What is the CCC?

- Established in 2006 through a multi-year cooperative agreement between the National Science Foundation and CRA

- A standing committee of CRA

- Provides a voice for the national computing research community

- Facilitates the development of a bold, multi-themed vision for computing research - and communicates this vision to stakeholders
A broad-based Council

Leadership:
- Ed Lazowska, U of Washington (Chair)
- Susan Graham, UC-Berkeley (Vice-Chair)
- Erwin Gianchandani, CRA (Director)

Terms ending 2014:
- Deborah Crawford, Drexel
- Gregory Hager, Johns Hopkins
- John Mitchell, Stanford
- Bob Sproull (ret.)
- Josep Torrellas, UIUC

Terms ending 2013:
- Randy Bryant, CMU
- Lance Fortnow, Northwestern
- Eric Horvitz, Microsoft Research
- Hank Korth, Lehigh
- Beth Mynatt, Georgia Tech
- Fred Schneider, Cornell
- Margo Seltzer, Harvard

Terms ending 2012:
- Stephanie Forrest, U of New Mexico
- Chris Johnson, U of Utah
- Anita Jones, U of Virginia
- Frans Kaashoek, MIT
- Ran Libeskind-Hadas, Harvey Mudd
- Robin Murphy, Texas A&M

Rotated off:
- Bill Feiereisen, Intel (2011)
- Dave Kaeli, Northeastern (2011)
- Dick Karp, UC-Berkeley (2010)
- John King, U of Michigan (2011)
- Peter Lee, Microsoft Research (2009)
- Karen Sutherland, Augsburg U (2009)
- Dave Waltz, Columbia (2010)

Meets three times a year, including an annual summer meeting in Washington, DC

http://cra.org/ccc
A multitude of activities

- Community-initiated visioning:
  - Workshops that bring researchers together to discuss “out-of-the-box” ideas
  - Challenges & Visions tracks at conferences

- Outreach to the White House, Federal funding agencies:
  - Outputs of visioning activities
  - Short reports to inform policy makers
  - Task Forces -- Health IT, Sustainability IT, and Data Analytics

This Week's Highlight:
Fruit Fly Suggests New Solution to Computer Networking Problem

- Public relations efforts:
  - Library of Congress symposia
  - Research “Highlight of the Week”
  - CCC Blog [http://cccblog.org/]

- Nurturing the next generation of leaders:
  - Computing Innovation Fellows Project
  - “Landmark Contributions by Students”
  - Leadership in Science Policy Institute

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4 meetings during summer 2008
Roadmap published May 2009
Extensive discussions between visioning leaders & agencies
OSTP issues directive to all agencies to include robotics in FY 12 budgets
National Robotics Initiative is announced

Henrik Chistensen
Georgia Tech

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Example: PCAST report

- One-third of the PCAST NITRD Working Group members were CCC Council members.
- The report drew extensively from CCC white papers.
- An excellent roadmap for the field.
- The challenge moving forward: translating it into action.

REPORT TO THE PRESIDENT AND CONGRESS
DESIGNING A DIGITAL FUTURE: FEDERALLY FUNDED RESEARCH AND DEVELOPMENT IN NETWORKING AND INFORMATION TECHNOLOGY

Executive Office of the President
President’s Council of Advisors on Science and Technology

DECEMBER 2010

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Current areas of emphasis

- **Data analytics**
  - Series of white papers written for policy makers in summer 2010
  - Ongoing discussions with OSTP and Federal agencies

- **Health information technology**
  - Workshop held in San Francisco in October 2009
  - NSF/CISE initiative on Smart Health & Wellbeing (SHB) announced in FY 2011

- **Education (Learning) Technologies**
  - Roadmap produced in summer 2010
  - President’s FY 12 budget would establish “ARPA-ED”

- **Role of Information Sciences & Engineering in Sustainability**
  - Workshop in Washington, DC, on Feb. 3-4, 2011
  - Ongoing discussions with NSF/CISE and DoE Office of Energy Efficiency & Renewable Energy

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A community effort - we need you!

- Propose visioning activities, white papers, Challenges & Visions tracks at research conferences
- Put together short videos for undergraduates
- Contribute to the CCC Blog
- Send us a research highlight for the Highlight of the Week

Get involved today:
erwin@cra.org or 202-266-2936
http://cra.org/ccc or http://cccblog.org/

http://cra.org/ccc
Computing Research Association

Arizona State University - CSE
Auburn University - CSSE
Ball State University - CS
Baylor University - CS
Boston College - CS
Boston University - CS
Bowdoin College - CS
Bowling Green State 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 - ECE
City University of New York, Graduate Center - CS
Clemson 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
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 Polytechnic University - CS
Florida State University - CS
Florida State University - IST
Georgia College - MCS
Georgia Southern University - IT
Georgia Tech - CS
Georgia State University - CS
Georgia State University - IST
Girard College - CS
Harvard University - CS
Hervey Mudd College - CS
Hofstra University - CS
Illinois Institute of Technology - CS
Illinois State University - ACS
Indiana University, Bloomington - CS
Indiana University - I
Iowa State University - CS
Iowa State University - ECE
Johns Hopkins University - CS
Kansas State University - CSE
Kent State University - CS
Lafayette College - CS
Lehigh University - CSE
Long Island University - CS
Louisiana State University - CS
 Loyola University, Chicago - CS
Massachusetts Institute of Technology - ECE
Miami University - CS
McMaster University - CSE
Michigan State University - CS
Michigan Technological University - CS
Mississippi State University - CS
Montana State University - CS
Montclair State University - CS
National University of Singapore - CS
New Jersey Institute of Technology - CS
New Mexico State University - CS
New York University - CS
New Mexico State University - CS
New York Tech - CS
North Carolina State University - CS
Northwestern University - CSE
Ohio University - ECE
Ohio State University - CS
Oklahoma State University - CS
Old Dominion University - CS
Oregon Health & Science University - CSE
Oregon State University - ECE
Pace University - CS
Pennsylvania State University - CSE
Pennsylvania State University - IST
Polytechnic University - CSE
Pomona College - CSE
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 - CS
Sacramento State University - CS
Saint Louis University - MCS
San Diego State University - CS
Southern Illinois University, Carbondale - CS
Southern Methodist University - CSE
Southern Polytechnic State University - CSE
Stanford University - CS
State University of New York, Albany - CS
State University of New York, Binghamton - CS
State University of New York, Stony Brook - CS
Stevens Institute of Technology - CS
Swarthmore College - CS
Syracuse University - CS
Tulane University - CS
Tufts University - CS
Tulane University - ECECS
Union College - CS
University at Buffalo - CS
University at Buffalo - IST
University of Alabama - Birmingham - CS
University of Alabama, Tuscaloosa - CS
University of Albertas - CS
University of Arizona - CS
University of Arkansas - CS
University of Arkansas at Little Rock - CS
University of California - Los Angeles - CS
University of California, Berkeley - ECE
University of California, Berkeley - IMS
University of California, Davis - CS
University of California, Irvine - CS
University of California, Los Angeles - CS
University of California, Riverside - CS
University of California, San Diego - CS
University of California, Santa Barbara - CS
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 - CS
University of Denver - MCS
University of Florida - CS
University of Florida - CS
University of Georgia - CS
University of Hawaii - CS
University of Houston - CS
University of Illinois - Chicago - CS
University of Illinois, Urbana-Champaign - CS
University of Illinois, Urbana-Champaign - ECE
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University of Kentucky - CS
University of Maryland, Baltimore Co - CS
University of Maryland, Baltimore Co - IS
University of Massachusetts, Amherst - CS
University of Massachusetts, Boston - CS
University of Michigan - ECECS
University of Michigan - I
University of Michigan, Dearborn - CS
University of Minnesota - CSE
University of Minnesota, Duluth - CS
University of Mississippi - CS
University of Missouri - CS
University of Missouri, Columbia - CS
University of Missouri, Rolla - CS
University of Montana - CS
University of Montana - 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 - CS
University of North Carolina at Chapel Hill - CS
University of North Carolina at Chapel Hill - SLS
University of North Carolina, Charlotte - IT
University of North Dakota - CS
University of Notre Dame - CSE
University of Oklahoma - CS
University of Oregon - CS
University of Pennsylvania - CSE
University of Pittsburgh - CS
University of Pittsburgh - CS
University of Puget Sound - MCS
University of Rochester - CS
University of South Alabama - CS
University of South Carolina - CSE
University of South Florida - CSE
University of Southern California - CS
University of Southern California - ECE
University of Tennessee, Knoxville - CS
University of Texas, Arlington - CS
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 Virginia - CS
University of Washington - CSE
University of Washington - CSE
University of Washington - I
University of Washington, Bothell - CS
University of Waterboro - CS
University of Wisconsin, Madison - CS
University of Wisconsin, Milwaukee - EECS
University of Wyoming - CS
Utah State University - CS
Vanderbilt University - ECECS
Virginia Commonwealth University - CS
Virginia Tech - CS
Wake Forest University - CS
Washington State University - ECECS
Washington University in St. Louis - CS
Wayne State University - CS
West Virginia University - CSE
Western Michigan University - CS
Williams College - CS
Worcester Polytechnic Institute - CS
Wright State University - CS
Yale University - CS
York University - CS
Sun Microsystems (Sponsoring Member)
Microsoft Corporation (Sustaining Member)
IBM Research (Supporting Member)

Accenture Technology Labs
Argonne National Laboratory
Aways
CA Labs
Computer Science Research Institute, Santa Clara National Labs
Fraunhofer Center for Experimental Software Engineering
Fujitsu Laboratories of America
Google
Haier-Rakick Company
TDA Center for Computing Sciences
Intel Corporation
Lawrence Berkeley National Laboratory
Las Alamos National Laboratory
Lucent Technologies, Bell Labs
McNee Research
Hitachi Electric Research Labs
National Center for Atmospheric Research
NASA
NEC Laboratories America
NTT DoCoMo USA Labs
Pacific Northwest National Laboratory
Panasonic Information & Networking Technologies Lab
Ricoh Innovations
San Diego Supercomputer Center
SAP Labs
SRI International
Telcordia Technologies

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Mission and activities

- Strengthen research and education in the computing fields
  - Working to influence policy that impacts computing research
  - Encouraging the development of human resources
  - Contributing to the cohesiveness of the professional community

- Collect and disseminate information about the importance and state of computing research

Table 1. PhD Production by Type of Department and Rank

<table>
<thead>
<tr>
<th>Department, Rank</th>
<th>PhDs Next Year</th>
<th>Avg. per Dept.</th>
<th>PhDs</th>
<th>Avg. per Dept.</th>
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</thead>
<tbody>
<tr>
<td>US CS 1-12</td>
<td>265</td>
<td>25.2</td>
<td>286</td>
<td>25.6</td>
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<tr>
<td>US CS 13-24</td>
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<td>241</td>
<td>20.1</td>
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<td>US CS 25-36</td>
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<td>17.1</td>
<td>206</td>
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<tr>
<td>US CS Other</td>
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<td>8.4</td>
<td>672</td>
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<td>US CS Total</td>
<td>1,501</td>
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<td>1,696</td>
<td>11.3</td>
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