

CRA's Computing Community Consortium

Ed Lazowska

Bill & Melinda Gates Chair in
Computer Science & Engineering
University of Washington

Chair
Computing Community Consortium

<http://www.cra.org/ccc>



The Computing Community Consortium is ...



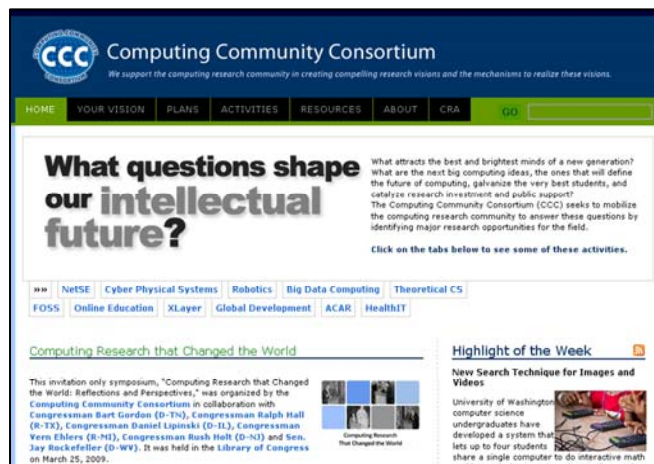
- A standing committee of CRA
- Funded by NSF under a Cooperative Agreement
- Focused on empowering the computing research community to pursue more audacious research visions
- Led by a broad-based Council
- Chaired by Ed Lazowska (Ch.) and Susan Graham (V.Ch.)
- Staffed by CRA (Erwin Gianchandani and Andy Bernat)



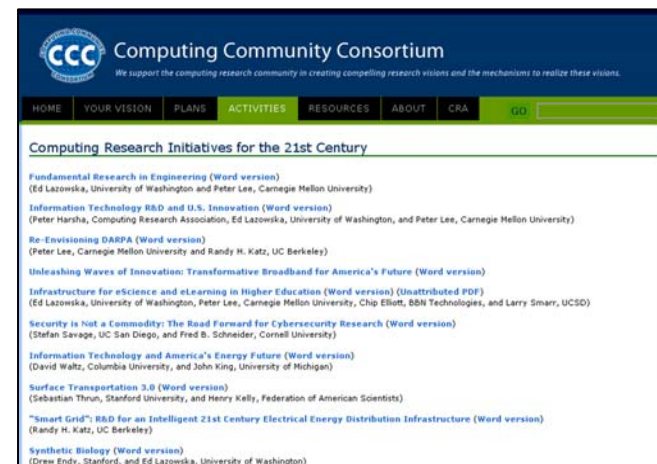


CCC's activities include ...

- Activities to increase funding of computing research; community-initiated workshops to define new research directions; computing research white papers for the White House and other groups
- Dozens, including the future of robotics, health IT, educational technology, IT for development, broadband infrastructure, the role of large-scale data analysis in all fields, IT and energy/sustainability, ...



The screenshot shows the homepage of the Computing Community Consortium. The header includes the CCC logo and the text "Computing Community Consortium" and "We support the computing research community in creating compelling research visions and the mechanisms to realize these visions." Below the header is a navigation menu with links for HOME, YOUR VISION, PLANS, ACTIVITIES, RESOURCES, ABOUT, CRA, and a GO button. The main content area features a large heading "What questions shape our intellectual future?" followed by a paragraph of text. Below this is a row of tags: NetSE, Cyber Physical Systems, Robotics, Big Data Computing, Theoretical CS, FOSS, Online Education, XLayer, Global Development, ACAR, and HealthIT. There are two main sections: "Computing Research that Changed the World" and "Highlight of the Week".



The screenshot shows a page titled "Computing Research Initiatives for the 21st Century" on the CCC website. The header is identical to the homepage. The main content area lists several research initiatives with their respective authors and affiliations:

- Fundamental Research in Engineering (Word version) (Ed Lazowska, University of Washington and Peter Lee, Carnegie Mellon University)
- Information Technology R&D and U.S. Innovation (Word version) (Peter Harsha, Computing Research Association, Ed Lazowska, University of Washington, and Peter Lee, Carnegie Mellon University)
- Re-Envisioning DARPA (Word version) (Peter Lee, Carnegie Mellon University and Randy H. Katz, UC Berkeley)
- Unleashing Waves of Innovation: Transformative Broadband for America's Future (Word version) (Ed Lazowska, University of Washington, Peter Lee, Carnegie Mellon University, Chip Elliott, BBN Technologies, and Larry Smarr, UCSD)
- Security is Not a Commodity: The Road Forward for Cybersecurity Research (Word version) (Stefan Savage, UC San Diego, and Fred B. Schneider, Cornell University)
- Information Technology and America's Energy Future (Word version) (David Waltz, Columbia University, and John King, University of Michigan)
- Surface Transportation 3.0 (Word version) (Sebastian Thrun, Stanford University, and Henry Kelly, Federation of American Scientists)
- "Smart Grid": R&D for an Intelligent 21st Century Electrical Energy Distribution Infrastructure (Word version) (Randy H. Katz, UC Berkeley)
- Synthetic Biology (Word version) (Drew Endy, Stanford, and Ed Lazowska, University of Washington)



■ The Computing Innovation Fellows project

- A stimulus-motivated project
- Has placed more than 100 new graduates with postdoctoral mentors in the past 2 years
- “Max 2 rule” ensures broad institutional participation

A screenshot of the Computing Innovation Fellows Project website. At the top, there are logos for CRA, NSF, and CCC. Below the logos is the title 'Computing Innovation Fellows Project'. A navigation bar contains links for 'Home', 'CRA', 'CCC', and 'CISE'. The main content area features a red announcement: 'The 2009 Computing Innovation Fellows have been selected!'. Below this is a link to 'View the press release with the names of the 2009 Fellows and their Mentors'. A congratulatory message follows, thanking everyone who was selected and providing a link to a forum for up-to-the-minute news. Further down, there are two paragraphs of text: one about a courtesy website for employers to post available positions, and another about a courtesy site for computing PhDs to post their profiles. At the bottom, a footer states that the program is funded by the Computing Community Consortium (CCC) and the Computing Research Association (CRA), with funding from the National Science Foundation.



- Library of Congress Symposium for policymakers
 - 13 presentations
 - A great set of videos and overview papers for students!





■ CCC blog

- Discussion of research-related topics

■ Computing Research Highlight of the Week

- Exposure for your research-related press releases!

The screenshot shows the CCC Blog homepage. At the top left is the CCC logo. The main header reads 'CCC BLOG THE COMPUTING COMMUNITY CONSORTIUM'. Below this are navigation links: 'HOME', 'ABOUT THE CCC', and 'ABOUT THIS BLOG'. On the left side, there is a 'Subscribe in a reader' link and a 'Subscribe to this Blog' section with an email input field and 'Subscribe' and 'Unsubscribe' buttons. Below that is a 'Recent Posts' section with three entries: 'Computing Research that Changed the World: Reflections and Perspectives', 'Computer Engineer Barbie!', and 'Where the jobs are ...'. The main content area features a post titled 'Where the jobs are ...' dated 'JAN 4', filed under 'Uncategorized, pipeline, resources'. It includes two bar charts showing employment growth within the 10 BLS major occupational groups (2008-18) and the 8 BLS 'Professional and related' occupations (2008-2018). The text explains that every second year, the US Bureau of Labor Statistics provides a ten-year forecast of job growth in all fields of employment. The most recent forecast, released in November 2009 and covering the period 2008-2018, may be found here (pdf). Among the highlights: Among the 10 major BLS occupational groups, the "Professional and related" category (which includes computer science occupations) is projected to grow by the largest percentage between now and 2018.

The screenshot shows the 'Computing Research Highlight of the Week' page for January 14 - 21, 2010. The header includes the CCC logo and the text 'Computing Community Consortium We support the computing research community in creating compelling research visions and the mechanisms to realize these visions.' Below the header is a navigation menu with links: 'HOME', 'YOUR VISION', 'PLANS', 'ACTIVITIES', 'RESOURCES', 'ABOUT', 'CRA', and 'GO'. The main content area features a post titled '"One Keypad per Child" Lets School Children Share Screen to Learn Math'. The text describes how University of Washington computer science undergraduates have developed a system that lets up to four students share a single computer to do interactive math problems. Early tests show that students using the tool are able to share a single screen while working on problems at their own pace, effectively quadrupling the number of computers available for math exercises. There are two images: one showing children using a shared computer and another showing a child using a computer. A video player is embedded in the text. The post is dated 'This month the team will test the system, called MultiLearn, with 180 students who are attending two government-run elementary schools in rural India.' Below the text is a quote from Joyojeet Pal, a lecturer in UW Computer Science & Engineering who has studied technology adoption in rural India, Rwanda, and the slums of Brazil. Despite this, though, practically no learning technologies accommodate sharing, Pal said. "Children show dominance patterns when they sit in front of a machine," Pal said. "If there are three to five children, then the child who is the smartest and from the most affluent family controls the mouse." In 2006 Pal worked with Kentaro Toyama at Microsoft Research India helping to connect multiple mice to a single computer so that many users could... On the right side, there is a 'Relevant Links' section with links for 'Press Release', 'Project Web Page', 'Research Papers', and 'Media Contact'. Below that is a 'Keywords' section with 'educational technology, information technology for development, University of Washington'. At the bottom right, there is a 'BUZZ' section with social media sharing buttons for RSS, Facebook, Email, Twitter, and a 'SHARE' button.



■ Landmark Contributions by Students in Computer Science

- Prepared as part of the DARPA leadership transition

Landmark Contributions by Students in Computer Science

Version 11: September 15, 2009

There are many reasons for research funding agencies (DARPA, NSF, etc.) to invest in the education of students. Producing the next generation of innovators is the most obvious one. In addition, though, there are an impressive number of instances in our field in which undergraduate and graduate students have made truly game-changing contributions in the course of their studies.

The inspiring list below was compiled by the following individuals and their colleagues: Bill Bonvillian (MIT), Susan Graham (Berkeley), Anita Jones (University of Virginia), Ed Lazowska (University of Washington), Pat Lincoln (SRI), Fred Schneider (Cornell), and Victor Zue (MIT).

We solicit your suggestions for additional student contributions of comparable impact – post them on the Computing Community Consortium blog, <http://www.cccb.org/2009/08/28/landmark-contributions-by-students-in-computer-science/>, or send them to Ed Lazowska, lazowska@cs.washington.edu.



CCC sessions at Snowbird

- CCC Workshop on Discovery and Innovation in Health IT
 - Monday, 10:30 a.m. - noon, Ballroom 2



Susan Graham



Deborah Estrin



Yoky Matsuoka



Beth Mynatt



■ The Computing Innovation Fellows Project

■ Monday, 3:30 - 5:00 p.m., Ballroom 2



Peter Lee



Andrew McPherson
(Penn -> Drexel)



Miriah Meyer
(Utah -> Harvard)



Antonina Mitrofanova
(NYU -> Columbia)



■ Achieving Sustainable Energy: New Approaches Based on the Tools of Computer Science

■ Monday, 3:30 - 5:00 p.m., Ballroom 3



Randy Bryant



David Culler



Illah Nourbakhsh



Shwetak Patel



■ Computer Science and Global Development: A New High-Impact Research Area

■ Tuesday, 3:30 - 5:00 p.m., Ballroom 2



Tapan Parikh



Lakshmi Subramanian



Beki Grinter



- The Computing Community Consortium and You
 - Tuesday, 7:30 p.m., Magpie Room (CRA-Deans Meeting)



Ed Lazowska

Participate!



- The CCC is all of us!
- The CCC is part of CRA!

