

ACCI Update to MPS AC

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ACCI Developments

- Planning for next ACCI meeting has begun:
 - April 22-23, 2015
 - Overlap session with BIO Directorate
- Two working groups are being established
 - **Data and Code Access and Reproducibility**
 - Chairs: David A. Bader, Helen Berman
 - **ACI Scale and Scope (still forming)**

ACCI Developments

- **Data and Code Access and Reproducibility**
 - New policies and the changing research landscape, including the increasing role of computational and data science in research and education, have driven issues of data and code preservation and sharing to the fore.
 - This Working Group will consider how research and development activities in the computational and data sciences can be augmented in light of these changes, including:
 - attention to such issues as reproducible research,
 - re-use of data and codes,
 - the need for data repositories or sharing platforms,
 - standards for shared code and shared data,
 - citation and incentive mechanisms

ACCI Developments

- **ACI Scale and Scope (still forming)**
 - As computing technologies continue to evolve and computational infrastructure becomes central to all manner of scientific and engineering research, the demand for new ACI activities and investments will naturally increase.
 - This working group will examine and characterize CI users across a broad spectrum of research activities and relate these findings to ACI investments and programs.
 - Specific interests range from large scale computational simulations and data analyses to the so-called “long tail” of computational and data science research.
 - This working group may develop in-depth use cases and/or vignettes to more completely map the research community that uses or may use cyberinfrastructure resources in their research, including:
 - software, data storage, collaborative tools, and data analysis workflows, as well as capital-intensive investments such as telescopes and HPC systems
 - Chairs: tbd

CIF21 FY 2014 Accomplishments / Progress

- Data-intensive science
 - **DIBBs** made 18 awards: 16 Pilot and 2 Early Implementation awards with every directorate participating in funding
 - 24 small and eight mid-scale awards in the **Big Data** program
 - **AIP** prototype for the plant genome community
 - **NRT** received 200 proposals with 60% in the **DESE** track, with all Directorates participating
- Computational models, methods, and algorithms
 - **SI²** made 24 SSE (small) awards and one SSI (medium) award in FY14
 - **CDS&E** funded 71 proposals for a total of \$35 million with 48% of those funded by more than one Division
- Community building
 - **EarthCube** made 8 Building Blocks awards and 3 RCN awards; the Test Enterprise Governance project is building a leadership structure
 - **BCC** made 11 awards in FY14 involving SBE, EHR, and CISE
 - **NCN** has supported 12,500 simulation users, and 320,000 users have accessed the tutorial and lectures

CIF21 FY 2015 PLANS

- Data-intensive science
 - **DIBBs** will emphasize the role of multi-campus larger-scale data infrastructure
 - **Big Data** will post a third solicitation focused on foundational research, innovative applications, tool development, and the needs of the community
 - **AIP** prototype will be reviewed, and full implementation will be considered
 - **NRT** expects to make eight to ten awards totaling up to \$30 million with many in the **DESE** track, and will continue to have a CIF21-related track **NRT-DESE**
- Computational models, methods, and algorithms
 - **SI²** expects to make 15 SSE awards and eight SSI awards, together with two to three Institute awards and one or two Conceptualization awards
 - **CDS&E** will issue a revised program description aimed at increasing participation within NSF and increasing outreach to the community

CIF21 FY 2015 PLANS

- Community building
 - **EarthCube** will issue a solicitation focusing on critical components and conceptual governance, and will also work to integrate other federal agencies into the activities
 - SBE has released **RIDIR** (Resource Implementations for Data Intensive Research, replacing **BCC**) to support large-scale data resources and analytic techniques to advance SBE research; EHR will release **BCC-EHR** in February
 - **NCN** will continue to grow the nanoHUB online community working together in new ways to define new standards of learning and research