2005 ANNUAL REPORT

Message from the Board Chair

I am pleased to report that 2004-05 was another successful year for CRA. During the period July 1, 2004 to June 30, 2005, membership increased from 243 to 251 (224 academic departments and 27 labs and centers); our ability to have an impact on computing research funding by providing meaningful information to decision makers was greatly enhanced; and our financial outlook continued to be stable and secure.

Here are a few of the highlights.

Community: For the eleventh year, CRA hosted the Computing Leadership Summit in February 2005, bringing together the presidents, executive directors, and other senior leadership of CRA and its five affiliate societies—AAAI, ACM, CACS/AIC, IEEE-Computer Society, SIAM, and USENIX—and NRC's Computer Science and Telecommunications Board. This year I expanded the participation to include additional organizations that share our interest in computing research. As a result, two new task forces were created—one to address research funding issues (chaired by Ed Lazowska, University of Washington) and one to consider ways to improve the image of computing as a career path for young people (led by Rick Rashid, Microsoft Research).

***Human Resources*:** CRA's Committee on the Status of Women in Computing Research (CRA-W) was honored by the National Science Board with its Public Service Award (Group) at the State Department in May. The citation read: "For [CRA-W's] action-oriented programs aimed at increasing the number and success of women participating in computer science and engineering research and education." CRA awarded the 2005 Habermann Award to Jane Margolis, Research Educationist, IDEA, UCLA Graduate School of Education Information Studies, for her work on issues of gender and minority status within computer science education. In April CRA-W held another of its successful academic careers workshops for soon-to-graduate Ph.D. students and new faculty in Washington, DC.

***Information*:** CRA's electronic news bulletin (http://www.cra.org/wp/) was revamped and now prompts individuals by blog and e-mail of news from, and information of interest to, the computing research community. The Computing Research Policy Blog

(http://www.cra.org/govaffairs/blog/index.php) continues to provide up-to-date news on congressional appropriations for computing research, hearings, and other policy events scheduled in Washington, DC, as well as notes on CRA board members' congressional testimony. CRA's annual Taulbee Survey continues to be the principal source of information on the enrollment, production, and employment of Ph.D.s in CS & CE, and for salary and demographic data for faculty in CS & CE.

Policy: The Government Affairs Committee had its busiest and most productive year in recent memory. A series of developments helped advance CRA's issues in Congress and gain attention for its concerns in the national media and at some of the highest levels of the Administration. Working with coalition partners in the science community helped build a case for increasing support for the physical sciences, mathematics and computing research that has found considerable traction in Congress and the press. Planning got under away for CRA's third in a series of Grand Research Challenges conferences, this one on the topic of computer architecture. The conference was scheduled for December 4-7, 2005, in Aptos, CA. Results are expected to be available in mid-2006.

CRA Board of Directors: Several long-time members retired or resigned from the CRA board this year, including: Jan Cuny (University of Oregon); Guylaine M. Pollock (Sandia National Lab, IEEE CS representative); Larry Snyder (University of Washington); Mary Lou Soffa (University of Virginia); Jack Stankovic (University of Virginia); Elaine Weyuker (AT&T Research); and Stu Zweben (The Ohio State University, ACM representative). We thank them for their dedicated service to CRA and to the computing research community.

We welcomed new members to the board in 2005: Anne Condon (University of British Columbia); George Cybenko (Dartmouth College, IEEE CS representative); Rich DeMillo (Georgia Institute of Technology); Peter Lee (Carnegie Mellon University); J Strother Moore (University of Texas at Austin); David Notkin (University of Washington); and Jennifer Rexford (Princeton University, ACM representative).

On June 30, 2005, I completed my second term as Chair of the CRA Board, and in June 2006 I will retire from the board after serving my maximum of three terms. During those years, CRA has continued to mature, to expand its impact, and to represent the overall computing community more broadly. As we continue to grow and do more, we will need to call even more on members of the community to serve on committees and to stand for election to the board. I have done my share: now it's your turn. Please say "Yes" when asked; better yet, volunteer to help with one of our programs!

James D. Foley
Board Chair

HIGHLIGHTS

Research Policy

CRA's Government Affairs Committee (GAC) had an extraordinary 2004-05. Its long-voiced concerns about the state of federal support for computing research were elevated to national attention and served as an "animating case" for the drive to revitalize America's innovation enterprise. Along the way, committee members were instrumental in making the case to Congress and have seen Congress respond by holding hearings, questioning Administration officials, and addressing many of the concerns in legislation.

Perhaps more importantly, the constant drumbeat driven in part by GAC advocacy and picked up by the national press and Congress helped keep pressure on the Administration to respond—pressure that resulted in the best opportunity in half a decade to reinvigorate the federal research investment: a presidential proposal that would double research funding at federal science agencies supporting the physical sciences, computing, mathematics, and engineering over the next decade.

CRA also established a new entity to assist the computing community in advocating for more federal research support. The Computing Research Funding Task Force is staffed by CRA, but consists of representatives of each of CRA's affiliated societies, plus representatives from industry and other entities with a stake in the computing research community. Task Force members have produced joint testimony representing the view of the "computing research community" in Congressional hearings.

The committee has continued to ramp up its efforts to provide policy resources for the computing community. CRA's Computing Research Policy Blog received more than 40,000 visits last year. The committee's analysis of computing research in the President's FY 2006 budget continues to be a useful reference for policymakers and the science policy community. And the committee continues to reach out to CRA members to find ways to bring them into the federal policymaking process— whether as members of federal advisory boards or by taking positions within federal agencies.

Information Activities

As a further step in its initiative to increase CRA's visibility among constituent groups, the Communications Committee created a project to provide information about CRA's activities to member departments for distribution to new faculty members, beginning in fall 2004. Additional progress was made last year on improving the CRA's website to facilitate access for faculty, students, and others.

CRA conducted the 33rd annual *Taulbee Survey* of Ph.D.-granting CS&CE departments. Board members and staff responded to a sharp increase in requests to provide statistical information about student enrollments in CS and CE due to concerns about offshoring. The annual *Salary Survey of Computer Science Researchers in Industrial Laboratories* was once again conducted last fall.

CRA continued to provide 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 its regular e-mail communications to the *Forsythe List of Ph.D.-Granting Institutions*.

Human Resources

In 2004-05, CRA presented **Outstanding Undergraduate Awards** to winners Andrea Grimes, Northeastern University, and Mihai Patrascu, Massachusetts Institute of Technology. Runners-Up were Ethan Eade, Duke University, and Heather Wake, University of South Carolina. In addition, ten students were selected as Finalists and a number received Honorary Mention. The awards are given for outstanding research potential. Microsoft Research sponsored the awards last year.

CRA-Women (CRA-W) increased its visibility within the National Science Foundation and among leaders in the scientific community when it received the National Science Board Public Service Award (Group) at a dinner at the State Department in Washington, D.C. on May 25, 2005. The citation reads: "For its action-oriented programs aimed at increasing the number and success of women participating in computer science and engineering research and education."

CRA-W's Distributed Mentoring Programs continued to attract strong applications from both undergraduate students and faculty mentors. In summer 2005, 39 students participated from 34 institutions, and there were 25 mentors. The Canadian DMP made ten awards in 2005 with support from NSERC and General Motors of Canada.

CRA-W continued to publish its "Expanding the Pipeline" column in CRA's newsletter *Computing Research News,* highlighting issues and activities aimed at increasing the number of women, minorities, and people with disabilities in CSE. Successful career mentoring workshops were conducted by CRA-W in February and April 2005, the latter targeting faculty who teach undergraduates. The second meeting of the Cohort of Associate Professors Project (CAPP), which has the goal of increasing the percentage of women faculty to achieve the rank of full professor, was held June 10-11 in Washington, D.C.

CRA-W's second Grad Cohort Workshop, which aims to establish a nationwide community of women graduate students and to mentor them throughout their graduate studies as they make the transition from student to researcher, was held in February 2005. The original cohort (now second-year students) joined a new cohort of first-year students, resulting in 226 participants from 88 institutions (54 of whom attended the first workshop). Major funding for the workshop was provided by Microsoft Research and Google.

Proposals to NSF for additional funding were aggressively pursued by CRA-W in 2004-05. In particular, CRA-W and CDC formed an alliance for the Broadening Participation in Computing (BPC) program that proposed closer cooperation in many of their efforts.

This year, events in the CRA-W's Distinguished Lecture Series were held at Georgia Southern, University of Wisconsin, Columbia, University of Oregon, Northeastern, University of Maryland Baltimore County, and Mississippi University for Women.

In honor of Anita Borg, CRA-W established the annual Anita Borg Early Career Award recognizing a woman who is relatively early in her career (no more than 10 years past the Ph.D.) and who has achieved excellence in research and outreach to women. The 2005 award was presented by CRA-W Co-Chair Carla Ellis to Yuanyuan Zhou from the University of Illinois at the Hot Topics in Operating Systems Workshop, June 14, 2005.

The **Coalition to Diversify Computing (CDC)** had a busy year, a highlight being the planning of the Richard Tapia Celebration of Diversity in Computing Conference (October 19-22, 2005 in Albuquerque, NM), co-sponsored by the ACM and the IEEE-CS in cooperation with CRA. The 2005 conference theme was "A Diversity of Scholars— A Tapestry of Discovery," and the conference program addressed the critical issues relating to this theme through plenary sessions and panels. Sponsors included Sandia National Laboratories, UIUC, NCSA, EPIC, Google, Oak Ridge National Laboratory, Ohio Supercomputing, and Texas A&M University.

Three students received awards last year to attend meetings in Sweden and Spain as part of CDC's "Sending Students/Mentors to Technical Conferences," which encourages undergraduate and graduate students to gain expertise in areas of computing, while providing them with opportunities to network with researchers in these fields. It provides financial support for students from underrepresented ethnic groups in science, technology, engineering, and mathematics, with a particular focus on the area of computing, to participate in and attend leading technical conferences. Student and faculty mentor pairs that would otherwise not be able to attend such conferences are the primary targets of this project.

CDC joined with CRA-W in 2005 in a joint program (Collaborative Research Experiences for Undergraduates—CREU). It makes research experiences available to teams of undergraduate students during the academic year at their home institutions. The early focus has been on increasing publicity about this project within the MSIs.

A revitalization of the CDC database of minority researchers and graduate students was begun in 2005 with the hiring of a student. The goal is to continue populating the database with Tapia scholarship recipients. Further, all Tapia registrants will be invited to enter information into the CDC database.

Community-Building

For the eleventh year, CRA hosted the **Computing Leadership Summit** in February, bringing together the presidents, executive directors, and other senior leadership of CRA and its five affiliate societies—AAAI, ACM, CACS/AIC, IEEE-Computer Society, SIAM, and USENIX—and NRC's Computer Science and Telecommunications Board. This year the event was expanded to include a number or other organizations that share an interest in computing research. As a result, two new task forces were set up—one to address research funding issues and one to consider ways to improve the image of computing as a career path for young people.

CRA's **Distinguished Service Award** was given to Ed Lazowska, University of Washington (and former two-term chair of the CRA board), for his outstanding contributions to the computing research community.

CRA Financial Statement
July 2004-June 2005

See attached chart.

2004-05 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 2004 to June 2005.

Arizona State University - CSE
Auburn University - CSSE
Ball State University - CS
Boston College - CS*
Boston University - CS
Bowdoin College - 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
California Polytechnic State University - CS
California State University, Chico - CS
Carnegie Mellon University - CS
Case Western Reserve University - EECS
City University of New York Grad. Ctr. - CS
Clemson University - CS
Colgate University - 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 Atlantic University - CSE
Florida Institute of Technology - CS
Florida International University - CS
Florida State University - CS
Florida State University - IS
George Washington University - CS
Georgia Institute of Technology - CS
Georgia Southern University - IT
Georgia State University - CIS
Georgia State University - CS
Grinnell College - MCS
Harvard University - CS
Harvey Mudd College - 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
Lafayette College - CS*
Lehigh University - CSE
Louisiana State University - CS
Loyola University, Chicago - CS
Massachusetts Inst. of Technology - EECS
Miami University - CS
Michigan State University - CSE
Michigan Technological University - CS
Mississippi State University - CS
Montana State University - CS
Montclair State University - CS*
National University of Singapore - CS/IS
Naval Postgraduate School - CS
New Jersey Institute of Technology - CCS
New Mexico State University - CS
New York University - CS
North Carolina State University - CS
Northeastern University - CIS
Northwestern University - ECE
Oakland University - CSE
Ohio State University - CSE
Ohio University - EECS
Oklahoma State University - CS
Old Dominion University - CS
Oregon Health & Science University - CSE
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
Roosevelt University - CS&T
Rutgers University, Busch Campus - 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
State Univ. of New York, Albany - CS
State Univ. of New York, Binghamton - CS
State Univ. of New York, Stony Brook - CS
Stevens Institute of Technology - CS
Swarthmore College - CS
Syracuse University - IS
Texas A&M University - CS
Toyota Technological Inst. at Chicago - CS*
Tufts University - CS
Tulane University - EECS
University at Buffalo - CSE
University at Buffalo - IS
University of Alabama, Birmingham - CIS
University of Alabama, Tuscaloosa - CS
University of Alberta - CS
University of Arizona - CS
University of Arkansas - CSCE*
University of Arkansas at Little Rock - I
University of Calgary - 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 Florida - CS
University of Chicago - CS
University of Cincinnati - ECECS
University of Colorado, Boulder - CS
University of Delaware - CIS
University of Denver - CS
University of Florida - CISE
University of Georgia - CS
University of Hawaii - ICS
University of Houston - CS
University of Idaho - CS
University of Illinois, Chicago - CS
Univ. of Illinois, Urbana Champaign - CS
Univ. 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
Univ. of Maryland, Baltimore Co - CSEE
University of Massachusetts, Amherst - CS
University of Massachusetts, Boston - CS*
University of Michigan - EECS
University of Michigan - I
University of Michigan, Dearborn - CIS
University of Minnesota - CSE
University of Mississippi - CIS
University of Missouri, Columbia - CS*
University of Missouri, Rolla - 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 Chapel Hill - CS
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 Tennessee, Knoxville - CS
University of Texas, Arlington - CSE
University of Texas, Austin - CS
University of Texas, Dallas - CS
University of Texas, El Paso - CS
University of Toronto - CS
University of Tulsa - MCS
University of Utah - CS
University of Virginia - CS
University of Washington - CSE
University of Washington - I
University of Washington, Bothell - CS
University of Washington, Tacoma - CSS
University of Waterloo - CS

University of Wisconsin, Madison - CS
University of Wisconsin, Milwaukee - EECS
University of Wyoming - CS
Utah State University - CS
Vanderbilt University - EECS
Virginia Commonwealth University - CS
Virginia Tech - CS
Wake Forest University - CS
Washington State University - EECS
Washington University in St. Louis - CS
Wayne State University - CS
West Virginia University - CSEE
Western Michigan University - CS
Williams College - CS
Worcester Polytechnic Institute - CS
Wright State University - CSE
Yale University - CS
York University – CS

Labs and Centers Members

Accenture Technology Labs
Argonne National Laboratory*
Avaya
Computer Science Research Institute at Sandia National Laboratories
Fujitsu Laboratories of America
Google*
Hewlett-Packard
IBM Research
IDA Center for Computing Sciences
Intel
Lawrence Berkeley National Laboratory
Los Alamos National Laboratory
Lucent Technologies, Bell Labs
McAfee Research, Network Associates*
Microsoft
Mitsubishi Electric Research Labs
National Center for Atmospheric Research
NCSA
NEC Laboratories America
NTT DoCoMo USA Labs*
Pacific Northwest National Laboratory*
Panasonic Digital Networking Laboratories
Ricoh Innovations
San Diego Supercomputer Center
SRI International*
Sun Microsystems
Telcordia Technologies

Affiliate Professional Society Members

American Association for Artificial Intelligence
Association for Computing Machinery
Canadian Association of Computer Science (CACS/AIC)
IEEE Computer Society
Society for Industrial and Applied Mathematics
USENIX Association Labs and Centers Members

Indicates new members in 2004-05.

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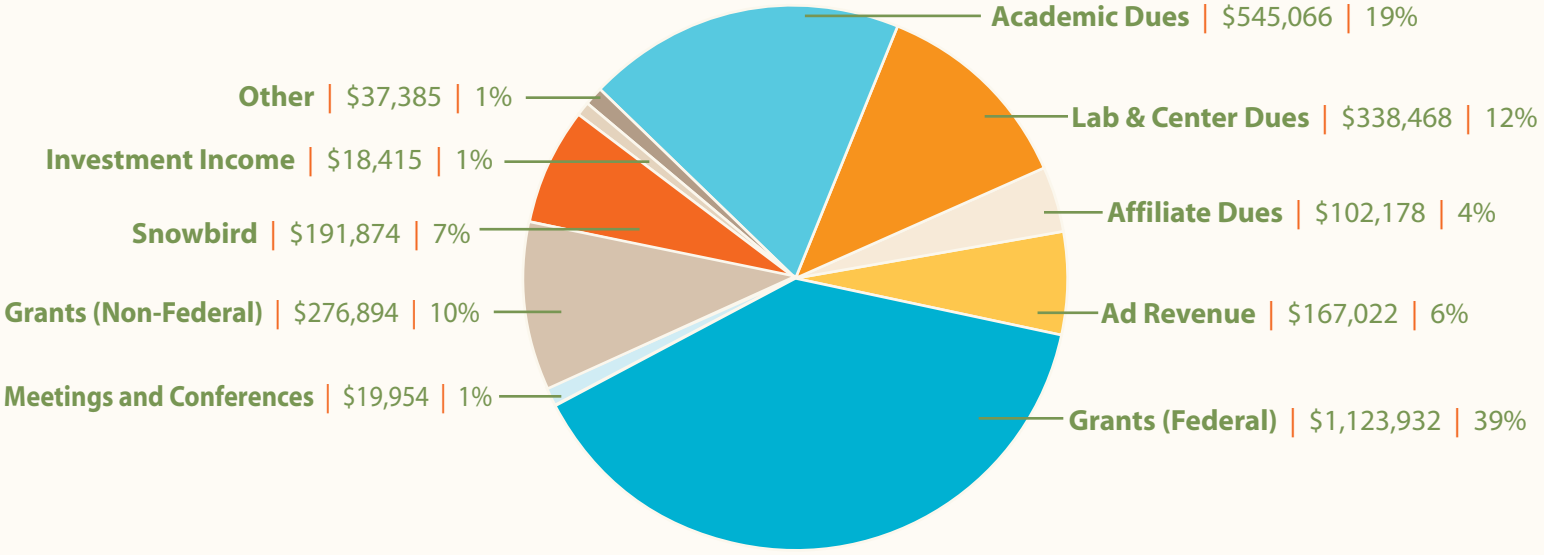
As of June 30, 2005

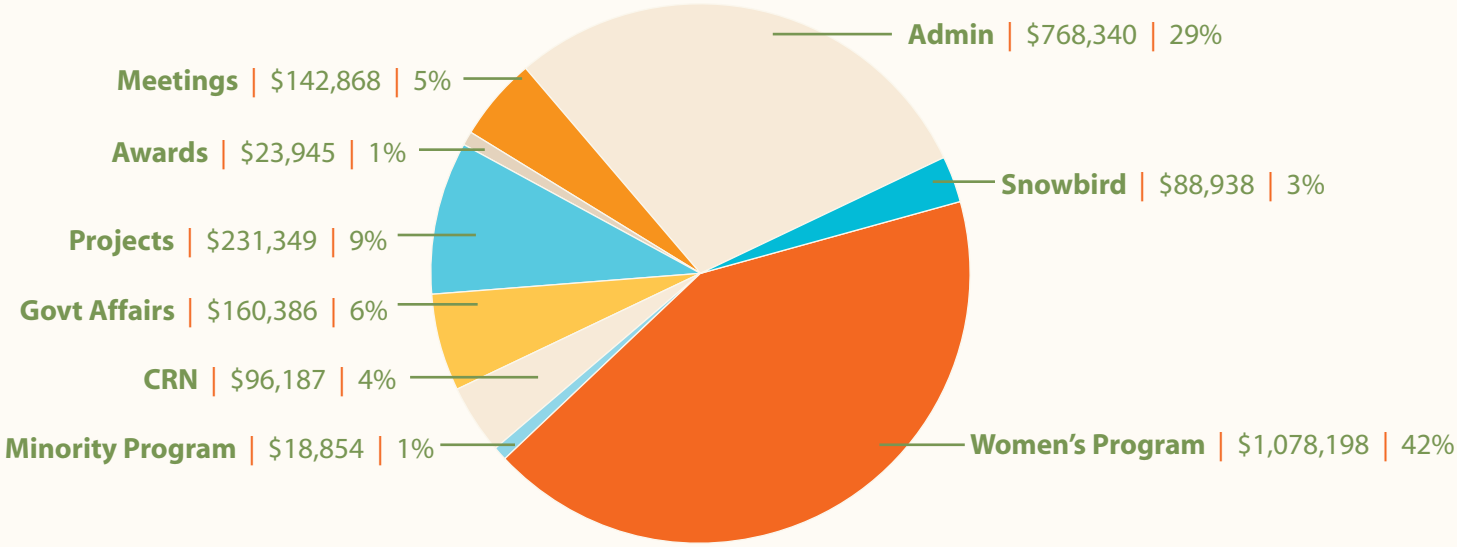
CRA Financial Statement

July 2004-June 2005

Income | $2,821,188



Expenses | $2,609,065



Cash Position | $2,036,274

Unrestricted Funds (6/30/05)	551,604
Accounts Receivable	711,885
Restricted (projects)	156,159
Restricted (Operating Reserve)	616,626
Total	2,036,274