NATIONAL SCIENCE FOUNDATION
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ARLINGTON, VIRGINIA 22230

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Dear Colleague Letter: 8 UfU=bzfUghiff Wiff Yifif]X]b[`6`cWfg`fB=66gLdfcffUa`D#WfDAYYh]b[

August 29, 2016

Dear Colleagues:

With this Dear Colleague Letter (DCL), the National Science Foundation's (NSF) Division of Advanced Cyberinfrastructure (ACI) in the Directorate for Computer & Information Science & Engineering (CISE) announces the organization of the first workshop for Principal Investigators (PIs) and co-PIs funded by active awards under the Data Infrastructure Building Blocks (DIBBs) program. This invitation-only workshop will take place in early FY 2017, contingent upon available funding.

BACKGROUND AND CONTEXT

Over the past decade, ACI has supported a series of programs and activities that provision cyberinfrastructure (CI) and treat CI — composed of interoperable, heterogeneous physical resources and systems, software, and data — as itself an object of research. Of critical importance is meeting the needs of the scientific and engineering community. Science and engineering use cases drive CI development, and successful CI systems strike a balance reflective of both the underlying technology and disciplinary research needs.

Since its launch in July, 2012, as part of the CIF21 Initiation,[1] the Data Infrastructure Building Blocks (DIBBs)[2] program has funded or co-funded more than 40 awards through a collaborative approach that involves representatives from all seven NSF research and education directorates, including CISE's three research divisions. More generally, ACI has emphasized the need to seek to situate these data infrastructure technologies and systems in contexts that also address high-performance computing (HPC) and research instrumentation, networking and security, and software together with the learning and workforce development that will enable next-generation science and engineering.

The collaborative approach that distinguishes ACI's programs in data speaks to the central role that data play in current and future scientific and engineering research, as reflected in a recent discussion about NSF's Big Ideas at the May 2016 meeting of the National Science Board (NSB).[3] Many threads intersect to create the vision that was articulated at that NSB meeting: fundamental research in mathematics, statistics, and computational science; fundamental research on data topics; engagement of the research domains; embodiment of these innovations in a comprehensive data cyberinfrastructure ecosystem that enables and accelerates data-intensive research; and development and evaluation of innovative learning opportunities and educational pathways.

NEXT STEPS

To identify ways to build on prior and concurrent successes, reinforce and complement companion efforts in service of the vision outlined at the May 2016 NSB meeting, and evolve ACI's strategic programmatic needs, ACI envisions ongoing structured dialog with the data infrastructure research

community, similar to PI workshops in the HPC, software, networking and cybersecurity programs. The initial PI workshop will be organized to allow PIs and co-PIs with active DIBBs awards at the time of the invitation to meet, exchange results and lessons learned, and outline next steps based on their research advances. Such workshops have historically enabled better communication among funded investigators, reduced unnecessary programmatic redundancies, and fostered team-building within and across institutional boundaries. ACI expects the PI workshop to continue on an annual basis and may eventually expand it to include wider participation from industry as well as other Federal and State agencies. The shape and form of such future opportunities are partially contingent upon the outcomes of the initial PI workshop. Next steps, including future workshops, will be announced in a future DCL later in FY 2017 or in FY 2018.

Questions about this DCL may be directed to Amy Walton at awalton@nsf.gov and Robert Chadduck at rchadduc@nsf.gov.

Sincerely,

James Kurose
Assistant Director, CISE

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[1] Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF 21), https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504730.

[2] NSF 16-530, Data Infrastructure Building Blocks (DIBBS): http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504776.

[3] See especially "Harnessing Data for 21st Century Science and Engineering," https://www.nsf.gov/about/congress/reports/nsf_big_ideas.pdf.