

**National Science Foundation
Directorate for Computer and Information Science and Engineering Advisory Committee
(CISE AC)**

May 16-17, 2013

**National Science Foundation
4201 Wilson
Boulevard
Arlington, VA 22230**

MEETING SUMMARY

The spring meeting of the National Science Foundation's Directorate for Computer and Information Science and Engineering's Advisory Committee (CISE AC) was held at the National Science Foundation on May 16-17, 2013.

Thursday, May 16th, 2013

Joint Session of the CISE AC and the NSF Advisory Committee on Cyberinfrastructure (ACCI)

Dr. Farnam Jahanian, CISE Assistant Director, welcomed both advisory committees to their joint session shortly after 12:00 PM and then turned the meeting over to Dr. Larry Smarr, Chair of the ACCI.

Dr. Smarr emphasized that the ACCI is advisory to the entire Foundation. He highlighted the value of cross-linking between ACCI and NSF's other advisory committees due to the increasing need for best practices in cyberinfrastructure and architecture development across all disciplines. He pointed out that much of CISE's foundational research will help to advance cyberinfrastructures.

The two advisory committees then discussed a variety of issues, including the need to maintain synergy and strengthen linkages among the traditional cyberinfrastructure, CISE research, and other research communities. They also discussed how cyberinfrastructure for science includes not only high-performance computing, but also software, sensors, data infrastructure, education and workforce development and, increasingly, cloud and distributed computing. The role of statistics, new data infrastructure pilots and public-private engagement were also discussed.

The joint session and the ACCI meeting were adjourned by Dr. Smarr at 1:30 PM.

The CISE AC Meeting was convened at 2 PM by its co-chairs, Drs. J Strother Moore and Jennifer Rexford. The list of attendees can be found in Appendix I.

Review of Agenda and Approval of Minutes

The CISE AC unanimously voted to approve the last meeting's minutes.

CISE Update and FY14 Budget Priorities

Dr. Jahanian updated the Committee on CISE's activities since the last meeting held in November, as well as FY 2014 budget priorities. He described how CISE's portfolio contributes to national priorities at the convergence of disciplines, both through its core and cross-cutting programs.

Slides from Dr. Jahanian's presentation are posted to the CISE website.

The committee recessed for Working Group breakout sessions at 3 PM. The group reconvened at 4 PM.

Update on NSF Strategic Plan

Mr. Alan Blatecky, Division Director for Advanced Cyberinfrastructure, described the status of NSF's new Strategic Plan. He mentioned that the aim is for the Plan to be released concurrently with the FY 2015 Budget Request and that the changes from the previous plan will mostly reflect an increased attention for measuring activities and impact.

He stated that the current draft plan is based on three Strategic Goals, each with three associated Strategic Objectives, all based on NSF's mission, as prescribed in Public Law 81-507. The AC's feedback included increasing the emphasis on adaptability and making the language more NSF-specific.

CAREER Program

At 5:30 PM, Dr. Anita LaSalle, NSF Program Director in Computer and Network Systems, updated the Committee on the CAREER Program.

Discussion topics included the balance between research and education requirements, the values of institutions and tenure committees and the balance between the value of the award's prestige vs. its value for providing practical assistance. New ideas included expanding the program to industrial researchers, revisiting award amounts, the program's educational activity requirements, and the possibility of re-introducing an updated version of the Research Initiation Award.

The AC adjourned for the day at 6 PM.

Friday, May 17th, 2013

The Co-chairs convened the meeting at 8:40 AM.

Public Access Panel

Dr. Fran Berman, CISE AC member and panel chair, described the February 22, 2013 OSTP memo directing federal agencies to create plans for increasing public access to research publications and the scientific data that support them. She introduced the panelists: Vint Cerf, Member of the National Science Board; John White, CEO of the Association for Computing Machinery; Margot Seltzer, President of USENIX; and David Grier, President of the IEEE Computer Society. The panelists provided perspectives on business models and challenges related to making research data widely accessible.

Dr. Jahanian described NSF's efforts towards a plan for increased public access. NSF's principles include value to the nation, openness and transparency, and community roles such as new business models. He recognized the importance of professional societies in this area. NSF will propose a plan by late August, taking into account feedback from the community and Advisory Committees.

The group discussed a variety of topics, including the funding of research in these areas, infrastructure, business models and cost-sharing, data provenance and proprietary data.

The Advisory Committee adjourned for a 30-minute break.

Mid-Scale Infrastructure Subcommittee Briefing

Dr. Keith Marzullo, NSF Division Director for Computer and Network Systems, and Dr. Fran Berman provided an update on the Mid-scale Infrastructure Subcommittee's efforts.

They noted that community white papers solicited by the Subcommittee with the help of the Computing Community Consortium (CCC) emphasized a need for further investment in mid-scale infrastructure that is multi-tiered, sharable, programmable, federated, and sustainable. The Subcommittee intends to distill these white papers into a broadly usable format.

Discussion topics included the distinction between research about infrastructure and infrastructure for research, costs and long-term budgeting strategies, and the possibility of data pilot programs.

Working Group Report Out: CISE AC Vision 2025 Working Group

The CISE Vision 2025 Working Group, led by Drs. David Culler and James Landay, identified the challenges and opportunities in the areas of independent manufacturing, post-mobile technology and a massively connected society; innovation, intellectual property and social controls were highlighted.

The discussion covered a variety of topics, including international collaboration, the organization of the CISE directorate and the overlap between core and cross-cutting CISE programs. The group suggested that a series of white papers could come out of these efforts, potentially to be led by the CCC.

Working Group Report Out: Postdocs Working Group

The Working Group on Postdocs, led by Drs. Henrik Christensen and Brent Hailpern, identified a variety of questions pertaining to the CISE postdoc experience. The group suggested a series of best practice studies in order to understand them before recommending concrete actions.

Discussion topics included a need to be realistic about the number of available faculty positions and the difference between industry and academic postdoctoral positions.

Closing Remarks and Wrap up

Dr. Jahanian thanked J Strother Moore for his service as co-chair of the CISE Advisory Committee. He also announced that David Culler agreed to serve as co-chair in the upcoming year. Dr. Jahanian thanked the working groups and subcommittees, and noted that the Broadening Participation Strategic Plan approved at the last AC Meeting is now posted online.

Dr. Rexford noted the intentions for gathering information about CISE postdocs, documenting the ideas of the CISE 2025 Vision group and the Mid-scale Infrastructure Subcommittee, as well as the formation of a joint ACCI/CISE AC working group.

Dr. Rexford closed the meeting at 12:30 PM.

Appendix I: Advisory Committee Members

<u>NAME</u>	<u>AFFILIATION</u>
<u>Members Present:</u>	
Dr. Francine Berman	Rensselaer Polytechnic Institute
Dr. Jaime Carbonell	Carnegie Mellon University
Dr. Henrik Christensen	Georgia Institute of Technology
Dr. David Culler	University of California, Berkeley
Dr. Teresa Dahlberg	College of Computing and Informatics, University of North Carolina, Charlotte
Dr. Susan Davidson	University of Pennsylvania
Dr. Jose Fortes	Department of Electrical and Computer Engineering, University of Florida
Dr. Juan Gilbert	Human-Centered Computing Division, Clemson University
Dr. Brent Haipern	IBM Research
Dr. Charles Isbell	College of Computing, Georgia Institute of Technology
Dr. Susan Landau	Radcliffe Institute for Advanced Study, Harvard University
Dr. James Landay	Department of Computer Science and Engineering, University of Washington
Dr. Maja Mataric	Computer Science Department, University of Southern California
Dr. Peter Lee	Microsoft Research Redmond
Dr. J. Strother Moore	AC Co-Chair; Department of Computer Science, University of Texas, Austin
Dr. Jennifer Rexford	AC Co-Chair; Department of Computer Science, Princeton University
Dr. Ronitt Rubinfeld	Massachusetts Institute of Technology
Dr. Rob Rutenbar	University of Illinois
Dr. Stefan Savage	Department of Computer Science and Engineering, University of California, San Diego
Dr. Robert Schnabel	School of Informatics and Computing, Indiana University
Dr. Jeffrey Vitter	University of Kansas (May 16 only)
<u>Members Absent:</u>	
Dr. Alex Szalay	Johns Hopkins University
Dr. James Kurose	Department of Computer Science, University of Massachusetts Amherst