

27 June 2008

Dear Colleagues:

In our effort to give you the big picture of all research funding opportunities within each division and across the entire CISE Directorate, we are embarking on a new way to present ourselves. We will release this summer a *Coordinated Solicitation* and a *Cross-Directorate Solicitation*.

### **The Bottom Line**

Each of CISE's three divisions will have one solicitation that covers its core activities normally covered in the past by many solicitations. The *Coordinated Solicitation* will be the simultaneous release of these three solicitations, describing all core research programs within each division:

- Computer and Communications Foundations (CCF) Division
  - Algorithmic Foundations Program
  - Communication and Information Foundations Program
  - Software and Hardware Foundations Program
- Computer and Network Systems (CNS) Division
  - Computer Systems Research Program
  - Network Systems Program
- Information and Intelligent Systems (IIS) Division
  - Human-Centered Computing Program
  - Information Integration and Informatics Program
  - Robust Intelligence Program

The *Cross-Directorate Solicitation* will describe cross-cutting research programs, those with interests that cut across the entire CISE Directorate and are managed entirely within CISE. (Excluded are cross-cutting programs joint between CISE and other entities; see Further Notes.) For FY09-FY10, they will be:

- Data-Intensive Computing
- Network Science and Engineering
- Trustworthy Computing

All proposals in response to the Coordinated Solicitation and Cross-Directorate Solicitation for Small projects (up to \$500,000) awards will be due in December; Medium (\$500,001 to \$1,200,000), in October for FY09 and August FY10; and Large (\$1,200,000 to \$3,000,000), in November. We expect these programs and due dates to be the same for FY09 and FY10 (modulo the difference in due dates for Medium projects).

Please read on for our motivation and more details!

## **Why Are We Doing This?**

Above all, we want to inform the CISE community—in one place and at the same time—of the depth and breadth of all research programs offered within CISE. As a PI, you may not realize that there are program opportunities outside your usual view of CISE; your research interests may change over time or they may overlap with research areas covered somewhere else. By seeing the big picture all at once, you should be able to target your proposal to the most appropriate program and you may even get new ideas by seeing the diversity of areas CISE covers.

Since core solicitations in all three divisions do not change much from year to year, having a stable description, written once and for all, with updates and elaboration via a website, provides you with a steady picture of our core programs. Our Coordinated Solicitation gives you and us that stability.

Our Cross-Directorate Solicitation serves two additional purposes. First, transformative advances in a field often come from research at the intersection of two or more areas or disciplines. We want to welcome bold new ideas coming from people from different areas working together or even from one person who takes the risk of working across multiple areas of computing. We encourage PIs to work with people and on problems in areas different from their own; and to work on interdisciplinary projects and collaboratively. We do not want CISE's organizational structure to be a barrier for cross-fertilization of ideas.

Second, we want to be responsive to our fast-moving field. Some topics require nimbleness and timeliness. We expect that over time, some cross-cutting programs will evolve or be absorbed into the core programs, and that new cross-cutting programs will be introduced.

With the simultaneous release of the Coordinated and Cross-Directorate solicitations, we also want to help you plan your schedule in proposal preparation. By having some stability to our core and cross-cutting program announcements and by having the same due dates across all of CISE for the same size awards for at least two years, we hope that you can be selective as to what programs make best sense for your best ideas, when best to submit to which program, and how best you can coordinate with collaborators when writing joint proposals. We hope this uniformity will also help your Office of Sponsored Research plan in their helping you prepare your proposals.

We also hope to serve you better in terms of the review process. Coordinating core and cross-cutting research programs lets program directors in different divisions coordinate with each other more effectively. Sometimes a proposal may better be handled in a program in a different division or sometimes it may best be handled jointly by multiple program directors (possibly in different divisions), and sometimes it may best be reviewed by a multi-disciplinary panel. With coordinated due dates, program directors can better collaborate in selecting the most appropriate reviewers for your proposal and in timing when to hold review panels.

We designed the solicitations to be as open as possible, so as not to constrain your creativity; thus you will find the description of each core and cross-cutting program short and conceptual, rather than reading as a long list of topic areas. As always, CISE welcomes both theoretical and experimental research, and also projects, including collaborative ones, that embrace the two together.

In summary, our efforts are meant to help you send us your best ideas as well as help CISE run more effectively.

### **CCF Changes**

The CCF program changes reflect CISE's stance that (1) fundamental research advances in algorithms, communication, hardware, information, and software can be leveraged by all areas that CISE supports; and (2) emerging models and technologies is integral to each of our core programs: all core programs—across all three divisions—are supportive of emerging areas in computing. These changes also more closely reflect the way the community organizes itself.

Algorithmic Foundations includes the part of theoretical computer science that studies fundamental algorithms, data structures, and computational complexity. With Communication and Information Foundations, we highlight the importance of communication and information theory to our directorate and the PI community. Software and Hardware Foundations is for the most part a renaming of “Computing Processes and Artifacts” with a recognition of the unique role that software plays in our field, in contrast to all other science and engineering disciplines.

### **Further Notes**

CISE investments in Small, Medium, and Large projects complement the directorate's investments in the Expeditions in Computing program, where projects are funded at levels of up to \$10,000,000 total for durations up to 5 years.

The Coordinated Solicitation and Cross-Directorate Solicitation are for research programs that are solely within CISE. There will continue to be separate solicitations for: cross-foundational programs, e.g., Cyber-Enabled Discovery and Innovation (CDI); programs that are joint between CISE and other NSF Directorates/Offices and/or other agencies, e.g., Collaborative Research in Computational Neuroscience (CRCNS); CISE education programs, e.g., CISE Pathways to Revitalized Education in Computing (CPATH); and CISE infrastructure programs, e.g., Computing Research Infrastructure (CRI).

Sincerely yours,  
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