

Dawn M. Tilbury, Ph.D.
Biography



Dr. Tilbury leads NSF's Directorate for Engineering in its mission to support engineering research and education critical to the nation's future and fosters innovations to benefit society. Engineering breakthroughs address national challenges, such as smart manufacturing, resilient infrastructure and sustainable energy systems. Engineering also brings about new opportunities in areas ranging from advanced photonics to prosthetic devices. The Engineering Directorate helps to advance NSF's Ten Big Ideas, including the Future of Work at the Human-Technology Frontier, the Quantum Leap, Understanding the Rules of Life, and NSF INCLUDES. The Engineering Directorate provides about 40 percent of the federal funding for fundamental research in engineering at academic institutions and distributes about 1,600 research awards each year.

Partnerships with industry are a key component of the Engineering Directorate's programs, including GOALI (Grant Opportunity for Academic Liaison with Industry) where industry researchers collaborate directly on academic research projects, and INTERN which allows graduate students funded on NSF projects to spend up to 6 months in a non-academic internship (such as a company, government lab, or non-profit organization). The IUCRC (Industry-University Cooperative Research Center) program brings together NSF researchers with funding provided by industry and other government agencies to do pre-competitive research, and the ERC (Engineering Research Centers) program supports large-scale convergence research projects together with workforce development, diversity and inclusion, and an innovation ecosystem. The Engineering Directorate coordinates NSF's I-Corps program, providing entrepreneurial training to faculty, graduate students and postdocs. NSF's SBIR and STTR programs, housed in the Engineering Directorate, support fundamental research being done in high-tech small businesses helping them transition new technologies into the commercial marketplace.

A professor at the University of Michigan since 1995, in both mechanical and electrical engineering, Dr. Tilbury has a background in systems and control engineering. She received the B.S. degree in Electrical Engineering, *summa cum laude*, from the University of Minnesota in 1989, and the M.S. and Ph.D. degrees in Electrical Engineering and Computer Sciences from the University of California, Berkeley, in 1992 and 1994, respectively. She is the inaugural chair of the Robotics Steering Committee and served as an associate dean for research in the College of Engineering. She was elected Fellow of the IEEE in 2008 and Fellow of the ASME in 2012, and is a Life Member of SWE. Dr. Tilbury retains her position with the University of Michigan and shall return after her term with NSF expires.