

ADVANCED WIRELESS RESEARCH

Advanced Wireless Funding¹			
(Dollars in Millions)			
	FY 2024		
	Current	FY 2025	FY 2026
	Plan	(TBD)	Request
CISE	\$84.47		\$29.56
ENG	22.10		11.00
MPS	15.30		3.00
TIP	21.52		15.90
Total	\$143.39		\$59.46

¹ Funding displayed may have overlap with other topics and programs.

Advanced wireless networks and systems provide the backbone that connects users, devices, applications, and intelligent services that will continue to enrich America's economy, health and security. Next-generation (NextG) wireless networked systems spur innovation and enable the development of new markets, products, and services, thereby contributing to economic growth. NSF-supported advanced wireless research will innovate in areas critical to future generations of wireless networks and offer new insights capable of making wireless communication faster, smarter, more secure, resilient, and affordable.

In FY 2026, NSF will support foundational research enabling conception, exploration, and development in edge, cellular and hybrid, mobile, vehicular, airborne, underwater, machine to machine, satellite, Internet of Things (IoT), and quantum wireless networks. Topics include new wireless devices, circuits, protocols, and systems for "6G" and beyond, AI-native networks, emerging physical layer technologies, network architectures, hardware and high frequency capabilities, fine-grained and real-time dynamic spectrum allocation and sharing, integration of wireless communications and sensing, mobile sensing and edge computing, and intelligent integrated satellite-terrestrial networks.

AI will be deeply embedded in NextG networks, potentially transforming how they are designed, managed, and utilized. NSF will invest in foundational research and vertical-driven technology development, demonstration, and translation activities that will lead to leaps in performance and capabilities of NextG advanced intelligent network systems that span the user-edge-core-cloud continuum. This includes research to address emerging issues in innovative higher-layer services that can be enabled by wireless communications, such as wireless localization, augmented reality, remote healthcare, disaster response, smart agriculture, and education and training.