineering at the University of Wisconsin-Madison and Principal Research Scientist at NVIDIA, was elevated to IEEE Fellow grade for contributions to identifying and mitigating the challenges of dark silicon.



Forrest Shull, Department of Defense

Forrest Shull, Principal Director for Advanced Computing and Software at the Office of the Under Secretary of Defense for Research and Engineering (OUSD (R&E)), was elevated to IEEE Fellow grade for contributions to software engineering research. He currently serves on the [CRA Board of Directors](#) (2021-present).

Karin Strauss, Microsoft Research

Karin Strauss, Senior Principal Research Manager at Microsoft Research, was elevated to IEEE Fellow grade for contributions to storage systems.

Hao Zhang, Simon Fraser University

Hao (Richard) Zhang, Distinguished Professor in the School of Computing Science at Simon Fraser University, was elevated to IEEE Fellow grade for contributions to shape analysis and synthesis in visual computing.

Zhi Wei, New Jersey Institute of Technology

Zhi Wei, Professor in the Department of Computer Science, Ying Wu College of Computing at the New Jersey Institute of Technology, was elevated to IEEE Fellow grade for contributions to knowledge discovery from biological data.

CRA-WP Names Martez Mott as 2024 Skip Ellis Early Career Award Recipient



By Lauren Lashlee, Program Associate, CRA-WP

Since 2019, CRA-WP has recognized an outstanding computer science researcher in honor of Clarence “Skip” Ellis, by awarding them with the CRA-WP Skip Ellis Early Career Award (SEECA).

CRA-WP is pleased to announce Martez Mott (Microsoft Research) as the recipient of the 2024 Skip Ellis Early Career Award for his research and service to the computer science community.

Mott is a Senior Researcher in the Ability group and Human Centered AI Experiences team at Microsoft Research in Redmond, Washington. He conducts research in the fields of human-computer interaction (HCI), accessibility, mixed reality, and human-centered AI. His research focuses on designing, building, and evaluating novel intelligent interactive technologies that are guided by scientific understandings of people’s experiences with computers and information. A core tenet of this work

is the consultation and inclusion of potential users and beneficiaries of technologies in all aspects of the research process. He is best known for his research on improving accessibility for people with limited mobility by identifying and removing accessibility barriers found in a range of computing technologies, including touch screens, gaze-based text entry, and virtual reality hardware. Mott received his PhD and MS in Information Science from the Information School at the University of Washington (UW), where his dissertation was supported by a Microsoft Research Dissertation Grant and a UW Graduate Opportunity Minority Achievement Program Fellowship. Before attending UW, Martez received his BS and MS in Computer Science from Bowling Green State University and was awarded the Outstanding Computer Science Graduate Student Award.

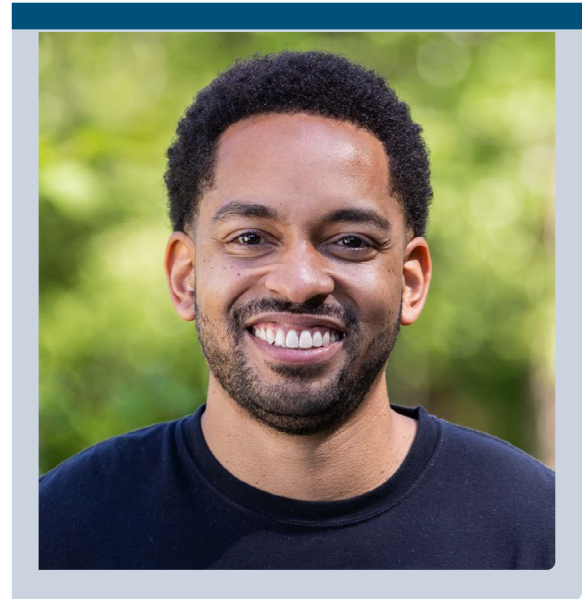
Mott is passionate about improving diversity in Computer and Information Science. He was an inaugural teaching fellow and served as a research advisor at the iSchool Inclusion Institute. He co-chaired the 2020 and 2021 CHI Mentoring Workshops at the ACM CHI conference, the premier international conference for HCI research. He also cofounded and co-leads the Black Researchers @ Microsoft Research employee resource group.

[Read more](#) about the CRA-WP Early Career Awards.

Get to know Martez Mott:

What brought you to computing research?

In the seventh grade my science teacher asked if I wanted to join the school’s inaugural LEGO robotics club. I declined, because I was more interested in playing sports and basketball tryouts were taking place during the same time as the robotics club meetings. When I didn’t make the team, my science teacher approached me again and asked if I would join the robotics club. I agreed. Since then, I knew I wanted to work with computers and electronics. When I went to college, I wanted a major that would allow me to explore those interests further, so I majored in Electronics and Computer Technology at Bowling Green State University. The program’s curriculum required us to take a series of Computer Science courses, and my first CS professor, Duke Hutchings, told me on the last day of class that I should consider doing an undergraduate research project with professors in the department. I had no idea what research was, or why I should do it, but I followed Duke’s advice. The next semester I changed my major to Computer Science, and I’ve been doing CS research ever since.





Martez Mott (*continued*)

Do you remember your first research project?

The first project I worked on was a collaboration between professors and students from Computer Science, Psychology, and Geology. The geologists had this problem where students would struggle with the University's structural geology course. The psychologists believed that one potential cause was the spatial reasoning skills required to perform tasks presented by the course, such as looking at a 2D topological map and inferring what the 3D structure should look like. My job, along with the other computer scientists, was to build software that would help us measure students' spatial reasoning skills, and to build applications that would allow them to practice visualizing some of the most common tasks found in the structural geology course. I learned a lot about research and about how our abilities impact our relationship with technology and each other.

What project was your most memorable or favorite to work on?

One of my favorite projects was the Smart Touch research I did as a doctoral student at the University of Washington. People with physical disabilities that impact their fingers, hands, or arms often experience difficulties using touchscreen devices like smartphones and tablets. The problem is that these devices expect a narrow range of inputs, such as using a single finger to select or manipulate onscreen controls or using two fingers to perform gestures like pinch-to-zoom. People with physical disabilities, however, might use multiple fingers, their palm, or their entire hand to interact with the screen, which can cause multiple errors and ultimately results in touchscreen devices being partially or entirely inaccessible. With Smart Touch, we wanted to allow people to interact with touchscreens in whichever ways were the most comfortable and natural to them. We created user-specific models of touch and demonstrated that with only a few dozen touch examples, touchscreens could be significantly more accurate in understanding users' touch input and predicting their intended touch locations.

What are your fondest memories of your research internship with Microsoft?

The best part of the internship experience at Microsoft Research (MSR) for me was the camaraderie with the other interns. Building 99—the MSR office in Redmond, WA—was filled with hundreds of PhD interns from around the world, all working on interesting projects. I got to meet so many students from different universities with varied research interests, and most importantly, I was able to establish friendships and connections that are still strong today. The best memories were really the small moments. A sigh and a quick glance down the hall from one of us was a signal that we all should get up, go for a walk, and take a break. The support we provided each other was special and that's what I'll remember the most.

What advice would you give current graduate students applying for research internships with Microsoft?

Students should think about how their skill sets could be applied to studying a range of research topics. I often see interns who simply want to continue their dissertation work while at MSR, and that can work in very limited instances, but most of the time MSR researchers are working on problems that do not align perfectly with what students are doing at their universities. So, when exploring opportunities at MSR, it's important for students not only to discuss their areas of focus and the expertise they have in those areas, but to also talk about their skills and how those skills might be useful to research teams as they carry out their investigations. To put it another way, do not only focus on what you know, but try to explain what you can do as well.

What challenges did you encounter when you first started your research career?

A big challenge I experienced when I started my professional research career was learning how to effectively communicate with my colleagues throughout the company. Doctoral students are often taught to speak about their work in terms of the "broader impacts" or the "scientific merit" of their research, which is helpful for discussing research with grant funding agencies or academic collaborators. At a company like Microsoft, however, there can be many different stakeholders, like designers, engineers, and project managers, and determining what each stakeholder needs to know and how that information should best be conveyed takes a while to learn. Concise and cogent communication can be very effective, but researchers must often fight against instincts that cause them to overexplain. This is something I still struggle with, but just being aware that I need to adapt my communication style to match my audience helps a lot.



Martez Mott (*continued*)

What challenges did you face in your research, and how did you overcome them?

One of the biggest challenges was learning how to make steady research progress in the face of uncertainty. Most students are accustomed to working on problems with known answers, so it can be a big shock to work on projects where no one knows the answer, and daunting once you realize it is your responsibility to find the answer. It's easy to get stuck, so it's important to find ways to break the inertia. My strategy was to develop little feedback mechanisms that would allow me to better understand if I was closer to reaching my goals. For example, when I was working on the Smart Touch project I created a set of milestones that I needed to meet if the project was to succeed. I did not put a time limit or due date on any of the milestones, I simply used them to make the components of the project more visible, and it reduced a large, seemingly intractable problem into a set of smaller, more achievable tasks. In general, breaking down large, complicated tasks into smaller, simpler tasks can help researchers think through tough problems and help them identify ways to improve or alter their research approach.

Can you tell us about any current research projects you're working on?

My colleagues and I are exploring how generative AI technologies can help people with complex communication needs (CCNs) more effectively collaborate and communicate with colleagues, friends, and family members. Many people with CCNs might use some form of computer mediated communication, like tablet-based augmentative and alternative communication (AAC) devices, so there is potential for gen AI technologies to improve existing systems and for new functionalities to be created. Our research focuses on working closely with people with CCNs to understand their current experiences and to elicit their thoughts on what technologies would best meet their needs. With this research, we hope to collaboratively design and evaluate new communication technologies that benefit people with CCNs.

What are some of your favorite things about research?

There are many things, but to keep it simple I'll share two. First, I love the amount of creativity involved, especially in my field of human-computer interaction. We are literally inventing the future, and the scope and scale of our inventions and investigations can take us to pretty interesting places and can uncover fascinating insights into how people relate to technology. It's a freeing experience, being able to follow your curiosity wherever it leads you. My second favorite thing is contributing to the history of my field. I love history, and being a researcher allows us to contribute to the history of our fields of study through our publications and other research artifacts. Researchers 10, 20, or 50 years in the future might read a paper I wrote and could find some interesting ideas that they wish to modify, expand, or interrogate further in their own work. I think that's pretty cool.

Knowing what you know now, what advice would you give to your younger self at the start of your career?

I would tell my younger self to be more confident. I dealt with so much imposter syndrome early on that it prevented me from going after opportunities that could have served me well throughout my career. For example, when I was applying to schools for my Ph.D. I didn't apply for the NSF Graduate Research Fellowship because I thought that I had no chance of winning, and I didn't want to inconvenience my mentors by asking them to write me a recommendation letter for a fellowship that I was bound to lose. It took me years to realize how wrong my thinking was, but at that time I was convinced that a student from a small, not well-known state school with limited research experience would not be competitive for such a prestigious fellowship. I had many of those types of experiences, where I decided a priori that I was undeserving of an opportunity, so I just did nothing. Having the confidence, or maybe courage is more apt, to ask a question at a conference, to reach out to a senior person in your field, or to perform any number of tasks that seem scary and daunting, is important for personal and professional growth. I encourage everyone just starting their research careers to be courageous and to step outside of their comfort zones from time to time.

CRA-WP Names Yakun Sophia Shao as 2024 Anita Borg Early Career Award Recipient



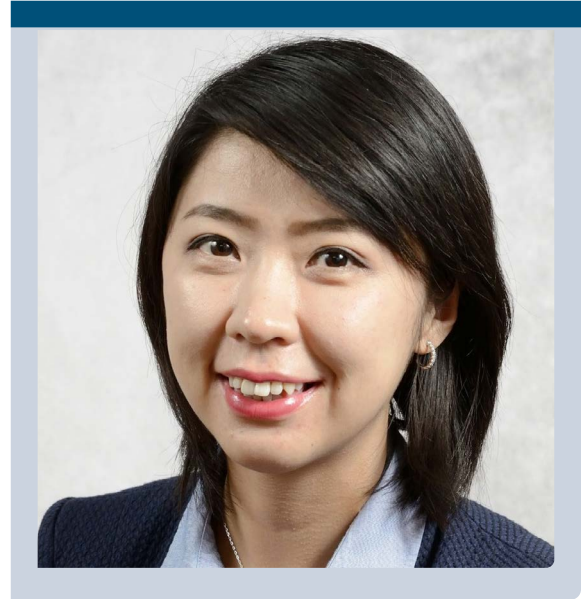
CRA-WP
Computing Research Association
Widening Participation

By Lauren Lashlee, Program Associate, CRA-WP

Since 2004, CRA-WP has recognized an outstanding computer science researcher in honor of Anita Borg, by awarding them with the CRA-WP Anita Borg Early Career Award (BECA).

CRA-WP is pleased to announce Yakun Sophia Shao (University of California, Berkeley) as the recipient of the 2024 Anita Borg Early Career Award for her research, mentorship, and service to the computer science community.

Shao is an Assistant Professor of Electrical Engineering and Computer Sciences at the University of California, Berkeley. Previously, she was a Senior Research Scientist at NVIDIA and received her Ph.D. in 2016 from Harvard University. Her research focuses on computer architecture, specifically domain-specific architecture, deep-learning accelerators, and high-productivity hardware design methodology. Shao's work has been awarded a Distinguished Artifact Award at ISCA'2023, the Best Paper Award at DAC'2021, the Best Paper Award at JSSC'2020, a Best Paper Award at MICRO'2019, a Research Highlight of Communications of ACM (2021), Top Picks in Computer Architecture (2023, 2014), and Honorable Mentions (2019*2). She is a recipient of a Sloan Research Fellowship, an NSF CAREER Award, the 2022 IEEE TCCA Young Computer Architect Award, an Intel Rising Star Faculty Award, a Google Research Scholar Award, and the inaugural Dr. Sudhakar Yalamanchili Award. You can visit Professor Shao's personal webpage at: <https://people.eecs.berkeley.edu/~ysshao/>.



[Read more](#) about the CRA-WP Early Career Awards.

Get to know Sophia Shao:

What brought you to computing research?

My journey into computing research was primarily driven by the exciting challenge of building solutions from the ground up and tackling problems that were previously unsolved. There's a unique joy in innovating and creating something entirely new. This aspect of discovery and creation is what really attracts me to the field of computing research. It's about pushing boundaries and exploring the unknown, which I find immensely rewarding.

Do you remember your first research project?

My first significant venture into what I would call "research-oriented" work was participating in a robotics competition during my junior year in college. This project, while not leading to a publication, was pivotal in shaping my interest in computing research. I was deeply involved in programming microcontrollers, and experimenting with different sensors and actuators to build various robots. This experience was not only really fun but also served as my introduction to system research. It also sparked a curiosity about computer architecture, especially the intricacies of how processors work, which eventually became the focus of my research.

What project was your most memorable or favorite to work on?

My favorite project to date was the Simba project during my time at NVIDIA, where we developed the first chiplet-based AI inference accelerator. This project stood out for several reasons. First, it was a prime example of building vertically integrated systems, showcasing innovation at every level from algorithms and architecture to circuits. Second, the project was highly collaborative, giving me the opportunity to work alongside many amazing colleagues from diverse backgrounds and areas of expertise. The combination of technical innovation and teamwork made this project not only challenging but also incredibly rewarding and enjoyable.



Yakun Sophia Shao (*continued*)

What challenges did you encounter when you first started your research career?

When I first embarked on my research career, the most significant challenge I faced was managing uncertainty. Initiating my own research projects was exciting, but the inherent uncertainty and numerous moving parts could be overwhelming. Several strategies helped me navigate this challenge effectively. First, I frequently talked to my mentors and collaborators to share my struggles. These conversations provided invaluable guidance for me to navigate the research process. Second, I made a concerted effort to organize my thoughts, clearly delineating what had been previously established, the specific problems I aimed to address, and my initial hypotheses. Lastly, I focused on initiating concrete prototypes to break down the project into manageable segments. This step-by-step approach allowed me to tackle the project piece by piece, which not only reduced ambiguity but also ensured steady progress.

Can you tell us about any current research projects you're working on?

My current research focuses on hardware-software co-design for domain-specific systems, particularly emphasizing efficiency and scalability in emerging applications like AI and robotics. We are exploring innovative hardware and software mechanisms aimed at accelerating computing through enhanced accelerator design and integration. This approach optimizes performance from an end-to-end perspective, involving a comprehensive examination of how these technologies can be synergistically developed to meet growing computational demands effectively.

I noticed that you switched from Research Scientist to Professor, what guided you to make this career shift?

I enjoyed my experiences in both roles and view them as distinct yet complementary phases of my career. Working as a research scientist at NVIDIA was incredibly fulfilling, allowing me to collaborate with talented colleagues on cutting-edge problems. However, my shift back to academia was driven by a deep appreciation for the educational aspect of research. I find immense joy in mentoring students—both undergraduates and graduates—and engaging in mutual learning. The opportunity to have a tangible, positive impact on their careers is something that I find uniquely rewarding about being a faculty member at a major public university.

Knowing what you know now, what advice would you give to your younger self at the start of your career?

I would tell my younger self that everything is going to be okay :) Challenges that seem overwhelming at the moment often turn out to be just brief episodes in the broader context of your career. Embrace both the challenges and opportunities, and don't be swayed by temporary setbacks or confusion. With time, things will fall into place, and the journey will not only be rewarding but also enjoyable.

Policy Spotlight: Juan E. Gilbert, University of Florida



By CRA Government Affairs

As part of CRA's mission to help the computing research community become more aware and engaged in the policymaking that affects our field, Computing Research News' Q&A series, **Policy Spotlight: Conversations with Computing Researchers**, highlights the work that community members are doing in governmental roles or who have taken part in CRA Government Affairs activities. This series will allow you to hear directly from policy-minded members of the community, in their own words, to highlight work that the community should know about and raise awareness of the types of opportunities that are available to those interested in serving.



Juan E. Gilbert (continued)

The spotlight turns now to **Juan E. Gilbert**, the Banks Family Preeminent Endowed Professor and Chair of the Computer and Information Science and Engineering Department at the University of Florida, where he also leads the **Computing for Social Good Lab**. Dr. Gilbert has been involved in several parts of CRA, from serving on multiple leadership committees to mentoring undergraduate researchers. He has also participated in several **Congressional Visit Days (CVD)** that the CRA Government Affairs Office has held in Washington DC.

CRA's CVDs, which are typically held in September, are an opportunity for members of the computing research community to come to Washington and take part in meetings with their Members of Congress and staff to help make the case for federal support of computing research. As you will read in his own words, Dr. Gilbert has leveraged his CVD participation to highlight to policy makers the work he is doing and give it a wider impact on the nation.



If you would like to participate in the 2024 CRA Congressional Visit Day, please contact Brian Mosley (bmosley@cra.org) in the Government Affairs Office for more details.

What are you working on right now in your research?

Research-wise, my lab is called the Computing for Social Good Lab and we have several different projects, but the largest, longest-term project in the lab is our voting technology projects. We build innovative solutions to real-world problems, and we do that by integrating people with technology, policy, and culture.

And so we apply that in the voting context to create universally-designed voting machines, such that if you can't see, if you can't hear, if you can't read, if you don't have arms – you can vote on the same machine as anyone else. And so right now we're working on some new innovations in that space.

We also created something called a transparent voting machine. This technology essentially turns paper into a touchscreen. The idea is to make sure that the paper ballot that is created by the voting machine through the voter is actually voter-verified and an accurate ballot. So we're working on that, as well as a form of internet voting called televoting. Imagine being able to vote over the internet and it results in a paper ballot being printed that you can verify.

So those are the hot projects right now – we have others as well, but those will be the top ones.

What does advocacy mean to you in the context of computing research?

Computing research advocacy is essential. Computing is pervasive. It's everywhere. Whether you are a child, a senior, whether you're technically competent or not – it doesn't matter. Everybody is interfacing with computing, even if they don't know it.

As a result of that, we have to do advocacy to promote computing research. And the most obvious thing to say is that we need advocacy in computing research for protections to enable computing to be safe in certain important contexts.

So yes, it's just so necessary that there be advocacy for computing research because it is pervasive and it impacts people's daily lives in all kinds of ways.

Juan E. Gilbert (*continued*)

How have you used your research in your meetings with policymakers?

When I meet with policymakers, I often will tell them about our research. Again, my lab is called Computing for Social Good, and so we deal with real world problems.

Here's an example: another project in the lab is called the [Virtual Traffic Stop](#). Imagine being pulled over and prior to the officer approaching the vehicle, you could have a video conference with that officer and a third party of your choice. This is a way to de-escalate tensions between officers and drivers during a routine traffic stop.

So, how does this connect with talking to legislators and policymakers? You have to contextualize what our research does and how it impacts society. When you contextualize things, policymakers are able to understand the benefit to their constituents in a way that makes it real for them. Simply put, we connect our research – which is applied in the real world – to the policy makers' constituents and to society in a way to make it compelling so they understand why they should care and why they should take the action that we're asking them to take.

What has been your biggest accomplishment with your outreach to elected officials and their staff?

I have to say, I don't want to take credit and say "my" biggest accomplishment, I would say "our" biggest accomplishment. Again, I work in voting technologies, and years ago there were voting machines created that did not have a paper ballot. They were just storing the ballot digitally on the voting machine.

So I had the opportunity to serve on a National Academies committee back in 2018. We released a report: [Securing the Vote and Protecting American Democracy](#). When we released that report, we said that given the current state of technology, there's no known way to secure a digital ballot. Therefore, we recommended that all voting should result in a paper ballot – whether that paper ballot is hand marked, whether it is through a ballot marking device, or through a computer that prints a ballot – it has to have a paper ballot.

So what I would say a big accomplishment was writing this report, working with the community, and communicating this to legislators. And now, there are very, very few, if any, of those digital-only machines being used in elections. So we made a difference, and that was a big collective accomplishment.

You've participated in CRA's Fall Congressional Visit Days (CVD). Can you tell us about your experience?

Yes! From my perspective, they're wonderful.

When I've gone to CRA's Congressional Visit Days I've met with staffers, and occasionally the actual representative, and it's been great to be able to interact with them face-to-face. I think it's so important that we do this because lawmakers don't typically have technical expertise. And so to go there and make them aware of what's happening in my lab, the department, and the greater computing research community, and then say we're here for you as a resource and if you have tough things you need to address in technology, call upon us. And they have actually called upon us – I've had the opportunity to testify before the Senate and others and provide expertise.

So I think the CRA fly-ins are critical because it's engaging a community that needs technical expertise and they sometimes don't know that and know where to get it. And so we do a great service in doing this. It's very important.

What's an example of something you learned through participating in the Congressional Visit Days that you've carried forward with you to inform how you approach advocacy?

I've learned that you have to understand the audience. Who you're speaking with.

A lot of times researchers see research from a perspective of "I'm solving a problem, and here's why you should care about it." But we don't contextualize the "why you should care about it" specifically to the policy maker. The hands-on training that you go



Juan E. Gilbert (*continued*)

through for CRA's Congressional Visit Day really brings that learning to life, and was helpful to me as I've developed and become more confident as an advocate.

What would you say to your computing research colleagues who are unsure about taking part in a Congressional visit day or similar meetings with policymakers?

That's a good question – there's different ways I've approached having that kind of conversation. I've had to do it time and time again.

Often, when I'm having that kind of interaction with colleagues, it's easy to communicate from the perspective of: "You have issues with current policies, right?" And they'll tell you all the concerns they have, and then I'll ask them: "Well how do the lawmakers know how to fix that?" And so I start asking questions and turn it into a conversation. And what I find is that they'll say: "Well, everybody knows." And I'll say: "You have a PhD in computer science. You think *they* know this?"

And you see where I'm going...you get them to understand that if we don't tell them, they'll never know the things that we think are obvious to us in the computing research community. We have to explain it to them, and who better than you to do that? That's how I start the conversation, and then it goes from there.

What other ways have you gotten involved with advocacy for computing research?

The number one, as you already know, is the CRA CVD. When I started to do the CRA fly-ins is when I started to learn quite a bit about engaging policymakers. And how I've built on that training is just by being opportunistic.

So now my frame of mind is different. I see research in a broader context and so I take advantage of opportunities to engage policy makers. So, for example, I'm in Florida. Sometimes I'll go up to Tallahassee, meet with legislators there, and we engage them. We invite them to things. If I'm in DC, this is a major election year—you can be guaranteed I'm gonna be knocking on some doors and letting them know we're there.

So I think you have to be a little opportunistic and you need to understand that, again, they don't know a lot of these things and you need to make them aware that you have expertise. So what I would do is I will go and I will speak to them about research we're doing and I will also speak to them about the benefits of computing research. So the talking points we're given by CRA during the fly-in training, I use those all the time. So it's just any opportunity to engage, you have to be ready.

Why do you think it's important for members of the community to do their part as advocates?

Because, again, if we don't, who will? And often when they answer that question of who will, they're not happy about who the alternatives are.

So we have to do it. It's our responsibility. We have expertise. And again, if we go back 25-30 years, computing was a different thing than it is today. The pervasiveness, the integration of computing with our lives. It has impacts. It affects people's lives in ways that it didn't years ago. And as a result of that we have a responsibility to communicate to policymakers about computing research and the ethics of it, the capabilities of it, and how to make things work and be cohesive with individuals in society.

What are you most looking forward to, either personally or professionally, for the remainder of 2024?

Well, it's a Presidential election year. Our voting research is advancing. We're about to do some studies on our voting technologies. I'm looking forward to advancing the state of the art in voting technology.

People have died for the right to vote in this country, and we are here making it a reality for everyone to vote – equitably, securely, and in a user friendly way. So, we're working in that context. So I'm excited about the future development of our research in that area. And I'm frankly excited about the opportunity to engage with policy makers and help them understand computing research in a way to improve and better the cohesiveness between society and computing.

CRA Congratulates Newly Announced Deans at New Jersey Institute of Technology and Tulane University



By Elora Daniels, Communications Associate

The Computing Research Association (CRA) is delighted to congratulate long-time CRA contributors **Jamie Payton** on her appointment as Dean of the Ying Wu College of Computing at the New Jersey Institute of Technology and **Hridesh Rajan** on his appointment as Dean of the School of Science and Engineering at Tulane University.

Jamie Payton - Dean of the Ying Wu College of Computing at the New Jersey Institute of Technology



Payton moved to her new Dean role at NJIT after most recently serving as Professor and Chair of the Department of Computer and Information Sciences at Temple University.

She has been a supporter of multiple CRA programs, most recently as a leader on the NSF LEVEL UP BPC Alliance committee for the inaugural LEVEL UP workshop series, which concluded in April 2024. Payton has shared her expertise with CRA, largely through efforts hosted by CRA-WP, including frequent contributions to the CRA-WP [Expanding the Pipeline](#) series in the CRN, mentoring students in the [DREU program](#), and serving as a panelist on many CRA-hosted events, including the CRA Conference at Snowbird and SIGCSE. As Principal Investigator and Director of the [STARS Computing Corps Alliance for Broadening Participation in Computing](#), she has also had the

opportunity to work closely with [CRA's Center for Evaluating the Research Pipeline](#) (CERP) on the evaluation of the program.

In a [press release](#) from NJIT announcing Payton's appointment, she said "I'm excited about leading the Ying Wu College of Computing into its next chapter, building on its strengths and prior successes, and bringing a fresh perspective and experience in fostering diversity, equity and inclusion in computing."

CRA is thrilled to partner with such an innovative and thoughtful individual focused on widening participation in computing. Congratulations, Dr. Payton!

Hridesh Rajan - Dean of the School of Science and Engineering at Tulane University



Rajan comes to his new Dean role at Tulane after most recently serving as the Kingland Professor and Chair of the Department of Computer Science at Iowa State University.

He has been an active member of the CRA Governance Committee, helping to review the CRA governance processes and propose modifications to enable CRA to better fulfill its mission. He also served as a mentor for the 2021 CRA/CCC cohort of [Computing Innovation Fellows \(CIFellows\)](#).

When [asked about](#) what he is most excited about in his new role, Rajan said "[w]orking closely with Tulane administration, the SSE Board of Advisors, the SSE executive committee, and our dedicated faculty, staff and students, our collective efforts will focus on enhancing interdisciplinary research, fostering innovation, and growing a strong, inclusive community that supports academic excellence and groundbreaking discoveries."

CRA looks forward to future collaborations with Dr. Rajan and his leadership at Tulane University!

CERP Infographic: Where Are They Now? Exploring the Career Paths of Past Participants of Grad Cohort for IDEALS and Grad Cohort for Women



By *Eniola Idowu, Research Associate, CERP*

The CRA-WP's [Grad Cohort for Women \(GCW\)](#) and [Grad Cohort for IDEALS \(GC-IDEALS\)](#) workshops have significantly influenced the career trajectories of their participants. CERP summarized the career advancement of past GCW and GC-IDEALS attendees who have successfully earned their Master's or Doctoral degrees using Data Buddies Surveys data (2018-2023), providing an overview of their current employment setting and position levels.

Career advancement among Grad Cohort participants who earned their Master's or Doctoral degree after participating in the program.

	Grad Cohort for Women (GCW) (n = 49)	Grad Cohort for IDEALS (n = 27)
Academia	35%	30%
Industry	53%	52%
Government	8%	15%
Other	4%	4%

Among GC-W participants...

- 49% were in entry level positions
- 45% were in mid-level positions
- 6% were in senior-level positions

Among GC-IDEALS participants...

- 37% were in entry level positions
- 41% were in mid-level positions
- 22% were in senior-level positions

As shown in the infographics, 76 survey respondents who indicated their past participation in any of the Grad Cohort workshops (GC-IDEALS (n =27) and GCW (n=49)) provided their current employment information. Key findings highlight the following:

Over half of the past participants in both Grad Cohorts indicated they were currently working in the industry sector, followed by 36 percent of GCW participants and 30 percent of IDEALS participants working in academia.

Source: CRA Data Buddies Surveys (2018-2023). Center for Evaluating the Research Pipeline. Computing Research Association.
Notes: Past Grad Cohort participants indicated if they earned their master's or doctoral degree and if they participated in one or both Grad Cohort Workshops. Participants could be 1-4 years out from their participation in the program.

Surprisingly, we observed a higher percentage of past GC-IDEALS participants (15%) in government positions compared to GCW past participants (8%).

At the position level stage, 45 percent of past GCW participants are in mid-level positions, while 22 percent of IDEALS participants hold senior-level roles.

Overall, both Grad Cohort workshops have been successful in providing continued support and professional development, equipping graduate students for diverse career paths and supporting their transition into the computing research workforce.

Notes:

- The survey data analyzed for this infographic were collected by the Center for Evaluating the Research Pipeline via Data Buddies Project (2018-2023).
- Past Grad Cohort participants indicated if they earned their master's or doctoral degree and if they participated in any of the Grad Cohort Workshops.
 - » Respondents answered to the following question, "In which setting do you currently work in?" and "Which career level best describes your current position?".

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.

This material is based upon work supported by the National Science Foundation under grant numbers, CNS-1246649/ CNS 1840724. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

CRA-E Announces New Co-Chair, Welcomes New Board Members, and Thanks Departing Members for Their Service

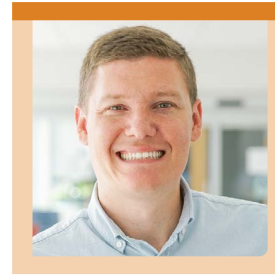


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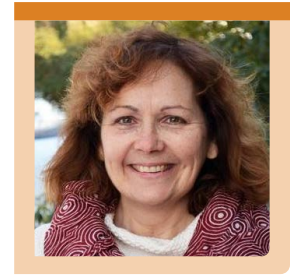
Computing Research Association
Education

By Julia Sepúlveda, Program Associate, CRA-E

The Computing Research Association's Education Committee (CRA-E) is thrilled to announce **Michael Hilton** (Carnegie Mellon University) as its newest co-chair. **Lori Pollock** (University of Delaware) will be stepping down from her role as co-chair, but will continue to serve as a board member, assisting with the UR2PhD and CSGrad4US programs.



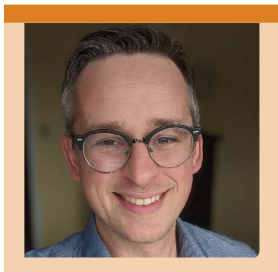
Michael Hilton



Lori Pollock

CRA-E is also excited to welcome Evan Peck (University of Colorado, Boulder), Jennifer Campbell (University of Toronto), and Jonathan Bell (Northeastern University) as its newest board members. These members bring with them a wealth of experience from designing and implementing inclusive curricula to organizing community building activities for students. We are looking forward to their support in promoting CRA-E's mission of addressing society's need for a continuous supply of talented and well-educated computing researchers.

CRA-E would like to thank outgoing board members, Gary Holness (Clark University) and Victoria Interrante (University of Minnesota) for their service. Gary, who joined in 2021, assisted with recognizing and selecting recipients for the **annual faculty mentor awards**. Additionally, he provided technical expertise in creating and maintaining visual and static resources for the **Student Pathways into Research in Computing** (SPARC) site. Victoria joined the board in 2021 and contributed to several projects, including serving on the **Outstanding Undergraduate Researcher Award** selection committee, developing materials distinguishing MS and PhD programs, and designing of the SPARC website. The CRA-E team is deeply appreciative of their contributions to CRA-E activities and wishes them success in their future endeavors.



Evan Peck

Associate Professor, University of Colorado, Boulder

Evan Peck is an Associate Professor of Information Science at the University of Colorado Boulder (<https://peck.phd>), and the Associate Chair of Undergraduate Studies (beginning in July 2024). Evan's research draws on the fields of Information Visualization and Human-Computer Interaction, and focuses on reimagining the processes and tools we use to share data with more diverse communities. Prior to CU Boulder, Evan was an Associate Professor of Computer Science at Bucknell University (2014-2023) where he developed (and still develops!) public resources for academic careers in primarily-undergraduate institutions (PUIs), research pathways for undergraduate students, and the integration of ethics and social responsibility into core computing curriculum. Evan previously worked as a Visiting Scientist in the Visualization Group at MIT (2021-2022) and received his Ph.D. in Computer Science from Tufts University in 2014. For a recent article on Evan's work, see #TechEthics, by CU's CMCI Now Magazine.



Jennifer Campbell

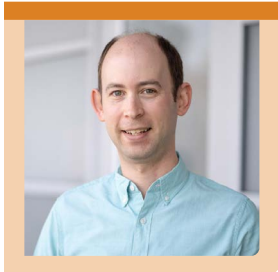
Professor, Teaching Stream, Department of Computer Science, University of Toronto

Jennifer Campbell is a Professor, Teaching Stream in the Department of Computer Science at the University of Toronto, where she has worked since 2003. Her research focuses on computer science education, and she is particularly interested in introductory programming and the experiences of computer science students. Jen was awarded the Faculty of Arts & Science Outstanding Teaching award in 2014 and the University of Toronto President's Teaching Award in 2021. She has received grants to support a variety of pedagogical initiatives, including developing teaching materials, designing new curricula, and conducting research studies to assess the outcomes of novel approaches. She co-developed her department's first flipped course and an online



CRA-E Announcements *(continued)*

version of the same course. Jen also co-authored a textbook on introductory programming in Python and co-developed two Massive Open Online Courses (MOOCs) on learning to program, which were amongst the first MOOCs in the world. She co-founded the Second-year Learning Community program, which has since expanded from her department to ten other departments.



Jonathan Bell

Associate Professor, Northeastern University

Jon is an Assistant Professor directing research in Software Engineering at Northeastern University, focusing on topics including software testing, continuous integration and open-source ecosystems. At Northeastern, Jon teaches Software Engineering. Previously while at George Mason University, Jon received a university-wide Teacher of Distinction award for his courses in distributed systems, web development, and program analysis. He also serves on a variety of program committees for top software engineering conferences. As part of his efforts to broaden the participation of underrepresented groups in his research communities, Jon helped form the ICSE Student Mentoring Workshop Steering Committee after co-organizing the student mentoring workshop twice at ICSE, and four times at SPLASH. In Summer 2020, Jon co-founded the Clowdr open source project to help support virtual academic conferences, and subsequently co-founded a startup to provide paid support and development for the project. His contributions to the object-oriented programming community were recognized with the 2020 Dahl-Nygaard Junior Researcher Prize. His research has been funded by the NSA and the NSF, and he is the recipient of the NSF CAREER award. His other interests include photography, cooking and cycling.

Resources for Designing Undergraduate Research Experiences



By Julia Sepúlveda, Program Associate, CRA-E

Well-scoped projects can help you advance your research, improve your leadership capabilities and promote the development of your mentees. But designing undergraduate research projects can be difficult and time consuming – especially, if you are inexperienced.

Earlier this year, the UR2PhD team led a presentation and discussion on “Designing Well-Scoped Undergraduate Research Projects.” The workshop provided suggestions and insights for engaging undergraduates in both new and existing projects. In addition to providing examples for how to create and stitch student projects together, the team fielded questions about student experiences, unique situations, and negotiating meaning. At the end of the session, the team shared a worksheet with guided questions on how to plan a project, set deliverables, and map needs. A completed version of that worksheet was also provided for the example project from the presentation.

The full recording of the workshop, the slides, and the worksheets can be accessed on the UR2PhD [webpage](#). We encourage anyone who works with undergraduates to review the resources and share them broadly with anyone who may benefit from them.

Check out this related content in the CRN archive:

On Undergraduate Research in Computer Science:
[Tips for Shaping Successful Undergraduate Research Projects](#)

Summer Courses Are In Session: UR2PhD Is Supporting The Next Generation of Researchers



CRA-E

Computing Research Association
Education

By Julia Sepúlveda, Program Associate, CRA-E

The UR2PhD program is an initiative that aims to drastically increase the number of women and gender-marginalized folks pursuing graduate studies in computing. As part of the program, the Computing Research Association (CRA) offers two summer courses: a graduate student mentor training and an undergraduate research methods course. Together, the courses seek to improve the quality of undergraduate research experiences and encourage students to pursue additional opportunities in the field.

In the graduate student mentor training course, participants learn both theoretical and practical frameworks for supporting the personal and professional development of their mentees. This summer, there are **19** graduate students enrolled in the program. While many of them have prior mentorship experience that they are building on, several participants seek new and concrete strategies for engaging with their mentees. Uthman Tijani, a graduate student at the University of South Florida and participant of the course, shared, "I decided to take the UR2PhD mentor training course to master effective mentorship practices that will empower my mentees on their research journeys. Additionally, this training will improve my leadership skills, preparing me for future roles in both academia and industry by fostering a supportive and inclusive research environment." Our team is excited to see how our mentors apply what they learn.

Undergraduate students participating in our research methods course are strengthening their capabilities and building their confidence as researchers. There are **more than 80 students** enrolled across the two sections. As part of the course, students are required to be actively engaged in a research project. Many of our participants are working on projects that have, or will have, a significant impact on their community. For example, one group is working on developing a centralized data repository for sustainable systems research in Colorado, and another is developing and evaluating educational interventions to increase social media safety for young adults on the autism spectrum.

By the end of the summer, undergraduate participants in the course will know how to read a research paper, how to conduct a literature review, and how to write and present technical information. They will have generated a research proposal describing the research project they are engaged in, with a deeper understanding based on their project related-assignments in the course. Several participants expressed excitement about the structured learning environment that will allow them to practice the skills they need to be successful researchers. One undergraduate participant from the University of Massachusetts at Amherst, noted "I look forward to learning from mentors, engaging with like-minded peers, and preparing myself for a successful transition to a PhD program, with the goal of contributing to diverse and impactful research in the future."

Through these courses, the UR2PhD initiative hopes to encourage faculty mentors to take on new undergraduate student researchers. The program assists them by offering their mentees guidance and advice for approaching research and research development, thus enabling mentors to focus more on technical assistance rather than foundational skills. Faculty mentors who are able to engage graduate students in the undergraduate research mentoring process are also ensuring that their graduate students are able to practice and develop new professional skills.

The UR2PhD program plans to offer both courses again in the fall, with the graduate course beginning in late August and the undergraduate course starting in September. To learn more about the courses, please visit our website: www.cra.org/ur2phd



Uthman Tijani and his undergraduate mentees

UR2PhD Computing Research Engagement and Awareness Workshops Helped Undergraduates Learn More About Research Careers and Pathways



CRA-E
Computing Research Association
Education

By Julia Sepúlveda, Program Associate, CRA-E

During the spring, Niema Moshiri (University of California, San Diego) and Christine Bassem (Wellesley College) led four workshops as part of the UR2PhD Computing Research Engagement and Awareness series. Over the course of the series, they helped students develop a deeper understanding of what computing research is, what it can look like, and why it might be an enticing career path for students. The series engaged over 140 undergraduate students from more than 60 institutions during the one-hour workshops.

In February, during the first workshop, “So you’ve done some research, what’s next?” the team moderated a panel discussion that featured two industry researchers, a professor, and two undergraduate researchers. Participants learned more about the research process and the challenges the panelists faced throughout their research journey. The session closed with advice for new researchers.

In March, the series set out to answer the question: “What does a career in computing research look like?” The session challenged assumptions about where computing researchers work and what their day-to-day job looks like. The session ended with a Q&A session that included the perspectives of a national lab researcher, a professor, and a bioinformatic scientist. Participants walked away with a better understanding of career possibilities in the field.

In April, Professors Moshiri and Bassem encouraged participants to reflect on impact. They invited three current graduate students to speak to the prompt, “How will my research change the world?” The guest speakers gave flash talks about their work, delving into what computing can tell us about the future of work, urban air pollution, and microbial communities.

To close out the spring series in May, the team illustrated the collaborative and interdisciplinary nature of the field, exploring, “How do I combine other interests with computing?” Participants heard from two entrepreneurs who use their technical knowledge to pursue their passions in agriculture and gaming. Moshiri and Bassem took the opportunity to highlight how research has far-reaching impacts in art, paleontology, sports, health, economics, fashion, mapping, and food production.

The UR2PhD Computing Research Engagement and Awareness Series will continue in August and we encourage any undergraduate who has an interest in computing research to participate. Sessions are open to all undergraduate students in North America, irrespective of skill level and experience. The UR2PhD team would also like to thank all of our guest speakers for sharing their stories and reminding us of the diversity of experiences across the field.

Recordings from the spring 2024 sessions can be found on the Computing Research Association’s YouTube channel: [view the full playlist](#).

CCC Chair Daniel Lopresti Transitions to Chair Emeritus and Several Council Members Rotate Off



CCC

Computing Community Consortium
Catalyst

By *Petrucce Jean-Charles, Communications Associate, CCC*



Dan Lopresti

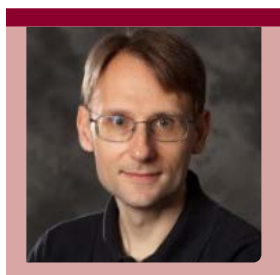
The Computing Community Consortium (CCC) wishes **Dan Lopresti** well as his 2-year term as Council Chair comes to a close. June 30th marks the end of Lopresti's term and CCC is grateful for his leadership. He remains on the Council for another year as Chair Emeritus. Lopresti has been an active member of the CCC since 2015. His contributions to the community since the start are extensive, but we will share just a few here:

In 2020, Lopresti co-organized and collaborated with partners including Delta 8.7 at United Nations University, the United Kingdom's Alan Turing Institute and the Rights Lab at the University of Nottingham for the **Code 8.7 on Applying AI in the Fight Against Modern Slavery workshops**. The first workshop was at the United Nations in New York City and the second one convened in Washington, DC. The workshop sought community engagement and input on laying out a research roadmap aimed at applying AI to the fight against human trafficking.

Lopresti has also been an author in 19 Request for Information (RFI) responses some including **NIH's Strategic Opportunities and Challenges for the National Library of Medicine**, **National Artificial Intelligence Research and development Strategic Plan**, **PCAST Working Group on Generative AI Invites Public Input**, and **Dual Use Foundation Artificial Intelligence Models With Widely Available Model Weights**. While authoring 17 whitepapers ranging from intelligence infrastructure to pandemic preparation. He was featured on episode 5, 13 and 14 of the **Catalyzing Computing Podcast** discussing his work applying computer science to molecular biology, pattern recognition, and voting machine security and his involvement in the Code 8.7 workshop.

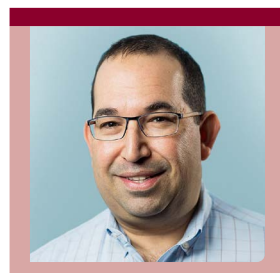
He has also helped organize several CCC American Association for the Advancement of Science (AAAS) panel sessions over the years.

We'd also like to recognize the CCC Council members whose terms expire on June 30th for their commitment to the CCC and to enhancing the computing community.



Sven Koenig

Sven Koenig has pushed forward several initiatives to increase the collaboration of researchers from artificial intelligence (AI) and operations research (OR). This included co-organizing three AI/OR workshops to work out a roadmap for further activities, bringing together the professional societies in AI and OR, and helping to create an AI/OR summer school, the inaugural one of which was held in May 2024. He has also been a member of the **Sociotechnical Collaborations of AI+X Task Force** and responded to three Requests for Information, including **the National Artificial Intelligence Research and Development Strategic Plan**, **National Priorities for Artificial Intelligence**, and the PCAST Working Group public input on **Generative AI**.



Brian LaMacchia

Brian LaMacchia has contributed to many activities while on the Council, especially those related to his research area of cryptography and computer security. During his term, LaMacchia served on the Security, Integrity, and Trust, **Socio-Technical Resilience**, and **Full Stack** Task Forces, and his work led to organizing two workshops on Socio-Technical Cybersecurity. He co-authored the **Post-Quantum Cryptography** Quadrennial Paper and the **Algorithmic Robustness** whitepaper, shepherded the **Research Opportunities in Evidence-Based Elections** whitepaper, was the sole author of the CCC's response to OSTP's **RFI on Advancing Privacy-Enhancing Technologies**, and was a co-author on five additional RFI responses. LaMacchia spoke at AAAS Annual Meeting sessions on socio-technical cybersecurity in 2019 and post-quantum cryptography in 2023.



Council Members *(continued)*



Mona Singh

Mona Singh has been an active member of the **Grand Challenges Task Force**, attending the roundtable and fostering efforts for defining grand challenges. She has also engaged in research surrounding AI and ML systems in healthcare, including the 2023 RFI response on **Using Artificial Intelligence and Machine Learning in the Development of Drug and Biological Products** and the 2024 RFI response on the **NIH's Strategic Plan for Data Science 2023-2028**. Mona Singh was a co-organizer of the **Future of Pandemic Prevention and Response CCC Workshop**, held in Fall 2023, and helped organize the CCC-organized AAAS panel on health equity in 2023.



Ufuk Topcu

Ufuk Topcu has been an effective member of the **Addressing Unforeseen Deleterious Impacts of Technology (AUDIT) Task Force**. He has also led the Assured Autonomy workshops series, providing major findings on the challenges and shortcomings that need to be addressed so that autonomy can sustainably fuel a long-lasting transformation. Other contributions to CCC include acting as the liaison for **Community-Driven Approaches to Research in Technology & Society (CDARTS)** and participating in RFI responses such as **PCAST Working Group on Generative AI Invites Public Input**, **Developing a Roadmap for the Directorate for Technology, Innovation, and Partnerships at the National Science Foundation**, and **AI Accountability Policy Request for Comment**.

CCC appreciates the work of all of these council members!

CCC Launches New LinkedIn Showcase Page

By Petruce Jean-Charles, Communications Associate, CCC



Have you ever heard of LinkedIn showcase pages?

Well, we have been secretly working on one to bring you exclusive CCC news. Our goal is to share content that is both informative and new. Looking forward to more content?

Here's everything you need to know about our new page:

Q: What's a LinkedIn Showcase page?

A: It's an extension of an already existing account like **CRA's-designed** to spotlight individual initiatives like CCC.

Q: Why create a CCC showcase page?

A: CCC aims to energize the computing research community by sparking discussions on ambitious, long-term research challenges. We strive to foster consensus on research visions, refine the most promising ones into actionable initiatives, and collaborate with funding organizations to bring these visions to fruition. What better way to do that than creating a LinkedIn showcase page?

Q: What can the computing community expect from this page?

A: The community can expect the opportunity to suggest and see content you want from CCC. We want you to have a say on what we produce so keep an eye out for polls and calls for participation. You can also look forward to new content including council profiles, Q&As, opinion pieces, listicles and reviving old reports and projects from CCC's archives.

If you're interested in getting more CCC content on LinkedIn, **follow our showcase page** and reshare our **first post**. Help us welcome the page by sharing it with your networks or individuals you think would enjoy following CCC.

And if you have ideas for content, why not leave a comment under the post as well?

Four Ways Computing Can Positively Affect Society

By Petruce Jean-Charles, Communications Associate, CCC

Computing stands as the cornerstone of modern technological progress, holding immense promise to reshape society for the better. At its essence, it provides a robust framework for problem-solving, automation, and groundbreaking innovation, capable of tackling humanity's most urgent issues. Whether it's bolstering healthcare with predictive analytics and tailored treatment strategies or combatting environmental threats through data-driven sustainability initiatives, computing uses transformative power across a spectrum of societal challenges.

CCC Council Chair Daniel Lopresti said computing research is important because there are risks that need to be considered. He points to innovations such as surveillance technologies which can be used to violate privacy.

In order to alleviate these risks, researchers need support in their work. CCC has conducted many research visioning activities including recent ones such as [The Future of Social Technologies](#) and [Community Driven Approaches to Research in Technology & Society](#) workshops.

Now let's get into the four examples of how computing has a positive impact on society.

Improving healthcare

One key area where computing has made significant strides is in medical diagnosis and imaging. Advanced algorithms can analyze medical images such as MRIs, CT scans, and X-rays with remarkable accuracy, aiding clinicians in detecting diseases and abnormalities at early stages. Machine learning techniques can also predict patient outcomes based on data from similar cases, assisting healthcare providers in making informed decisions about treatment plans. This not only enhances diagnostic accuracy but also improves patient outcomes by facilitating timely interventions.

Another aspect where computing contributes to healthcare is in the management and analysis of vast amounts of patient data. Electronic Health Records (EHRs) streamline the storage and retrieval of patient information, enabling healthcare professionals to access comprehensive medical histories promptly. Data analytics techniques can uncover valuable insights from EHRs, such as identifying trends in disease prevalence, optimizing resource allocation, and even predicting disease outbreaks. By harnessing the power of big data and data science, healthcare systems can become more efficient, cost-effective, and patient-centered.

Providing opportunities for marginalized communities

Computing offers an array of tools and solutions that can significantly benefit marginalized communities in numerous ways. One pivotal aspect lies in education accessibility. Through online platforms and digital learning resources, computing can bridge the educational gap, providing opportunities for skill development and empowerment. By offering coding classes, technology workshops, and resources tailored to the needs of marginalized groups, individuals can acquire in-demand skills, opening doors to employment and economic advancement.

Computing can also address social challenges prevalent in marginalized communities. Data analytics can help identify patterns of inequality or areas lacking essential services, aiding policymakers in designing targeted interventions. Additionally, technologies such as mobile applications can facilitate access to healthcare services, education materials, and financial resources, particularly in remote or underserved areas. By leveraging technology, marginalized communities can overcome barriers to essential services and participate more actively in society.

4 Ways Computing Can Positively Affect Society (continued)

Helping with climate and environmental challenges

Climate change is one of the most pressing issues of our time, with far-reaching implications for ecosystems, economies, and human well-being. Addressing this complex challenge requires a multifaceted approach that integrates insights from diverse disciplines and leverages cutting-edge technologies.

Environmental justice concerns underscore the need for computing innovations that address inequalities in exposure to environmental risks and ensure equitable access to climate change solutions. By using rich datasets, AI models, and decision-support tools, researchers can identify and mitigate environmental injustices, through promoting fairness and inclusivity in climate change mitigation and adaptation efforts.

Computing research can also boost infrastructure resilience and reduce climate disruption impacts through better design, monitoring diverse systems, and ensuring widespread access to robust solutions.

Helping with natural disasters and disaster management

Intelligent infrastructure plays a crucial role in mitigating the impact of both natural and man-made disasters. While events like earthquakes and tsunamis remain challenging to predict, proactive measures such as advanced building designs and early warning systems can significantly reduce the severity of their consequences. Similarly, for disasters like wildfires sparked by lightning or accidents such as ships colliding with bridges, intelligent infrastructure can enhance response capabilities and minimize damage. By integrating technologies for monitoring, prediction, and rapid response, intelligent infrastructure offers a proactive approach to disaster management across a wide range of scenarios, ultimately saving lives and safeguarding communities.

There are also significant opportunities associated with intelligent infrastructure. Advances in technology, such as the development of more efficient sensors and algorithms, offer new possibilities for enhancing disaster management capabilities.

Check out our other [visioning activities](#) and the ways CCC supports the computing community for the betterment of society.

Addressing Harms: Moving Beyond Intent



By Haley Griffin, Program Associate, CCC

The following was written by CCC's [Addressing the Unforeseen Deleterious Impacts of Technology \(AUDIT\) Task Force](#)

Computing technologies of all stripes have brought enormous benefits to people's lives, but also significant individual and societal harms. As these technologies become increasingly ubiquitous and powerful, we should expect the potential benefits and harms to grow as well. These shifts raise crucial questions about the foreseeability of impacts of the work of computing researchers and developers, as it is much easier to promote benefits and mitigate harms when they can be anticipated. We can ensure wide access (if beneficial), establish guardrails (if problematic), and much more, but only if we actually foresee how the computing technology will be designed, developed, and deployed in the real world [NASEM, 2022].

In some cases, it is easy to anticipate the impacts of a new technology. For example, the "first-order" impacts of a faster processor can usually be modeled and estimated. At the same time, more complicated impacts can be much harder to anticipate; for instance,

Addressing Harms (*continued*)

we might encounter a Jevons paradox in which increased efficiency leads to increased utilization, thereby undoing the positive benefits of the efficiency gains. As a practical example, autonomous vehicles are likely to be more efficient per vehicle mile traveled, but if they lead to an increase in total vehicle miles traveled, then emissions could actually rise when autonomous vehicles are introduced [Kalra & Groves, 2017; Geary & Danks, 2019]. These complexities in anticipating benefits and harms only grow as the capabilities and sophistication of our computing technologies increase. And of course, matters are exponentially more complicated when we consider research on computing technologies, as the intellectual and temporal gaps between research and implementation can be vast [NASEM, 2020].

Despite these challenges, we have a societal and ethical obligation to anticipate and address the foreseeable impacts of our efforts to bring new technologies into the world. Companies and organizations typically explore ways to consistently maximize the benefits of technologies that they produce, but do not have the same record of anticipating the potentially harmful impacts of their new computing technologies. Consider a few different examples. Mortgage approval systems were deployed with an understanding of how they could increase profit for lenders, but not how they could increase inequality in access to financial resources. Many people failed to anticipate the ways that social media would change social interactions for the worse. Automated hiring systems have unintentionally codified sexist and racist practices. And many more cases of unforeseen harms and challenges.

We might hope that failures to anticipate harms occur only because of the complexity of ways in which technologies can interact with and shape communities and societies. However, there are often incentives and institutional structures that create further reasons to avoid anticipating. That is, many problematic effects are arguably “willfully unforeseen,” rather than justifiably unforeseen. In such cases, we cannot simply point to our personal or organizational failures to anticipate harms in order to absolve ourselves from blame. We are responsible for the impacts that we should have foreseen, even if we did not actually foresee them in this particular situation. And so we need to recognize and address the barriers to actually understanding the impacts of the computing technologies that we create.

On the incentives side in industry, many companies and organizations reward people for “writing code” or other activities on the basis of solely “local” benefits, rather than more holistic assessments of all impacts. That is, the incentives for an individual employee or team all point towards a focus on potential benefits to the exclusion of other potential impacts. Meanwhile, in academia, tenure and promotion depend on publications and grants, where there is little incentive to emphasize potential harms or problems. The temptation to focus on benefits is also heightened by the typical distance between academic research and technology deployment. In all of these cases, it is little surprise that people do not spend much time thinking about what could go wrong. The harms are unforeseen, but not because they were unforeseeable.

On the institutional side, whether in industry or academia, computing technologies—both research and development—are often created by people who are far-removed from key stakeholders. Many harms from new computing technologies are easily seen by the impacted communities, but not necessarily by those tasked with creating or researching that technology [NASEM, 2022; Gebru et al., 2024]. However, direct engagement with impacted communities, whether through minimal interactions such as focus groups or richer interactions such as co-design, is not systematically part of all projects to create some new computing technology. We need to be talking with those who will interact directly with the technology, but those connections can be rare-to-nonexistent in many situations.

One might despair at this point, as the challenge of anticipating the benefits and harms of computing technologies appears too difficult, whether technically or institutionally. But although we face a difficult task, there are various methods and organizational designs that are being developed and tested to help us all do a better job of understanding likely impacts [NASEM, 2022]. These approaches range from practices that identify possible harms (e.g., red-teaming), to changes in organizational cultures (e.g., naming

Addressing Harms (*continued*)

Chief (Responsible) AI Officers to lead these efforts, or encouraging academics to engage with potentially impacted communities), to different policy or regulatory approaches (e.g., holding companies liable for certain harms). Of course, even the best-intentioned efforts might fall short, and so we should also consider ways to address harms regardless of whether they were foreseeable at all. Read more about that particular problem in the next entry of this series: [Addressing Harms Through Design](#).

Citations

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Bipartisan Group of Senators Release Legislative Roadmap Report on Artificial Intelligence Policy



By Brian Mosley, Associate Director of Government Affairs

In May, a bipartisan group of Senators, led by Senate Majority Leader Chuck Schumer (D-NY), Sen. Mike Rounds (R-SD), Sen. Martin Heinrich (D-NM), and Sen. Todd Young (R-IN), released a report outlining suggested funding priorities, legislative actions, and relevant topics that the chamber should take to begin the process of regulating artificial intelligence. The report is titled, “[Driving U.S. Innovation in Artificial Intelligence: A Roadmap for Artificial Intelligence Policy in the United States Senate](#)” and it is the culmination of a year of work engaging with communities and interest groups around artificial intelligence and what the federal government should do to regulate it.

The report covers a wide range of topics related to AI policy, but the subject that receives the most attention is research. In fact, the first recommendation is that the country should set a target of spending at least \$32 billion in non-defense AI innovation, which is the level proposed by the [National Security Commission on Artificial Intelligence](#); it even suggests passing emergency appropriations in order to reach that target. The report then recommends fully funding the outstanding [Chips and Science Act](#) accounts. Regular readers of the Policy Blog will recall that most of the federal research agencies, particularly NSF, [received significant cuts to their budgets](#).

The report then delves into a host of specific research areas and proposed research legislation that should receive particular funding attention: semiconductor design and manufacturing; authorizing the [National AI Research Resource \(NAIRR\)](#) and funding it as part of the cross-government AI initiative; expanding programs such as the NAIRR and the National AI Research Institutes to establish national AI infrastructure; funding a series of “AI Grand Challenge” programs; and R&D activities at the intersection of AI and robotics, and AI and critical infrastructure. This is where the report recommends specific pieces of legislation that should be passed into law, such as the [CREATE AI Act](#), which would authorize and fund the NAIRR program.



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Government Affairs

Report on AI Policy (continued)

The report goes into several other areas that artificial intelligence is likely to impact the country, such as national security, workforce development, elections, privacy and liability, consumer protections, transparency, explainability, intellectual property, copyright, and safeguards against AI. Much of this are recommendations that Senate Committees should examine in their legislative activities on how to regulate AI.

While this sounds great, it's worth keeping expectations in check. First, this is not proposed legislation; it's a report of recommended actions that the Senate should take in their legislative work. It's worth noting that a lot of the **initial criticism of the report** is that it is not more specific with its recommendations, leaving details to the Senate Committees to figure out. That will be a long process and open to the political vagaries of the chamber. Additionally, while this report is bipartisan, it is led by the leader of the Senate Democrats, which means a change in the balance of power in the Senate could make the report and its recommendations obsolete. Given that the Senate Republicans will have a change in their leadership next year, with the retirement of Senator McConnell, and that a successor is not yet identified, this could be a major hurdle for this report to have a long-lasting impact. Finally, there is the logistical issue that the House of Representatives has **started its own effort around AI** and could come to different conclusions.

Ultimately, for the computing research community, this is a good development. It is sending the right signals and saying the right things about the importance of research in handling the challenges and complexities of the impact of artificial intelligence on the country. But the report's impact is debatable, at least in the immediate term. What is needed now is to follow up with legislative action. CRA will continue to monitor any developments in this space and will advocate for the important role that the research community plays in any regulations of artificial intelligence.

CRA-I GenAI for Research and Science Roundtable



CRA-I

Computing Research Association
Industry

By Helen Wright, Manager, CRA-I

In early May, the **Computing Research Association – Industry (CRA-I)** held a dynamic roundtable event on **“Generative AI (GenAI) for Research and Science,”** bringing together industry leaders, researchers, and experts to delve into the transformative potential of GenAI, a subset of AI that generates new content by learning data patterns, across various scientific disciplines.

CRA-I Council member Elizabeth Bruce from Microsoft moderated the roundtable, and she emphasized its significance in automating creative processes and its broad applicability across sectors.

The panelists were Travis Johnson (Director of Bioinformatics at the Indiana BioSciences Research Institute), Jing Liu (Executive Director of the Michigan Institute for Data Science), Vijay Murugesan (Staff Scientist at Pacific Northwest National Lab), and Neil Thompson (Director of the MIT FutureTech Lab).





CRA-I

Computing Research Association
Industry

GenAI for Research and Science Roundtable (*continued*)

Johnson shared insights into how GenAI is revolutionizing drug discovery by generating new molecules based on existing data, expediting the identification of novel drug targets. Liu highlighted the potential of GenAI in facilitating interdisciplinary research and enhancing the scale of scientific endeavors. She also emphasized its role in distinguishing between valuable research and spurious results. Murugesan discussed a collaborative project with Microsoft leveraging GenAI to accelerate materials discovery for battery technology. He outlined how AI-driven screening of millions of materials drastically reduced the time and resources required for research. Thompson provided an economic perspective on the productivity gains enabled by GenAI. He underscored its role in empowering scientists to leverage computation more effectively and its potential to revolutionize scientific understanding through data-driven exploration.

At the end of the roundtable, Bruce asked the panelists what advice they would give young researchers today. Thompson initiated the final segment with sage advice from economist Hal Varian, emphasizing the importance of identifying areas complementary to emerging technologies like GenAI. He encouraged young researchers to focus on domains that can leverage AI advancements effectively, such as material science and biology, and to continuously adapt and evolve their research focus in response to technological advancements. Echoing Thompson's sentiments, Murugesan underscored the significance of adaptability in the rapidly evolving research landscape. He highlighted the transformative impact of GenAI on traditional research paradigms and emphasized the need for researchers to stay agile and adaptable in their thinking and research focus to remain relevant and impactful. Liu shared a poignant reflection from her postdoctoral mentor, emphasizing the importance of mindful contribution to science amidst technological advancements. She encouraged young researchers to reflect on their research goals and aspirations, prioritizing rigor and meaningful contributions to scientific knowledge while leveraging evolving tools and methodologies.

Finally, Johnson concluded the discussion by emphasizing the importance of responsible AI utilization in research. While advocating for the use of GenAI as a powerful tool for hypothesis generation and data analysis, he cautioned against over-reliance on AI-generated insights. Johnson urged young researchers to maintain expertise in their respective fields while leveraging AI as a supplementary tool to enhance research outcomes.

Overall, the CRA-I roundtable served as a forum for thought-provoking dialogue and collaboration, shedding light on the transformative impact of Generative AI in driving scientific innovation. [See the full recording here.](#)

Heather Stephens (Oracle) Joins CRA-Industry Council



CRA-I

Computing Research Association
Industry

By Helen Wright, Manager, CRA-I

CRA-Industry (CRA-I) is thrilled to share that Heather Stephens (Oracle) is now a member of the CRA-I Council. Heather joins a dynamic group of Council members, led by CRA-I Council Chair Divesh Srivastava (AT&T), who are dedicated to collaborating with the CRA-I Steering Committee. Together, they will steer the direction of future committees, engage with the community, and drive towards the goals of CRA-I.

"Heather is excited about shaping computing curricula in universities to be responsive to evolving trends and the needs of industry, and we look forward to Heather enabling CRA-I to strengthen these bonds between industry and academia," said Srivastava.





Heather Stephens (Oracle) *(continued)*

Heather Stephens is a Senior Director at Oracle Corporation. She started her career in physics research at NASA and DOE working on large scale data models and analysis for satellites and environmental research prototypes and devices. She switched over to high tech to advance technology for real world use and be closer to the people that use it. She has spent the bulk of her career working in various startups as well as larger companies like Microsoft on products ranging from language development to IDEs to various Cloud platform/services to Connected Cars. She is actively engaged with the Leadership Institute at her alma mater, Montana State University, to foster innovation and technical leadership by creating an interdisciplinary science and technology extracurricular program. This experience led her to take a role at Oracle to build out a program that supports the education sector in advancing to modern Java. She is learning many things about the challenges educators face and how difficult it is to stay abreast of changes in modern technology. She wants to be a force for good to develop methods for tech and education to stay current, so students are excited about coding and so they have the necessary knowledge to build the next wave of technology that helps the world.

Please help the industry research community by continuing to nominate outstanding colleagues for the CRA-I Council. [Read more here](#) and send nominations to industryinfo@cra.org.

Welcome, Heather!

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Column Editors

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

College of William & Mary

Visiting Assistant Teaching Professor of Computer Science

The Department of Computer Science at William & Mary, a public university of the Commonwealth of Virginia, invites applications for a non-tenure-track Visiting Assistant Teaching Professor position that will begin August 10, 2024. This appointment is for 1 year.

The department is open to applications from candidates with expertise in any area of computer science. The successful applicant will be expected to be an effective teacher and will have a 3-3 teaching load to include courses at the introductory level or above in computer science. The teaching responsibilities provide flexibility for the successful candidate to teach courses aligned with their area of expertise.

Located in the center of historic Williamsburg and known as a public Ivy, William & Mary is consistently ranked in the elite group for best undergraduate teaching by U.S. News and World Report and is committed to a multi-year effort to strengthen and expand its computer science program. More information about the department can be found at <https://www.cs.wm.edu>.

Hamad Bin Khalifa University

Faculty Position in Information and Computing Technology (Open Rank)

The Division of Information and Computing Technology at HBKU's College of Science

& Engineering is seeking applications for a faculty position in the rank of Assistant Professor. Priority will be given to applicants with expertise in Artificial Intelligence, Cyber Security, and Integrated Circuit Design. The role encompasses teaching, research, and contributing to university and professional service. Faculty members at HBKU enjoy access to top-tier research facilities, ample research funding, and globally competitive salaries. [Apply now](#) for a chance to join our academic community, and help us shape the future of Information and Computing Technology.

Indiana University-Bloomington

Luddy School of Informatics, Computing, and Engineering

Postdoctoral Fellows for Microelectronics Radiation Effects Research

Postdoctoral Fellows

The Center for Reliable and Trusted Electronics

Department of Intelligent Systems Engineering

Luddy School of Informatics, Computing, and Engineering

The Center for Reliable and Trusted Electronics at the Luddy School of Informatics, Computing, and Engineering in Bloomington, Indiana is accepting applications for two full-time postdoctoral fellow positions to start July 1, 2024 (negotiable) for research on microelectronics radiation effects.

<https://news.iu.edu/live/news/31928-iu-to-invest-111m-to-boost-us-microelectronics>

The Postdocs will join a dynamic and interdisciplinary team that includes engineers, physicists, computer scientists, and policy experts. The postdocs will work with Prof. Daniel Loveless on various areas of research, including radiation and reliability effects in emerging semiconductor technologies, modeling and simulation, integrated circuit design, development of radiation mitigation solutions, and radiation testing.

Minimum Qualifications: A PhD in one of the following or another related area is required: engineering, computer science, or physics. The position requires semiconductor modeling, simulation, and integrated circuit design (VLSI) experience.

Preferred Qualifications: Knowledge of microelectronics radiation effects mechanisms is desired, but not required. Experience with instrumentation and programming with Python is a plus.

Appointment Type: Twelve-month full-time non-tenure track appointment with potential to be extended annually for a maximum term of 4 years, subject to satisfactory performance and funding; Positions are currently funded for two years. The positions are not eligible for sponsorship of a work visa.

Postdoc Salary: \$65,000

Postdoc Benefits: https://hr.iu.edu/benefits/grad_appointees.html

Application Instructions: Review of Applications will begin May 24, 2024; however, the search will remain open until suitable candidates are found. Interested candidates should review the application requirements, learn more about IU and The Luddy School, and apply online at:

<http://indiana.peopleadmin.com/postings/23598>

Questions may be sent to:
dlovele@iu.edu

Indiana University is an equal employment and affirmative action employer and a provider of ADA services. All qualified applicants will receive consideration for employment based on individual qualifications. Indiana University prohibits discrimination based on age, ethnicity, color, race, religion, sex, sexual orientation, gender identity or expression, genetic information, marital status, national origin, disability status or protected veteran status.

Iowa State University

Postdoc Positions in Advanced Wireless, Open RAN, and Rural Broadband

The Center for Wireless, Communities and Innovation (<https://wici.iastate.edu/>) at Iowa State University has postdoc positions for research, development, innovation, and entrepreneurship in advanced wireless (e.g., URLLC in 5G-and-beyond systems), Open RAN, rural broadband, and applications. The positions offer opportunities of contributing to exciting projects such as the \$16M ARA



JOHNS HOPKINS UNIVERSITY

Human Language Technology Center of Excellence

The HLTCOE is hiring excellent speech, NLP, deep learning, and Computer Vision researchers to join our team. We have immediate openings for non-tenure track Research Scientists at all levels of experience, as well as for post-doctoral fellows. Please view current opportunities at <https://hlcoe.jhu.edu/opportunities/>. We welcome all inquiries: hlcoe-hiring@jhu.edu.

The Human Language Technology Center of Excellence at Johns Hopkins University was founded in 2007 to create next-generation algorithms for speech and language processing. We identify and create innovative technologies that have significant impact on challenging real-world problems. Our research addresses key challenges in extracting information from massive sources of text and speech.

PAWR project (<https://arawireless.org>), \$20M ICICLE AI Institute project (<https://icicle.ai>), \$42M O-RAN project ACCoRD (<https://tinyurl.com/accordwireless>), OPERA open-source ecosystem project (<https://wici.iastate.edu/opera>), and other projects of the WiCI Center (<https://wici.iastate.edu/projects>). For details, please check out <https://wici.iastate.edu/career>.

Old Dominion University

Multiple Non-Tenure Track positions in Cybersecurity

The School of Cybersecurity at Old Dominion University invites applications for three Lecturer positions to begin in Fall 2024.

The School of Cybersecurity was established in 2020 and houses one of the largest cybersecurity programs in the nation. The school has been designated by NSA and DHS as a National Center of Academic Excellence in Cyber Operations and a National Center of Academic Excellence in Cyber Defense and has been rapidly growing with a total of

about 1450 students. ODU is Virginia's forward-focused public doctoral research university, with a top R1 research ranking, rigorous academics, an energetic residential community, and initiatives that contribute \$2.6 billion annually to Virginia's economy.

For more information and to apply, visit <https://jobs.odu.edu/postings/19814>.

Old Dominion University is an equal opportunity, affirmative action institution. Women, veterans, and individuals with disabilities, and other individuals from minoritized communities are encouraged to apply.

Tsinghua University

Institute for Interdisciplinary Information Sciences (IIIS) Tsinghua University Computer Science Faculty Openings

The Institute for Interdisciplinary Information Sciences (IIIS), headed by Turing Award winner Professor Andrew C. Yao, is a well-established academic unit at Tsinghua University, aimed at creating a world-class environment for research

and education in computer science and related disciplines. IIS currently has 32 full-time tenure-track faculty members, and is actively recruiting outstanding scholars to join IIS in its exciting growth toward excellence.

We invite applications from highly-qualified candidates in areas including (but not limited to) Algorithms, Artificial Intelligence, Machine Learning, Information Security, Financial Technology, and Quantum Information.

Positions at Assistant/Associate/ Full Professor levels are available. The remuneration package will be very attractive, driven by market competitiveness and individual qualifications. Initial appointments are normally made on a fixed-term contract. Subsequent contract renewal, promotion and tenure all follow standard international practices.

Further information about the Institute is available at <http://iis.tsinghua.edu.cn/en> or from the postal address: IIS Faculty Recruitment, FIT Building, Room I-208, Tsinghua University, Beijing 100084, PR. China. Please send applications or nominations in the form of an application letter enclosing a current CV to iisrecruit@mail.tsinghua.edu.cn, with the subject line "candidate_name: IIS Computer Science Faculty Application".

The University of Alabama in Huntsville

Assistant Professor of Computer Science

ABOUT THE POSITION: The Department of Computer Science at The University of Alabama in Huntsville (UAH) invites applicants for one tenure-track faculty position at the Assistant Professor beginning August 2024. Desired area of research is cybersecurity, especially digital forensics and malware analysis. Candidates must be able to teach in cybersecurity and cybersecurity-related areas. Prior teaching experience in computing is desirable. Candidates who have a secondary area of interest in data science or operating systems are desirable. Outstanding candidates in other areas will also be considered. Candidates will be expected to seek funding from agencies such as the U.S. Department of Defense or Department of Justice or the National Aeronautics and Space Administration (NASA), due to UAH's proximity to Redstone Arsenal. Ideally, a candidate should have a background with one or more of these U.S. government agencies.

A Ph.D. in computer science or a closely related area is required. The successful candidate will have a strong academic background and be able to secure and perform funded research in areas typical for publication in well-regarded academic conference and journal venues. In addition, the candidate should embrace the opportunity to provide undergraduate education.

The department has a strong commitment to excellence in teaching, research, and

service; the candidate should have good communication skills, strong teaching potential, and research accomplishments.

The Computer Science department offers BS, MS, and PhD degrees in Computer Science and contributes to interdisciplinary graduate degrees in cybersecurity and software engineering. Faculty research interests are varied and include cybersecurity, mobile computing, data science, software engineering, visualization, graphics and game computing, AI, image processing, pattern recognition, and distributed systems. The annual NSF Higher Education Research and Development (HERD) survey ranked UAH as #11 in federally-financed computer and information sciences research expenditures.

APPOINTMENT DATE: Fall, 2024

ABOUT THE COLLEGE: The UAH College of Science advances cutting-edge research and offers first-rate degree programs thanks to our distinguished faculty and state-of-the-art facilities. Our location in Huntsville facilitates partnerships and collaborations with NASA, the US Army, NOAA, the Hudson Alpha Institute of Biotechnology, and the numerous high-tech companies located in Cummings Research Park, the second largest research park in the country. College of Science students enjoy the benefits of a research-intensive institution in a medium-sized university.

ABOUT THE UNIVERSITY: The University of Alabama in Huntsville, classified as a Very High Research Activity institution, offers academic and research programs

in the Colleges of Arts, Humanities, and Social Sciences; Business; Education; Engineering; Nursing; Professional Studies; and Science. <https://www.uah.edu/about>

ABOUT HUNTSVILLE: Huntsville (known as “Rocket City”) maintains one of the highest per capita incomes and standards of living in the Southeast, and is a culturally diverse community. It is a national center of aerospace and high technology research and is home to NASA’s Marshall Space Flight Center. U.S. News recently ranked Huntsville as the best place to live in 2022-2023 among the 150 most populous metro areas in the country. Huntsville offers a variety of educational, recreational, and cultural opportunities.

APPLICATION PROCEDURE AND DEADLINE: Interested parties must submit a detailed resume with references to info@cs.uah.edu or Chair, Search Committee, Dept. of Computer Science The University of Alabama in Huntsville, Huntsville, AL 35899. Qualified female and minority candidates are encouraged to apply. Initial review of applicants will begin as they are received and continue until a suitable candidate is found.

The University of Alabama in Huntsville is an affirmative action/equal opportunity employer of minorities/ females/ veterans/ disabled.

Please refer to log number:
POSITION 1: 24-25-595

University of Iowa

Postdoctoral Research Scholar

I am seeking applications for a **post-doctoral scholar** at the University of Iowa. We study extensibility and modularity in high-level typed functional programming languages. The post-doctoral scholar will contribute to an NSF-funded project exploring a new semantic foundation for type classes and type families in Haskell. Their work will include formalizing the new approach in Agda, implementing it in GHC, and evaluating that implementation.

A PhD in computer science or a closely related field, with a background in programming languages, is required. The ideal candidate will have experience with Haskell programming, including the use of type classes and families, or experience with theorem proving in Agda.

This is a one-year position with a starting salary of \$58,179, and may be extended for up to two additional years. The position will start in Summer 2024, and will remain open until filled.

For more details, and to apply, please visit <https://cs.uiowa.edu/~jgmorris/postdoc.html>.

University of Michigan

Post-Doc in Natural Language Processing (NLP)

Research Fellow Job#240982

Position available immediately in the LAnuage Understanding and generation research (LAUNCH) group at the Artificial Intelligence Laboratory, CSE, University of Michigan, Ann Arbor. Under supervision of Dr. Lu Wang, PostDoc will have the opportunity to work on a wide variety of NLP topics including (but not limited to): narrative understanding, natural language generation, and AI alignment.

Responsibilities include performing research, publishing the results, providing technical guidance on projects for graduate and undergraduate students, and assisting in research proposal writing. Interested candidates should visit <https://web.eecs.umich.edu/~wangluxy/> for more information on the research group and current projects.

PhD in CS or related fields, with demonstrated interest in NLP is required. Submit a statement of interest, CV, two representative publications and two contacts (one is PhD advisor) who can provide references for the applicant. Must possess valid work authorization and pass a background screening if selected. Salary range - \$70,000-\$75,000.

The University of Michigan is an equal opportunity/affirmative action employer.