Welcome,
a Brief NSF CISE Overview,
and a Few Words of Advice

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Computer & Information Science & Engineering
NSF CISE Career Workshop
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Welcome!

… we’re very glad you’re here!

… thank you for coming!
CISE’s Economic and Societal Context

- CISE is at the center of an ongoing, long-term societal transformation
- Advances in computing, communications, information technologies, cyberinfrastructure:
  - underpin economic prosperity, national security
  - drive U.S. competiveness and sustainable economic growth
  - accelerate the pace of discovery and innovation
  - are crucial to achieving national and societal priorities, including education and workforce development
Computing Frontiers, National Priorities

From Data to Knowledge to Action

Manufacturing, Robotics, & Smart Systems

Understanding the Brain

Secure Cyberspace

Education, Workforce Development

Augmenting Human Capabilities

Expanding the limits of computation
From federally-funded fundamental computing research …to multi-billion dollar industries
.... across many industries
It is an exciting, impactful and important time to be in computer and information science and engineering!!
CISE FY 2014 Activities … Reaching People

<table>
<thead>
<tr>
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<th>CISE</th>
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<tbody>
<tr>
<td>Budget</td>
<td>$893M</td>
</tr>
<tr>
<td>Number of Proposals</td>
<td>7,436</td>
</tr>
<tr>
<td>Number of Awards</td>
<td>1,682</td>
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<tr>
<td>Success Rate</td>
<td>~23%</td>
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<tr>
<td>Average Annualized Award</td>
<td>$199K</td>
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<tr>
<td>Number of Panels Held</td>
<td>302</td>
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<tr>
<td>Number of People Supported</td>
<td>16,774</td>
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<th>CISE</th>
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<tbody>
<tr>
<td>Senior Researchers</td>
<td>6,663</td>
</tr>
<tr>
<td>Other Professionals</td>
<td>1,123</td>
</tr>
<tr>
<td>Postdoctoral Associates</td>
<td>491</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>6,064</td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td>2,433</td>
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NSF Support for CISE Research: Critically Important

NSF Support of Academic Basic Research in Selected Fields
(as a percentage of total federal support)

- All Science and Engineering Fields: 24%
- Engineering: 40%
- Physical Sciences: 44%
- Social Sciences: 55%
- Mathematics: 59%
- Environmental Sciences: 60%
- Biology: 66%
- Computer Science: 87%

Note: Biology includes Biological Sciences and Environmental Biology; excludes National Institutes of Health.
CISE FY 2014 PI and Co-PI Departments

- Computer Science & Information Sciences 66%
- Sciences & Humanities 22%
- Interdisciplinary Centers 4%
- Engineering (excluding CE & EE) 8%
- Engineering 66%
CISE’s Commitment to the Core

CISE continues to cast a wide net and to let the best ideas surface, rather than pursuing a prescriptive research agenda. It engages the research community in developing new fundamental ideas, which are then evaluated by the best researchers through the merit review process.

This process, which supports the vast majority of unclassified computing research in the United States, has led to innovative and transformative scientific results with enormous economic impact and societal benefits.
A bit of advice

- Think big, and bold - do great science, something that will change the world!
- Give yourself (enough) time
  - Ideas, and narrative writing need time to percolate
- Writing: an integral part of the research process
  - Learn to write well … know your narrative
  - Get colleagues to review
It takes a community

- Get mentored:
  - Locally
  - CRA mentoring workshop
    cra.org/events/career-mentoring/
  - CRA-W

- Be a mentor
  - Get to know the NSF, your program directors
  - Be a reviewer, panelist
Thank you!

... to you

... to our organizers: Mitra Basu (NSF), Erwin Gianchandani (NSF), Howie Huang (GWU), Thyaga Nandagopal (NSF) and staff

... to our speakers:
  - Tanya Berger-Wolf (U. Illinois Chicago)
  - Shantenu Jha (Rutgers)
  - Debbie Lockhart (NSF)
  - Keith Marzullo (NSF)
  - Jacob Sorber (Clemson)
  - Lalitha Sankar (Arizona State)

... to our NSF Program Directors
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