

COMPUTING RESEARCH FUTURES

Elizabeth Mynatt

Chair

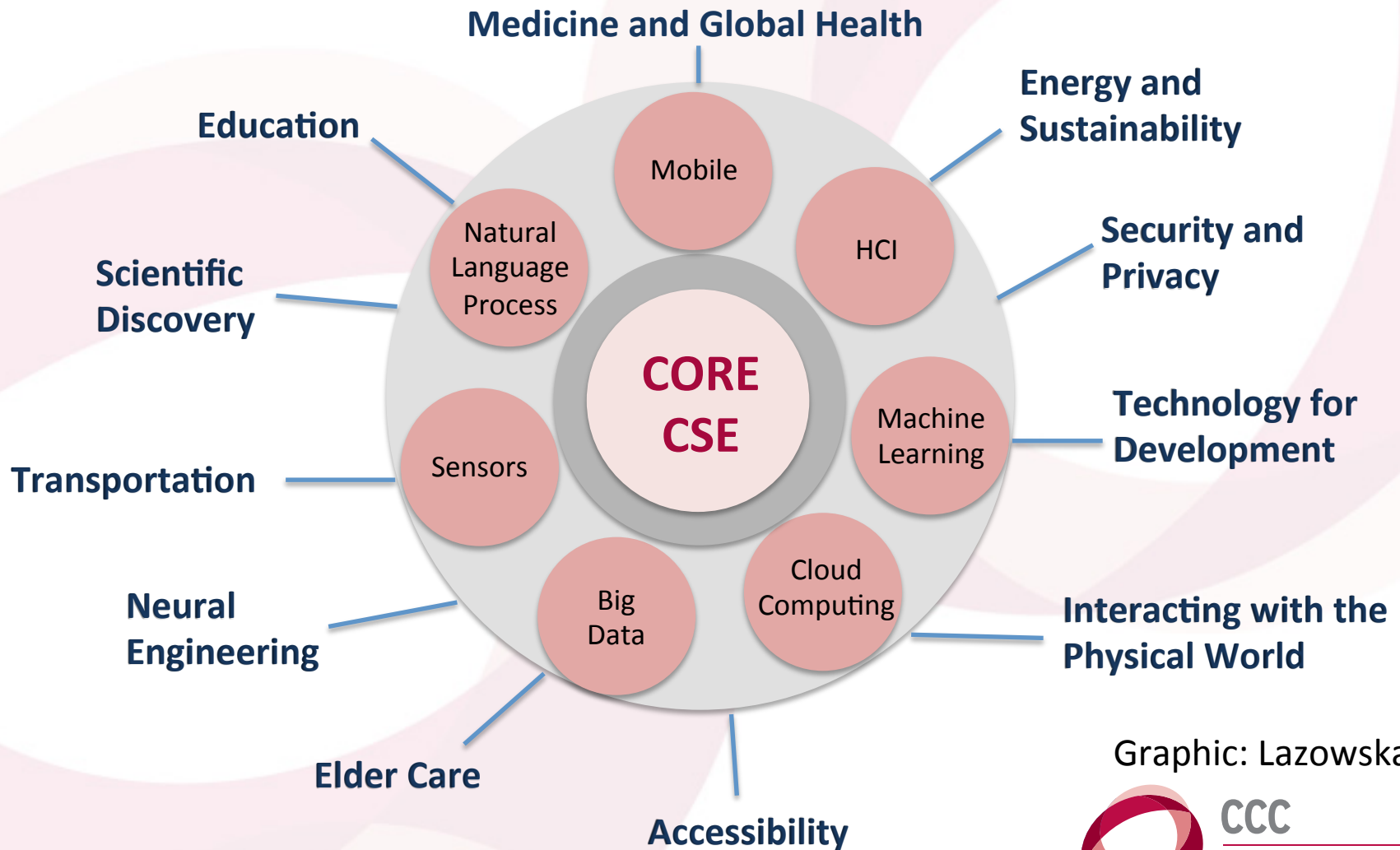
Computing Community Consortium



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THE RAPIDLY EXPANDING WORLD OF COMPUTING



Graphic: Lazowska



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WHAT IS THE COMPUTING COMMUNITY CONSORTIUM

- Established in 2006 as a standing committee of the Computing Research Association
- Funded by NSF under a Cooperative Agreement
- Facilitate the development of a bold, multi-themed visions for computing research
- Led by a broad-based Council
- Staffed by CRA

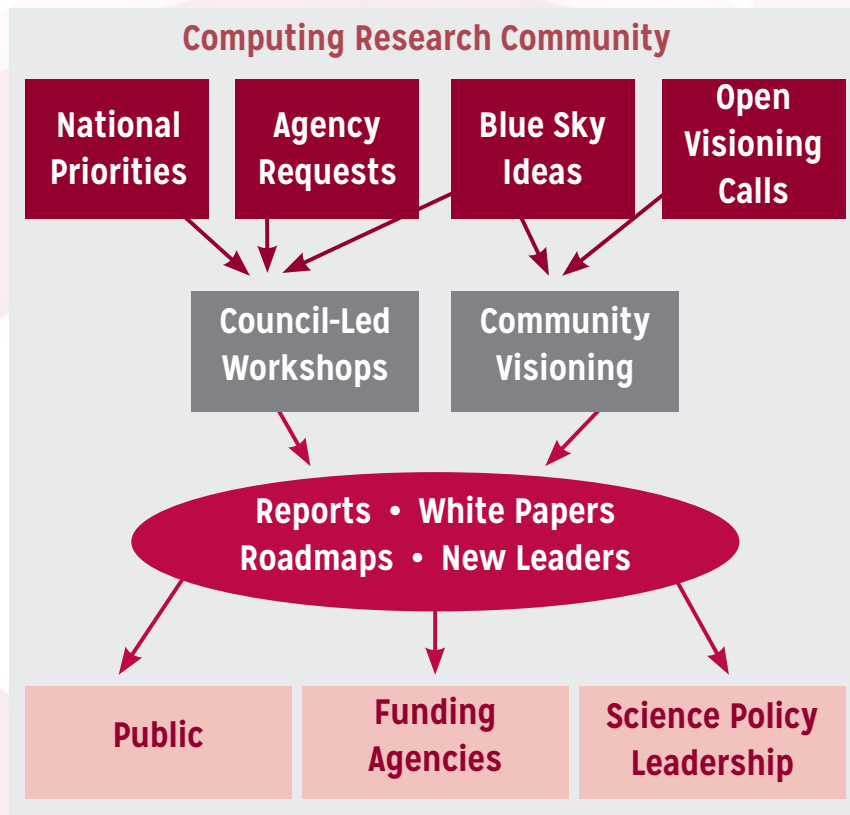


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COMPUTING COMMUNITY CONSORTIUM

The **mission** of Computing Research Association's Computing Community Consortium (CCC) is to **catalyze** the computing research community and **enable** the pursuit of innovative, high-impact research.



Promote Audacious Thinking:

- Community Initiated Visioning Workshops
- Blue Sky Ideas tracks at conferences

Inform Science Policy:

- Outputs of visioning activities
- Task Forces – Health IT, Data Analytics

Communicate to the Community:

- CCC Blog - <http://cccblog.org/>
- Great Innovative Ideas
- White Papers

Promote Leadership and Service:

- Industry – Academic Collaborations
- Leadership in Science Policy Institute
- Postdoc Best Practices

THE CCC COUNCIL – EXECUTIVE COMMITTEE



- Beth Mynatt, Georgia Tech (Chair)
- Mark Hill, University of Wisconsin, Madison (Vice Chair)
- Greg Hager, Johns Hopkins Univ. (Past Chair)
- Ben Zorn, Microsoft Research
- Jennifer Rexford, Princeton
- Ann Drobnis, Director
- Andy Bernat, CRA Executive Director



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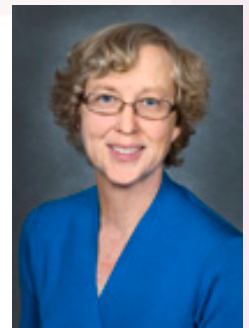
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THE CCC COUNCIL



Terms ending June 2019

- Sampath Kannan, UPenn
- Maja Mataric, USC
- Nina Mishra, Amazon
- Holly Rushmeier, Yale



Terms ending June 2018

- Liz Bradley, (CU Boulder)
- Cynthia Dwork, Microsoft Research
- Kevin Fu, Univ. Michigan (Leave)
- Daniel P. Lopresti, Lehigh University
- Shwetak Patel, Univ. Washington
- Katherine Yelick, UC Berkeley



Terms ending June 2017

- Lorenzo Alvisi, UT Austin
- Randy Bryant, CMU
- Vasant Honavar, Penn State
- Jennifer Rexford, Princeton
- Debra Richardson, UC Irvine
- Klara Nahrstedt, UIUC
- Ben Zorn, Microsoft Research



THE CCC COUNCIL — PAST MEMBERS

- Greg Andrews, Univ. Arizona
- Debra Crawford, Drexel
- Susan Davidson, Univ. PA
- Joseph Evans, Univ. KS
- Bill Feiereisen, LANL
- Limor Fix, Intel
- Stephanie Forrest, Univ. New Mexico
- Lance Fortnow, Georgia Tech
- Susan Graham, UC Berkeley
- Eric Horvitz, Microsoft Research
- Chris Johnson, Univ. Utah
- Anita Jones, UVA
- Frans Kaashoek, MIT
- Dave Kaeli, Northeastern
- Dick Karp, UC Berkeley
- John King, Univ. Michigan
- Hank Korth, Lehigh
- Ed Lazowska, Univ. of Washington, CCC Founding Chair
- Peter Lee, Carnegie Mellon
- Ran Libeskind-Hadas, Harvey Mudd
- Andrew McCallum, UMass
- John Mitchell, Stanford
- Robin Murphy, Texas A&M
- Tal Rabin, IBM Research
- Daniela Rus, MIT
- Fred Schneider, Cornell
- Margo Seltzer, Harvard
- Shashi Shekhar, Univ. MN
- Bob Sproull, Former Oracle / Sun
- Karen Sutherland, Augsburg College
- David Tennenhouse, New Venture Partners
- Josep Torrellas, UIUC
- Dave Waltz, Columbia
- Ross Whitaker, Univ. Utah



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CRA STAFF

CCC Director: Ann Drobnis

- 100% CCC, responsible for day-to-day management of the Organization

Senior Program Associate: Helen Wright

- 100% CCC, responsible for promoting the CCC mission through the website, blog, and social media

Program Associate: Khari Douglas

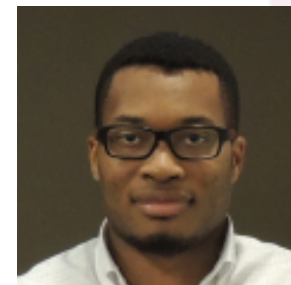
- 100% CCC, responsible for supporting CCC special programs, workshops, and communications

CRA Executive Director: Andy Bernat

- 20% CCC, responsible for general oversight

Other CRA Staff:

- Peter Harsha, Director of Government Affairs
- Sandra Corbett
- Sabrina Jacob



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WHAT DISTINGUISHES CCC?

Proactive, rapid response

- Identify, plan, and execute in a matter of weeks to months

Community-based

- Find, foster and raise awareness of new needs and opportunities

Leadership incubator

- Facilitate and grow leadership capacity in the community



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INDUSTRY – ACADEMIC COLLABORATIONS FOR EARLY CAREER FACULTY

With Big Data Regional Innovation Hubs

- *Northeast:* Young Innovator Internships, Knowledge Exchange Lecture Series, Data Science Best Practices Workshop
- *South:* Data Start Internships, PEPI Early Career Exchange Visits
- *Midwest:* Early Career Big Data Summit, Data Quality and Informal Data- An Oxymoron Workshop, Travel Grants
- *West:* Collaboratory Faire, Workshop on Data Hackathon Best Practices, Tools of the Data Journalism Trade Workshop



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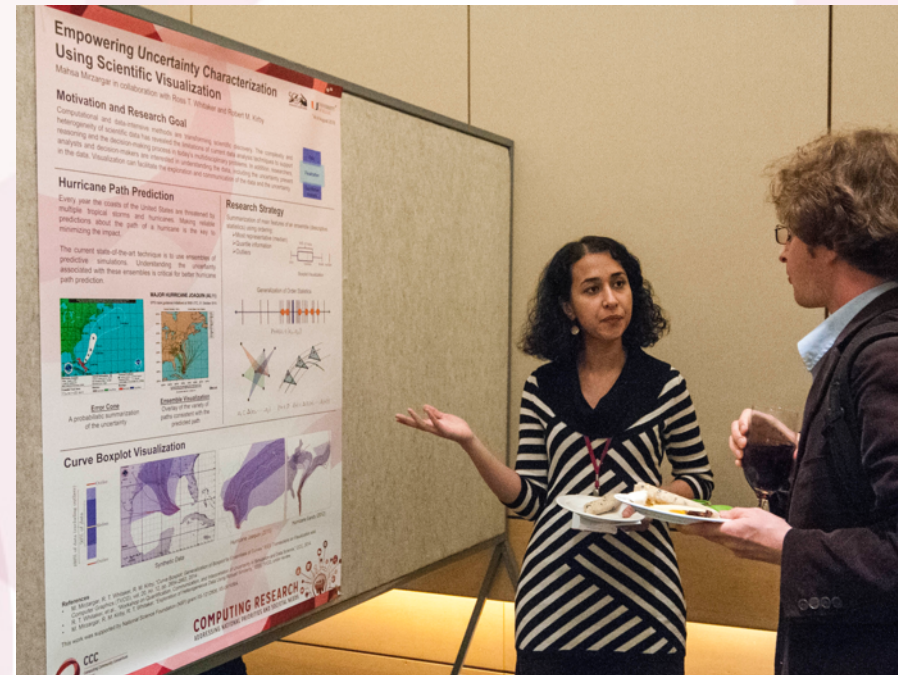
COMPUTING RESEARCH

ADDRESSING NATIONAL PRIORITIES AND SOCIETAL NEEDS



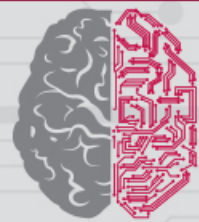
National Symposium to Highlight the Impact of Computing Research:

- Seven panels, two plenaries, and an early career poster session covering four main themes:
 - The Impact of Computing in Our Physical World
 - Computing Enhancing Our Lives
 - Controlling Our Data
 - Partnerships for the Future
- 130 in-person participants; over 1000 online viewers



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ARTIFICIAL INTELLIGENCE

FOR SOCIAL GOOD

- June 7, 2016 in Washington, DC
- Co-sponsored by OSTP, AAI, CCC to discuss the successful deployments and the potential use of AI in various topics that are essential for social good
- One of four workshops the OSTP co-sponsored to identify challenges and opportunities around AI
- Over 400 participants in-person; over 3,500 participants online



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UPCOMING VISIONING WORKSHOPS

Cyber Social Learning Systems

- Kevin Sullivan (UVA)
- Chuck Friedman (Mich)

August 29-30, 2016

November 2-3, 2016

January 2017

Nanotechnology-Inspired Information Processing Systems Workshop

- Naresh Shanbhag (UIUC)

August 31 – Sept. 1

Sociotechnical Cybersecurity

- Tim Summers (UMD)
- Susan Winter (UMD)

Early 2017

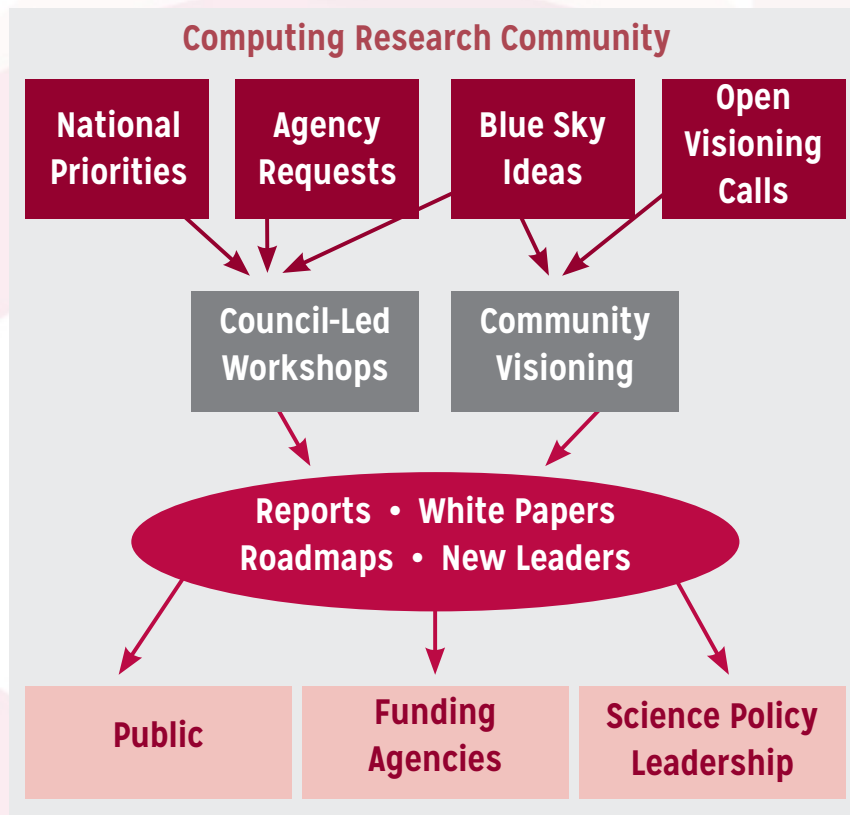


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GET YOUR DEPARTMENT INVOLVED!

- Propose a visioning workshop or conference track
- Read, comment, contribute to the CCC Blog
- Nominate new Council members
- Send us ideas for new activities, better ways to communicate, and other avenues for impact!

<http://cra.org/ccc>

OUR TALKS THIS EVENING

Theory for Society

- Cynthia Dwork,
Microsoft Research / Harvard



Computing Alone Doesn't Solve Social Problems. So, What's Next?

- Kentaro Toyama,
W.K. Kellogg Associate Professor
of Community Information at
the [University of Michigan
School of Information](#)



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