

NSF CISE: EXPEDITIONS IN COMPUTING // NSF 18-528

The Directorate for Computer and Information Science and Engineering (CISE; www.nsf.gov/CISE) has established the *Expeditions in Computing (Expeditions)* program to provide the CISE research and education community with the opportunity to pursue ambitious, fundamental research agendas that promise to define the future of computing and information.

In planning *Expeditions* projects, investigators are encouraged to come together within or across departments or institutions to combine their creative talents in the identification of compelling, transformative research agendas that promise disruptive innovations in computer and information science and engineering.

DEADLINE	AWARDS	APPLICATION LIMITS
Required Pre-Proposals are due April 25, 2018 by 5 p.m. Invited Full Proposals are due January 16, 2019 by 5 p.m.	Projects are funded at levels up to \$2,000,000 / year for 5 years. It is estimated that 2 to 4 awards will be made in each round.	An individual may only participate in one preliminary and full proposal as PI, co-PI, or senior personnel

EXPEDITIONS IN COMPUTING PROGRAM GOALS

- To catalyze far-reaching research or research cyberinfrastructure explorations motivated by deep scientific questions or hard problems in the computer and information science and engineering fields and/or by compelling applications and novel technologies that promise significant scientific and/or societal benefits;
- To inspire current and future generations of Americans, especially those from under-represented groups, to pursue rewarding careers in computer and information science and engineering; and
- To stimulate significant research and education outcomes that, through effective knowledge transfer mechanisms, promise scientific, economic and/or other societal benefits.

Each of these goals must be specifically addressed in the pre-proposal.

PROJECT CHARACTERISTICS

- Foster research climates that nurture creativity and informed risk-taking, and value complementary research and education contributions such that the whole *Expeditions* project is greater than the sum of its parts;
- Draw upon well-integrated, diverse teams of investigators from computer and information science and engineering fields, and from other fields of science and engineering as appropriate for a given project;
- Stimulate effective knowledge transfer; and
- Demonstrate experimental systems, support shared experimental facilities (including instruments, platforms and/or testbeds), and/or deploy research cyberinfrastructure to accelerate discovery and learning.

Each of these characteristics must be specifically addressed in the pre-proposal.

BROADENING PARTICIPATION

Each *Expeditions in Computing* proposal will be required to include a meaningful Broadening Participation in Computing (BPC) plan.

More information and examples of meaningful BPC activities and metrics can be found on the CISE-BPC webpage: <https://www.nsf.gov/cise/bpc>.