2008 Annual Report

Message from the Board Chair

During the period July 2007-June 2008, I am pleased to report that CRA made considerable progress in extending its reach and influence on behalf of computing research. Several important opportunities emerged that were both innovative and exciting. The number of people actively engaged in CRA’s activities continues to grow, and its financial position is stable and secure.

The Computing Community Consortium (CCC) greatly increased its activities in 2007-08. The consortium was funded by the National Science Foundation in October 2006 to stimulate new ideas in computing research as part of a broad-based effort to define the future of computing. Under the direction of its Council, the CCC provided support for “visioning workshops” for members of the computing research community. It also initiated a website, prepared a booklet describing a wide range of research visions for the field, and launched a blog where the entire research community can participate in real time. CCC sponsored two workshops in March 2008—one on “Big-Data Computing” and a second on “From Internet to Robotics: The Next Transformative Technology.”

In February 2008, CRA convened the annual Computing Leadership Summit of presidents, executive directors, and other senior leadership of CRA, its five affiliate societies (AAAI, ACM, CACS/AIC, IEEE-Computer Society, SIAM, and USENIX), and NRC’s Computer Science and Telecommunications Board (CSTB). Topics ranged from research funding, activities at CSTB, the image of computing, education initiatives, and CCC activities. Speakers included Charles Vest, President of the National Academy of Engineering, who provided an update on NAE’s activities.

CRA’s Distinguished Service Award 2008 was presented to W. Richards (Rick) Adrion, Professor of Computer Science at UMass Amherst, Co-Director of RIPPLES, Co-Director of the Commonwealth Information Technology Initiative (CITI), and Director of CRICCS. Richard E. Ladner, Boeing Professor in Computer Science and Engineering at the University of Washington, received CRA’s A. Nico Habermann Award 2008 for his lifelong, strong and persistent advocacy on behalf of people with disabilities in the computing community. Both awards were presented at CRA’s Conference at Snowbird in July.

CRA-Women (CRA-W) continued to expand its activities related to increasing the representation and opportunities for women in computing research, while continuing its popular workshops and mentoring activities. The Distributed Mentoring Project (US and Canada) and Collaborative Research Experiences for Undergraduates (CREU) are coordinated with the CDC (Coalition to Diversify Computing) as part of CRA-W’s Broadening Participation in Computing (BPC) grant from NSF.

The Coalition to Diversify Computing (CDC), a joint organization of the ACM, CRA and IEEE-CS, organized the very successful Richard Tapia Celebration of Diversity in Computing Conference held October 14-17, 2007. This year CDC and CRA-W created a joint application for the Distributed Mentoring...
Project (parallel projects of the CDC and CRA-W, jointly administered). About 150 student applications and about 70 mentor applications were received.

CRA conducted its 37th annual Taulbee Survey of Ph.D.-granting CS&CE departments. The annual Salary Survey of Computer Science Researchers in Industrial Laboratories was conducted in fall ’07 and results were provided to labs that participated.

The popular Computing Research Policy Blog (http://www.cra.org/govaffairs/blog) provided postings on current activities in the policy arena. Those who joined CRA’s Computing Research Advocacy Network received timely information about key advocacy opportunities—providing summary and background information, recommended actions, talking points, and contact information—to enable them to speak out on behalf of computing research. The CRA Bulletin, http://www.cra.org/bulletin, focused on education and research data gleaned from CRA surveys and outside sources.

Both Board members and staff regularly responded to requests from journalists, researchers, educators, and others for statistical information on CS and CE enrollments. CRA provided current items of interest to chairs of U.S. and Canadian Ph.D.-granting CS&CE departments and the larger computing research community through its newsletter, Computing Research News, and via regular e-mail communications to department chairs and lab directors. CRA-W produced a biannual newsletter that was circulated widely to its alumni.

In 2007-08, CRA’s Government Affairs Committee (GAC) and staff continued their efforts to improve policymaker understanding of the importance of computing research and positioning CRA as the “organization of record” for issues surrounding computing research. The committee and staff also added several new activities designed, in part, to help increase the engagement in IT R&D policy of some organizations and companies that have been somewhat on the periphery of the advocacy community. One new activity introduced was co-sponsoring a congressional briefing of the new Congressional Robotics Caucus on “Industrial Robotics,” held in conjunction with three days of robotics workshops put on by the Computing Community Consortium. The GA committee and staff also provided support for CRA members who found themselves in positions of influence with various presidential candidates.

The Board of Directors welcomed new members in 2007-08: Laura Haas (IBM Almaden Research Center); Norman Jouppi (Hewlett Packard), ACM representative; Martha Pollack (University of Michigan); and Fred Schneider (Cornell University).

Board members whose terms ended in 2007-08 include Anne Condon (University of British Columbia), and Michael Jones (Microsoft Research) who represented USENIX on the board. We thank them for their dedicated service to CRA and to the computing research community. As always, we are grateful to the many people who contribute to CRA by serving as chairs and members of its various committees.

The success of any organization is defined by the enthusiasm and active participation of its members and volunteers. By that standard, CRA is a vibrant and thriving organization, committed to advancing aspects of computing research. This report is a vignette of the diverse activities of CRA and its members. On behalf of the CRA Board, thank you for all you do to make CRA the success that it is today.

Daniel A. Reed
Board Chair
**Research Policy**

In FY 2007-08, CRA’s Government Affairs Committee (GAC) and staff continued their activities to improve policymaker understanding of the importance of computing research and positioning CRA as the “organization of record” for issues surrounding computing research. Much of that effort focused on participation in science advocacy community activities aimed at mitigating the FY08 Omnibus funding levels through the FY08 Emergency Supplemental appropriation. The GAC and staff also added several new activities designed, in part, to help increase the engagement in IT R&D policy of some organizations and companies that have been somewhat on the periphery of the advocacy community. GAC also took an active role in helping shape CRA’s new communication plan, and provided support for CRA members who found themselves in positions of influence with various presidential candidates.

In May, CRA’s Board Chair testified on high-performance computing in global climate modeling before the Senate Commerce Committee. Another board member met with his congressman during CRA’s congressional visits day, and several weeks later, the congressman’s staff asked CRA to meet again and talk about possible legislative approaches to an issue they had discussed. Other board members also made visits to the Hill, meeting with nineteen different Members of Congress or their staff; one met with House Science and Technology Committee staff.

CRA participated in the annual Coalition for National Science Funding Capitol Hill Science Exhibition, a “science fair” for Members of Congress and staff. CRA selected a researcher from North Carolina State University to demonstrate his research using the underlying technology of video games for more serious educational and research purposes. The exhibit received a great deal of attention from Congressional staff, Members of Congress, and other exhibitors.

In a new activity initiated this year, GAC co-sponsored a congressional luncheon briefing of the new Congressional Robotics Caucus on “Industrial Robotics,” held in conjunction with three days of robotics workshops put on by the Computing Community Consortium. The following day, ACM, CRA and the National Center for Women and Information Technology hosted a roundtable for members of the IT business advocacy community to bring together the government affairs representatives of many possible stakeholders in the IT sector. It was an effort to determine if CRA could find a common context for discussions of workforce, diversity and research needs.

**Information Activities**

CRA served as a source of information on a variety of IT topics. The number of inquiries from journalists, researchers, educators, and others goes up each year. The demand for statistical information on CS and CE enrollments continues to be high, and both Board members and staff regularly respond to such requests.

CRA conducted its 37th annual Taulbee Survey of Ph.D.-granting CS&CE departments. The annual Salary Survey of Computer Science Researchers in Industrial Laboratories was conducted in fall ’07 and results were provided to labs that participated.
The popular **Computing Research Policy Blog** provided postings on current activities in the policy arena. Those who join CRA’s **Computing Research Advocacy Network** (an electronic mailing list that delivers timely information about key advocacy opportunities, provides summary and background information, recommended actions, talking points, and contact information) are provided the opportunity to speak out on behalf of computing research. The **CRA Bulletin** focused on education and research data gleaned from CRA surveys and outside sources.

Current items of interest to chairs of U.S. and Canadian Ph.D.-granting CS&CE departments and the larger computing research community are provided by CRA’s newsletter, **Computing Research News**, and via regular e-mail communications to department chairs and lab directors. CRA-W produced a biannual newsletter that was circulated widely to CRA-W alumni.

**Human Resources**

Richard E. Ladner, Boeing Professor in Computer Science and Engineering at the University of Washington, received CRA’s 2008 **A. Nico Habermann award** for his lifelong, strong and persistent advocacy on behalf of people with disabilities in the computing community. During the year, CRA presented **Outstanding Undergraduate Research Awards** to winners Rachel Sealfon (Princeton); Kevin Dick (Cal Tech); and Chuan Sheng Foo (Stanford). **Runner-Up** for the female award was Raluca Ada Popa (MIT). In addition, twelve students were selected as Finalists and a number received Honorable Mentions. The student awards, given for outstanding research potential, were sponsored this year by Mitsubishi Electric Research Labs.

CRA-W is a thriving and energetic subcommittee focused on developing programs to increase the representation and opportunities for women in computing research. As a major goal of its Broadening Participation in Computing grant from NSF, CRA-W is increasing its coordinated efforts on several of projects with the Coalition to Diversify Computing (CDC).

CRA-W also is regarded highly for its successful **student mentoring** programs. The **Distributed Mentoring Project (US and Canada)** continues to be one of its most visible and well-known programs. This year CRA-W worked closely with CDC, using the same web-based infrastructure for student and mentor applications and advertising both programs together. Publicity, selection, and matching for the two programs were separate but coordinated, with a committee involving both CRA-W and CDC members. Moreover, working with CDC, CRA-W tried to improve its advertising to reach more students at minority institutions. For summer 2008, there were 42 mentees matched with 27 mentors, from a total of 186 student applications and 69 mentor applications.

The **Collaborative Research Experiences for Undergraduates (CREU)** continues to be popular and well known. Since fall 2005, the program has been led in cooperation with CDC, with teams composed of students from underrepresented groups in computing and the selection committee composed of CRA-W and CDC members. Of the 17 proposals submitted in 2007-2008, 12 were funded. Of the 31 students participating, 5 are underrepresented minorities. CREU has also been expanded to include interdisciplinary teams, where only some of the faculty and students are from the computing field. The multidisciplinary teams were funded by a one-year NSF CITeam grant.

In 2007-08, **CRA-W** conducted its popular **workshops** targeted to the needs of various groups of women in computing. For example, CRA-W and CDC collaborated to provide **Discipline-Specific Mentoring Workshops** in subfields of computing; the **Grad Cohort Project**, for women graduate students in their first, second, or third year of graduate school, offered a two-
day workshop on graduate school survival, career planning, and networking; Career Mentoring Workshops brought junior researchers and educators together with women already established in their fields who provided practical information, advice, and support to their younger colleagues; the Cohort of Associate Professors Project aims to increase the percentage of computer science and engineering women faculty with the rank of full professor by forming and mentoring a cohort of women from the associate professor ranks; and the Distinguished Lecture Series, which sends faculty and industry researchers to campuses to encourage women and minorities to attend graduate school.

Other CRA-W projects included: Research lab outreach to women in industry and government labs; Pipeline articles published regularly in Computing Research News; revised mailing lists to ensure that the stages of the pipeline were being covered adequately; and an evaluation team that is developing a more formalized process to better manage CRA-W’s various evaluation efforts.

The Coalition to Diversify Computing (CDC) is a joint organization of the ACM, CRA and IEEE-CS. Each of the parent organizations provided funds for the 2007-08 operating budget, as well as administrative support for items like meeting planning, conference calls, and hosting the website and listservs. CDC organized the Richard Tapia Celebration of Diversity in Computing Conference October 14-17, 2007. This year CDC and CRA-W created a joint application for the Distributed Mentor Project (parallel projects of the CDC and CRA-W, jointly administered). About 150 student applications and about 70 mentor applications were received.

The CDC/CRA-W BPC Alliance has monthly teleconferences to discuss ways to achieve the streamlining and integration of joint projects. The CDC also is cooperating as a partner with the National Science Foundation’s new three-year Broadening Participation in Computing program, the Empowering Leadership: Computing Scholars of Tomorrow Alliance. The Alliance is building a community comprised of human, institutional, and programmatic resources to help ensure the success of minority scholars in computing disciplines at majority research institutions.

CRA held its biennial Career Mentoring Workshop on February 25-26, 2008 in Washington, DC. It was attended by 53 faculty or postdocs and 45 graduate students. These workshops are intended to help beginning researchers in computer science and computer engineering make a strong start in their careers. Participants are recent PhD recipients or graduate students nearing completion of their PhD. Presentations discussed career planning, the tenure process, professional networking, and research funding.

Community-Building
This mission area received a big boost in 2007-08 when NSF funded CRA’s proposal for a Computing Community Consortium (CCC) to stimulate the computing research community to imagine, articulate, and pursue more audacious research visions—visions that would capture the imagination and change the world. Under the direction of a newly appointed CCC Council, whose role is to facilitate the process, the CCC quickly organized five inspiring plenary talks to be presented at the Federated Computing Research Conference. It also provided support for “visioning workshops” by members of the computing research community, and initiated a website, compiled a booklet describing a wide range of research visions for the field, and created a blog where the entire research community can participate in real time. CCC sponsored two workshops in March 2008, one a “Big-Data Computing Study Group” and a second on “From Internet to Robotics: The Next Transformative Technology.” NSF funding for CCC was provided for three years.

CRA’s Distinguished Service Award 2008 was presented to W. Richards (Rick) Adrion, Professor of Computer Science at UMass Amherst, Co-Director of RIPPLES, Co-Director of the Commonwealth Information Technology Initiative (CITI), and Director of CRICCS. He received the award at CRA’s Conference at Snowbird in July.
2007-08 Computing Research Association Members

Academic Members

The following departments held membership in CRA for all, or in a few cases part, of the period July 2007 to June 2008.

*indicates new members in 2007-08

Allegheny College – CS *
Arizona State University - CSE
Auburn University - CSSE
Binghamton University, SUNY - CS
Boston College - CS
Boston University - CS
Bowling Green State University - CS
Bradley University - CS
Brandeis University - CS
Brigham Young University - CS
Brown University - CS
Bryn Mawr College - MCS
Bucknell University - CS
California Institute of Technology - CS
Carnegie Mellon University - CS
Case Western Reserve University - EECS
City University of New York, Grad Center - CS
Clemson University - CS
Colgate University - CS
College of Charleston - CS *
College of William & Mary - CS
Colorado School of Mines - MCS
Colorado State University - CS
Columbia University - CS
Cornell University - CS
Cornell University - ECE
Dalhousie University - CS
Dartmouth College - CS
DePaul University - CS
Drexel University - CS
Drexel University - IST
Duke University - CS
Emory University - MCS
Florida Institute of Technology - CS
Florida International University - CS
Florida State University - CS
George Mason University - CS
George Washington University - CS
Georgetown University - CS *
Georgia Institute of Technology - CS
Georgia Institute of Technology - CSE
Georgia Institute of Technology - IC
Georgia Southern University - IT
Georgia State University - CS
Grinnell College - MCS
Harvard University - CS
Harvey Mudd College - CS
Hobart and William Smith Colleges - MCS
Hofstra University - CS
Illinois Institute of Technology - CS
Illinois State University - ACS
Indiana University - CS *
Indiana University - I
Iowa State University - CS
Iowa State University - ECE *
Johns Hopkins University - CS
Johns Hopkins University - SI
Juniata College - IT & CS
Kansas State University - CIS
Kent State University - CS
Korea Advanced Institute of Science & Technology - CS *
Lafayette College - CS
Lehigh University - CSE
Long Island University - ICS
Louisiana State University - CS
Loyola University, Chicago - CS *
Marquette University - CS *
Marymount University - IT *
Massachusetts Institute of Technology - EECS
McGill University - CS *
Memorial University of Newfoundland - CS
Miami University - CS
Michigan State University - CSE
Michigan Technological University - CS
Mississippi State University - CSE
Missouri University of Science & Tech - CS
Montana State University - CS
Montclair State University - CS
Mount Holyoke College - CS
National University of Singapore - CS/IS
Naval Postgraduate School - CS
New Mexico State University - CS
New York University - CS
North Carolina State University - CS
North Dakota State University - CSOR
Northeastern University - CIS
Northwestern University - EECS
Nova Southeastern University - CS
Oakland University - CSE
Ohio State University - CSE
Ohio University - EECS
Oklahoma State University - CS
Old Dominion University - CS
Oregon State University - EECS
Pace University - CSIS
Pennsylvania State University - CSE
Pennsylvania State University - IST
Polytechnic University - CIS
Pomona College - MCS
Portland State University - CS
Princeton University - CS
Purdue University - CS
Purdue University - ECE
Rensselaer Polytechnic Institute - CS
Rice University - CS
Rochester Institute of Technology - CS
Rutgers University, Busch Campus - CS
Rutgers University, Camden - CS *
Saint Louis University - MCS
Santa Clara University - CE
Simon Fraser University - CS
Singapore Management University - IS
Southern Illinois University, Carbondale - CS
Southern Methodist University - CSE
Southern Polytechnic State University - CSE
Stanford University - CS
Stevens Institute of Technology - CS
Stony Brook University, SUNY - CS
Swarthmore College - CS
Syracuse University - IS
Tecnológico de Monterrey, ITESM, Monterrey
Texas A&M University - CS
Texas State University - CS
Toyota Technological Institute at Chicago - CS
Tufts University - CS
Union College - CS
University at Albany, SUNY – CI *
University at Buffalo, SUNY - CSE
University of Alabama, Birmingham - CIS
University of Alabama, Tuscaloosa - CS
University of Alberta - CS
University of Arizona - CS
University of Arkansas - CS&CE *
University of Arkansas at Little Rock - IS&SE
University of British Columbia - CS
University of California, Berkeley - EECS
University of California, Berkeley - IMS
University of California, Davis - CS
University of California, Irvine - ICS
University of California, Los Angeles - CS
University of California, Riverside - CSE
University of California, San Diego - CSE
University of California, Santa Barbara - CS
University of California, Santa Cruz - CE
University of California, Santa Cruz - CS
University of Central Arkansas - CS
University of Central Florida - EECS
University of Chicago - CS
University of Cincinnati - CS
University of Colorado, Boulder - CS
University of Delaware - CIS
University of Denver - ECS
University of Georgia - CS
University of Hawaii - ICS
University of Houston - CS
University of Idaho – CS *
University of Illinois, Chicago - CS
University of Illinois, Urbana Champaign - CS
University of Illinois, Urbana Champaign - ECE
University of Iowa - CS
University of Kansas - EECS
University of Kentucky - CS
University of Louisiana at Lafayette - CACS
University of Louisville - CECS
University of Maine - CS
University of Maryland - CS
University of Maryland, Baltimore Co - CSEE
University of Maryland, Baltimore County - IS
University of Massachusetts, Amherst - CS
University of Massachusetts, Boston - CS
University of Massachusetts, Lowell – CS *
University of Michigan - EECS
University of Michigan - I
University of Michigan, Dearborn - CIS
University of Minnesota - CSE
University of Mississippni - CIS
University of Missouri, Columbia - CS
University of Missouri, Kansas City - CS
University of Montana - CS
University of Nebraska at Omaha - CS/IST
University of Nebraska, Lincoln - CSE
University of Nevada, Las Vegas - CS
University of Nevada, Reno - CSE
University of New Brunswick - CS
University of New Hampshire - CS
University of New Mexico - CS
University of New Mexico - ECE
University of North Carolina at Chapel Hill - CS
University of North Carolina at Chapel Hill - SILS
University of North Carolina, Charlotte - IT
University of North Dakota - CS
University of North Texas - CS
University of Notre Dame - CSE
University of Oklahoma - CS
University of Oregon - CIS
University of Pennsylvania - CIS
University of Pittsburgh - CS
University of Pittsburgh - IS
University of Puget Sound - MCS
University of Rochester - CS
University of South Alabama - CIS
University of South Carolina - CSE
University of South Florida - CSE
University of Southern California - CS
University of Southern California - EES
| University of Texas, Arlington - CSE | University of Wyoming - CS |
| University of Texas, Austin - CS | Utah State University - CS |
| University of Texas, Dallas - CS | Vanderbilt University - EECS |
| University of Texas, El Paso - CS | Villanova University - CS |
| University of Toronto - CS | Virginia Tech - CS |
| University of Tulsa - CS | Wake Forest University - CS |
| University of Utah - CS | Washington State University - EECS |
| University of Virginia - CS | Washington University in St. Louis - CSE |
| University of Washington - CSE | Wayne State University - CS |
| University of Washington - I | Wellesley College – CS * |
| University of Washington, Bothell - CS | Williams College - CS |
| University of Washington, Tacoma - CSS | Worcester Polytechnic Institute - CS |
| University of Waterloo - CS | Wright State University - CSE |
| University of Wisconsin, Madison - CS | Yale University - CS |
| University of Wisconsin, Milwaukee - EECS | York University – CSE |
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IBM Research (Supporting Member)
Sun Microsystems (Supporting Member)

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Avaya, Inc.
CA Labs
Computer Science Research Institute (Sandia NL)
Fujitsu Laboratories of America, Inc.
FX Palo Alto Laboratory (FXPAL) *
Google
Hewlett-Packard Company
IDA Center for Computing Sciences
Lawrence Berkeley National Laboratory
Los Alamos National Laboratory
Mitsubishi Electric Research Labs
National Center for Atmospheric Research
National Center for Supercomputing Applications
NEC Laboratories America, Inc.
Ricoh Innovations, Inc.
San Diego Supercomputer Center
SCI Institute *
SRI International
Telcordia Technologies

* Indicates new members in 2007-08

Affiliated Professional Society Members

Association for the Advancement of Artificial Intelligence
Association for Computing Machinery
Canadian Association of Computer Science (CACS/AIC)
IEEE Computer Society
Society for Industrial and Applied Mathematics
USENIX Association
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(ACM representative)

Robert Schnabel
Indiana University
(SIAM representative)

Fred B. Schneider
Cornell University

Marc Snir
University of Illinois, Urbana-Champaign
CRA Financial Statement
July 2007 - June 2008

**Income | $3,764,329**

- **Gen & Admin/Membership | $1,167,391 | 31%**
- **Info/Communications | $179,583 | 5%**
- **Human Resources | $1,407,508 | 37%**
- **Policy | $0 | 0%**
- **Community | $1,009,847 | 27%**

**Expenses | $4,117,010**

- **Gen & Admin/Membership | $974,490 | 24%**
- **Info/Communications | $157,451 | 4%**
- **Policy | $250,343 | 6%**
- **Community | $1,234,225 | 30%**
- **Human Resources | $1,500,501 | 36%**

**Financial Position | $1,624,604**

- **Cash & Accts Receivable | $1,380,285**
- **Investments | $1,146,841**
- **Total Assets | $2,527,126***
- **Total Liabilities | $902,522**
- **Total Net Assets | $1,624,604**

*Includes Total Unrestricted Net Assets of $1,451,850 and Total Temporarily Restricted Net Assets of $172,754