Computing Everywhere!
Why Partnerships Matter

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Computing Research: Addressing National Priorities and Societal Needs
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Partnerships: Many dimensions

Partnerships build capacity, leverage resources, increase the speed of translation from discovery to innovation

- Collaborative Research in Computational Neuroscience (CRCNS): Germany, France, Israel
- NSF-BSF (Israel): USICCS, SaTC DCL; CCF core (small)
- NSF-Germany: automation design DCL
- US-Japan: Big Data and Disaster Research (BDD); JUNO
- NSF-Finland: WIFUS
- NSF-India: PC3
- NSF-Netherlands: privacy
- NSF-Brazil: cybersecurity
Partnerships: Many dimensions

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- Cyber Physical Systems (CPS): DHS, DOT, NASA, NIH, USDA
- National Robotics Initiative (NRI): DARPA, NASA, NIH, USDA, DOE
- Smart and Connected Health (SCH): NIH
- Collaborative Research in Computational Neuroscience (CRCNS): NIH

all joint with other NSF directorates
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Changing times:
- modestly increasing federal research budgets
- varying emphasis on basic research investment levels in corporate labs
- corporate assets (infrastructure, data, customer engagements) increasingly important but often out-of-reach of academia
- emergence of CS interest in traditionally non-IT domains (appliance, auto, energy, media)
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Foundational thoughts:
- CISE researchers have rich engagements with industry today; NSF should amplify, facilitate ... not impede those engagements
- create new research capacity, avenues, rather than funding shift
- partnerships with industry likely to be mission, rather than discipline, focused
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- NSF/SRC: SaTC STARRS, E2SDA
- NSF/Intel Partnerships: VEC, CPS
- Innovation Transition (InTrans) DCL for Expeditions, Frontier projects

**Prescription 3:** Regain America’s Standing as an Innovation Leader by Establishing a More Robust National Government-University-Industry Research Partnership