

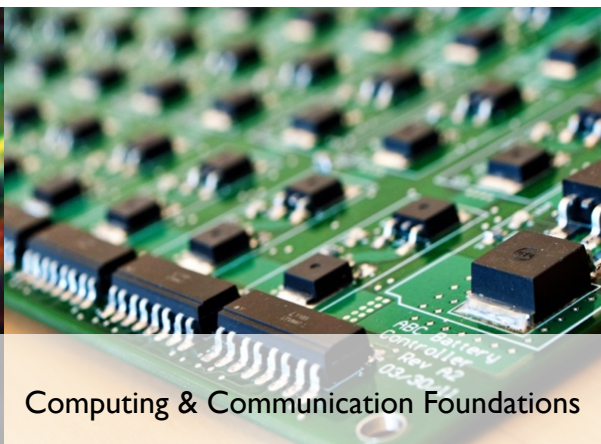


National Science Foundation

Computer & Information Science & Engineering (CISE)

Morgan State University Town Hall: Supporting STEM at MSU and Other HBCUs

The National Academies of Sciences, Engineering, and Medicine (NASEM) and Morgan State University (MSU)



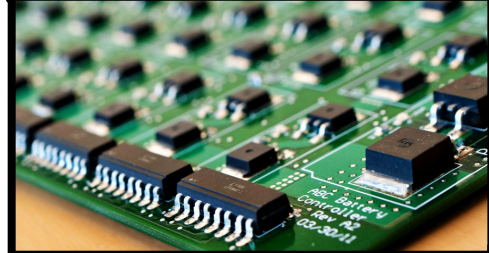
Fay Cobb Payton, Ph.D.

fpayton@nsf.gov

CISE Divisions



Office of Advanced Cyberinfrastructure supports and coordinates the development, acquisition, and provision of state-of-the-art cyberinfrastructure resources, tools and services essential to advancing science and engineering.



Computing and Communication Foundations advances computing and communication theory, algorithms for computer and computational sciences and architecture and design of computers and software.



Computer and Network Systems invent new computing and networking technologies and finds new ways to make use of current technologies.



Information and Intelligence Systems studies the interrelated roles of people, computers, and information to increase our ability to understand data, as well as to mimic the hallmarks of intelligence in computational systems

CISE programs address national priorities



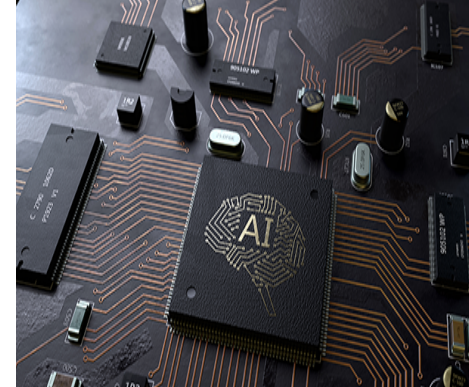
Image Credit: CCC and SIGACT CATCS

AI, Big Data, & Robotics

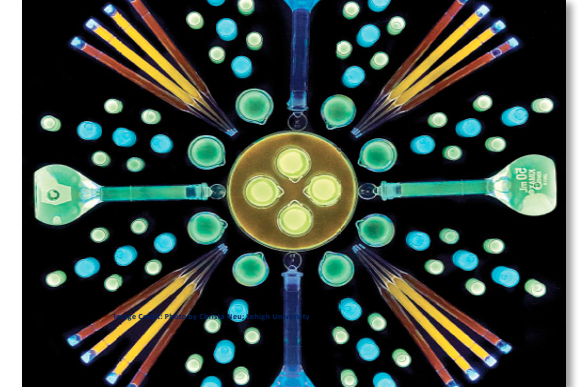


Image Credit: ThinkStock

Cybersecurity



**Manufacturing &
Microelectronics**



**Quantum Information
Sciences**



**Future Computing
Systems**



Image Credit: US Ignite

**Smart
Communities**



Image Credit: Calvin Lin, University of Texas, Austin

**Computer Science
Education**



**Advanced Wireless
Research**



NSF CISE MSI Research Expansion Program (NSF-21-533)

This program solicitation offers three Threads to grow research capacity at MSIs and encourage intra- and inter-organizational collaborations:

- 1) Research Capacity-Building Planning (RCBP), including (Thread 1, Track A) Enhancement and Development (RCBP-ED) and (Thread 1, Track B) Research-Focused (RCBP-RF)
- 2) Demonstration Projects (DP)
- 3) Research Partnerships Enhancement Projects (RPEP).

Focuses on CISE CORE and Participating Programs



Participating NSF/CISE Areas

- Directorate for Computer and Information Science and Engineering (CISE)
 - Division of Computing and Communication Foundations (CCF)
 - Computer and Network Systems (CNS)
 - Division of Information and Intelligent Systems (IIS)
 - Office of Advanced Cyberinfrastructure (OAC)
- Other programs spanning multiple CISE divisions (Participating Programs) :
 - Cyber-Physical Systems (CPS)
 - Secure and Trustworthy Cyberspace (SaTC)
 - Smart and Connected Communities (S&CC)
 - Smart and Connected Health (SCH)



CISE Topic Areas: Beyond the Core

Other CISE Programs

- PPOSS
- Formal Methods in the Field
- Designing Accountable Software Systems (new)
- Big Data Hubs (as a resource for the community)

Multi-directorate Programs led by CISE

- Secure and Trustworthy Cyberspace
- Cyber-physical Systems
- National AI Research Institutes
- Smart and Connected Health
- Smart and Connected Communities
- Civic Innovation Challenge (CIVIC)
- National Robotics Initiative 3.0
- Fairness in AI with Amazon

Programs Led by Other Directorates but of Interest to CISE

- Designing Materials to Revolutionize and Engineer our Future
- Foundational Robotics
- Future Manufacturing
- Spectrum Innovation Initiative
- Sustainable Regional Systems
- Understanding the Brain
- NSF Research Trainee Program (NRT)

Education programs

- Computer Science for All
- Computing in Undergraduate Education
- Broadening Participation in Computing Alliances

Infrastructure

- Major research Instrumentation
- Mid-Scale Research Infrastructure – Size classes 1 (\$6-20M) and 2 (\$20-100M)
- CCRI – CISE Community Research Infrastructure

NSF Big Ideas and their Solicitations

- Future of Work
- Harnessing the Data Revolution
- Data Science Corps
- Quantum Leap
- Quantum Leap Faculty Fellows

Entrepreneurship and Translation

- Convergence Accelerator
- I-Corps, SBIR/STTR
- Industry/University Cooperative Research Centers (IUCRC)
- CISE InTrans supplements, CISE Transition-to-Practice opportunities

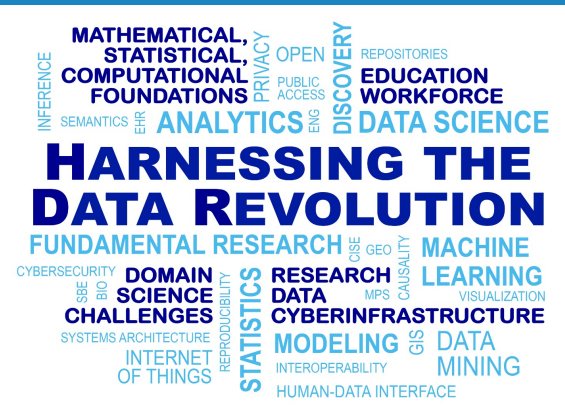


NSF's 10 Big Ideas

RESEARCH IDEAS

HARNESSING THE DATA REVOLUTION

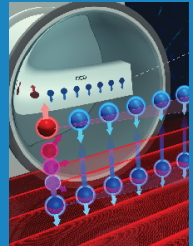
Harnessing Data for 21st Century Science and Engineering



Future of Work at the Human-Technology Frontier



Quantum Leap: Leading the Next Quantum Revolution



Windows on the Universe



Understanding the Rules of Life

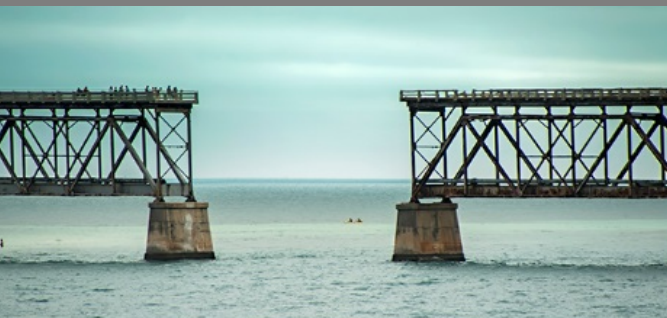


Navigating the New Arctic



PROCESS IDEAS

Mid-scale Research Infrastructure



NSF-INCLUDES



NSF 2026



Growing Convergent Research





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