Transforming our World with Quantum Technologies

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NSF Engineering Strategic Plan

MISSION

To transform our world for a better tomorrow by driving discovery, inspiring innovation, enriching education, and accelerating access

VISION

NSF Engineering will be a global leader in identifying and catalyzing fundamental engineering research, innovation, and education.

GOALS

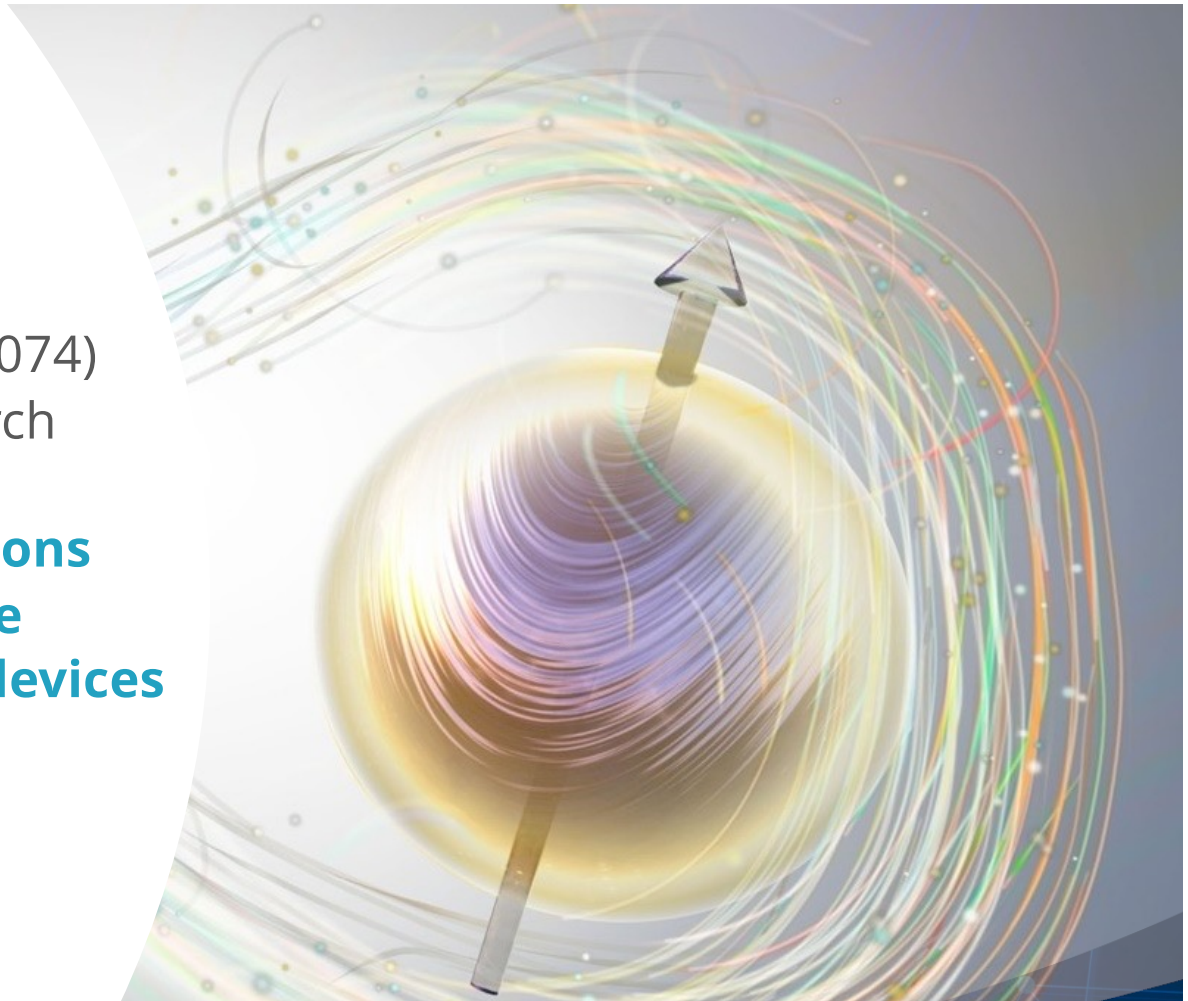
Propel
U.S. leadership in transformational engineering approaches to problems with societal impact

Expand
opportunities for people

Catalyze
purposeful partnerships

Quantum Manufacturing

- Dear Colleague Letter (NSF 22-074) for EAGER and standard research proposals
- **New manufacturing innovations enabling and accelerating the manufacturing of quantum devices**
- Spanning device fabrication to potential modes of system integration
- *Continuous submission*



Moving Quantum Technologies from Lab to Fab

Access to Semiconductor Fabrication

- Dear Colleague Letter (NSF 22-113) for supplemental proposals
- **Fabrication of research devices and systems through standard semiconductor fabrication facilities**
- Open to principal investigators of active awards in ENG, CISE, and the MPS Divisions of Materials Research (DMR) and Chemistry (CHE)
- *Continuous submission*

National Nanotechnology Coordinated Infrastructure (NNCI)

10-year, $160-million NSF investment in 16 NNCI sites and coordinating office

- Serves researchers from academia, large and small businesses, and government
- **Provides access to leading-edge fabrication and characterization tools, instrumentation, and expertise across nanoscale science and engineering**
- Builds community around commercialization, diversity, international engagement, and other priority topics
- **www.nnci.net**

transform quantum

Join this community for

- translating ideas into quantum-enabled devices and systems
- Road mapping quantum technology infrastructure

Quantum Centers

Center for Quantum Technologies

- Industry-University Cooperative Research Center led by Purdue University, with Indiana University and Notre Dame
- develop and transfer foundational knowledge into industry-relevant quantum devices, systems, and algorithms

Center for Quantum Networks

- Engineering Research Center led by University of Arizona with Harvard, MIT, and Yale University
- aims to create the first quantum network with fully error-corrected quantum connectivity over local and global scales

Early Career Support

- Engineering Postdoctoral Fellowship Program
  - ***Spring 2023 cohort underway***
  - **efellows.asee.org**
- Engineering Research Initiation
  - ***NSF 22-595 proposals due September 15, 2023***
  - Supports new investigators as they initiate their research programs
  - Limited to those not affiliated with “very high research activity” R1 institutions
- Faculty Early Career Development Program (CAREER)
  - ***NSF 22-586 proposals due July 26, 2023***
  - Annual ENG CAREER proposal-writing workshop

Broadening Participation

- Broadening Participation in Engineering
  - Planning and Conference Grants
  - Research in Broadening Participation in Engineering
  - Inclusive Mentoring Hubs ***NSF 22-514 target date November 15, 2023***
  - Centers for Equity in Engineering ***NSF 22-514 target date November 15, 2023***
- Research in Undergraduate Institutions (RUI) and Research Opportunity Awards (ROA) ***Continuous submission***
- HBCU Excellence in Research (HBCU-EiR) ***Letters of Intent due July 27, 2023***
- EPSCoR Research Infrastructure and Workshop Opportunities

Opportunities to Engage

- Workshops, information sessions, ERVA
- NSF Website – Funding Opportunities
- Continuous submission and application deadlines
- RFI, Metaprograms, DCL, Solicitations
- Contact Program Directors

www.quantum.gov

World Quantum Day
April 14

SIGN UP FOR UPDATES >