The Computing Research Association

UNITING INDUSTRY, ACADEMIA AND GOVERNMENT TO ADVANCE COMPUTING RESEARCH AND CHANGE THE WORLD

CRA

Computing Research Association

Our Mission

The mission of the Computing Research Association (CRA) is to strengthen research and advanced education in computing. CRA executes this mission by leading the computing research community, informing policymakers and the public, and facilitating the development of strong, diverse talent in the field.

About CRA

Founded in 1972, CRA's membership includes more than 200 North American organizations active in computing research: academic departments of computing, laboratories and centers (industry, government, and academia), and affiliated professional societies (AAAI, ACM, CACS/AIC, IEEE Computer Society, SIAM, USENIX).

An Invaluable Resource

CRA ensures that computing research has a vibrant future by investing in our community. With the help of industrial, academic and government leaders, we unite the computing community to advance the field. We enhance public and policymaker understanding of the importance of computing to make the case for federal investment in research. We have programs that mentor and cultivate individuals in each stage of their career, so that more computing researchers can reach their full potential. All of our programs are evaluated regularly in order to ensure their efficacy. Most of CRA's

initiatives are led and supported by our passionate volunteers, talented computing researchers who dedicate their valuable time to bring our programs to life. CRA is an invaluable resource to the computing community.

Leadership

CRA empowers the research community to broaden the scope of computing research and to amplify its impact on society.

CRA's Computing Community Consortium (CCC) catalyzes the computing research community and enables the pursuit of innovative, high-impact research. The CCC conducts activities that strengthen the research community, articulate compelling research visions, and align those visions with pressing national and global challenges. CCC communicates the importance of those visions to policymakers, government and industry stakeholders, the public, and the research community itself.

The CCC has generated a series of white papers for the White House Office of Science and Technology Policy and other Federal Agencies to help inform National Initiatives, such as Big Data and Sustainability. The CCC leads the community in visioning activities, like the workshop series focused on robotics in 2008. The workshops generated a roadmap of applications for robotics across users, producers, and researchers. In May

2009, the roadmap was published and presented to the Congressional Caucus on Robotics, and subsequently led to the creation of the National Robotics Initiative in 2011, which is jointly sponsored by NSF, USDA, NASA, and NIH.

CRA produces resources that standardize and establish best practices in the field.

For example, CRA issued a Best Practices Guide for Postdocs, providing guidance to graduate students, postdocs, advisors and mentors, and institutions on how to develop positive postdoctoral experiences within computer science and engineering.

CRA members benefit a great deal from interacting with academic and industrial colleagues. The biennial CRA Conference at Snowbird is our flagship conference where the leadership of the computing research community gathers to network and discuss common issues concerning the future of the field.

Policy

CRA is a trusted source of information—formally and informally—for Members of Congress and their staff, as well as the White House and the President's Council of Advisors for Science and Technology, and federal agencies.

CRA assists policymakers who seek to understand the issues confronting the federal Networking and Information Technology Research and Development program (NITRD)—the thirteen-agency, nearly $4-billion-a-year federal effort to support computing research.

CRA helps educate Members of Congress and the Administration about the benefits of the federal investment in computing research. CRA-sponsored briefings have "deconstructed" the iPad for Congress (to detail the legacy of Federal investment in the development of the key enabling technologies in the device), highlighted key research areas in the field, and brought Members of Congress and their staff into direct contact with the technologies that are impacting every aspect of our lives.

CRA also helps provide policymakers with expert testimony on issues that affect science policy generally and computing research policy in particular. CRA Board Members have testified before House and Senate committees about the importance of computing research, cyber security research, and the payoff of the Federal investment

in science. Members of the CRA community sit on agency and presidential advisory boards and serve at agencies across the Federal government, playing key roles in managing the Federal portfolio in computing research.

CRA and CCC help develop the computing community's next generation of leaders through efforts such as the Leadership in Science Policy Institute (LiSPI), a 1.5 day, DC-based workshop with the goal of increasing the community's understanding of the policymaking process. Participants get an intensive education from policymakers in the White House, the agencies, and Congress about how decisions affecting science policy actually get made, and what role those participants could play in that process.

Talent Development

CRA cultivates talented computing researchers at every stage of their careers. CRA's programs help undergraduate students, graduate students, postdocs, early career, and mid-career professionals develop valuable skills that prepare them to achieve success throughout their research careers.

CRA's Committee on the Status of Women in Computing Research (CRA-W) programs focus on reaching women at all career levels to diversify the talent pool in Computer Science and Engineering research and education at all levels. CRA-W and the Coalition to Diversify Computing partner to more effectively reach underrepresented minorities. In 2003, CRA-W was awarded the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring, and in 2005 the National Science Board's Public Service Award for their work in addressing the underrepresentation of women in computer science and engineering.

CRA-W coordinates a range of effective mentoring programs and workshops designed to increase the representation and opportunities for women and minorities in computing research. Some of their initiatives are below.

- **For all levels:** Discipline-specific Mentoring Workshops, Distinguished Lecture Series, Career Mentoring Workshops

- **For undergraduates:** Collaborative and Distributed Research Experiences
- **For graduate students:** Graduate Cohort Workshop
- **For early to mid career professionals:** Advanced Career Mentoring Workshop, Anita Borg Early Career Award

CRA's Education Committee (CRA-E) provides support and resources for ensuring a healthy pipeline of domestic students who continue to graduate school and research careers. CRA-E activities collect, analyze, and interpret data; and disseminate findings to the community. Projects include identifying and developing best practices and resources for undergraduates in research and graduate school, and making junior faculty aware of existing mentoring and best practices resources by running workshops at research conferences.

CRA analyzes the health of the computing research talent pool and evaluates the effectiveness of intervention programs intended to grow this pool by surveying, comparing, and analyzing computer science departments and individuals.

CRA's annual Taulbee Survey serves as the principal source of information on students and faculty in Ph.D.-granting computing departments in North America, including the enrollment, production, demographics, and employment of Ph.D.s in computer science, computer engineering, and information programs. It is the trusted source on data regarding masters and undergraduate enrollment and degree production, as well as salary and demographic data for faculty.

CRA's Center for Evaluating the Research Pipeline (CERP) collects semiannual survey data from a national sample of students enrolled in computing programs across the U.S. in order to gauge students' experiences in their degree program and in the computing community. Within each sample of data, CERP compares success outcomes between participants and non-participants in career development programs. Thus, thanks to the CRA, the computing community now has access to a national sample of data for comparative analysis of diversity and other initiatives in computing. CERP staff also utilize their national survey data to conduct basic social science research geared towards developing best practices for promoting persistence among all computing students at the postsecondary level.

CRA Wants You!

Participation in our programs is open to everyone with interest and dedication. We are broadly inclusive, because our goal is to reach computing researchers in every stage of their education and career. We are a volunteer based organization, and we need additional support from people like you to advance our mission.

CRA members and volunteers support:

- Visioning future directions of the field
- Ongoing initiatives that help shape public policy relevant to our community
- Building a strong, diverse pipeline of students in the field

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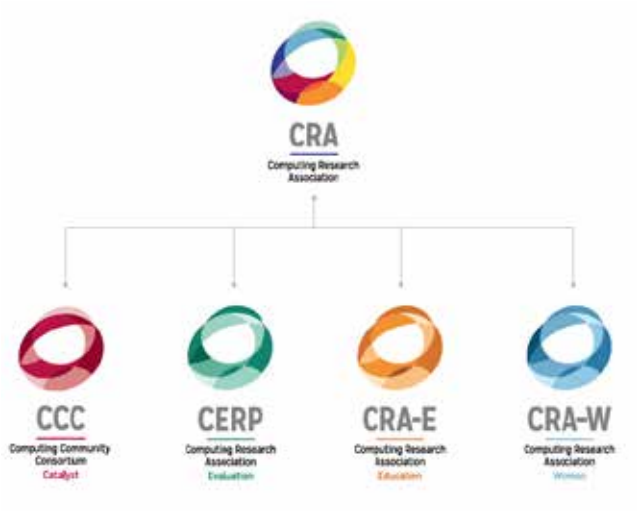

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