



NATIONAL SCIENCE FOUNDATION
2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

NSF 19-016

Dear Colleague Letter: Fairness, Ethics, Accountability, and Transparency: Enabling Breakthrough Research to Expand Inclusivity in Computer and Information Science and Engineering Research

November 2, 2018

Dear Colleagues:

The National Science Foundation's (NSF) Directorate for Computer and Information Science and Engineering (CISE) is committed to maximizing the positive consequences of the research that it funds through inclusive research approaches. Indeed, a key component of CISE's mission is *to contribute to universal, transparent, and affordable participation in an information-based society*. Some research practices and methods may carry biases and inequities that can in turn have significant impacts on the scientific community and broader society. The increased reliance on computing and information technologies may further increase and automate such biases and inequities.

Professional societies, national and global corporations, and other organizations have issued statements, standards, requirements, and/or ethical guidelines that call attention to the need for more inclusive research approaches to realize widely beneficial outcomes. Codes of ethics, for example, have been established to emphasize human-subjects sampling methods and dataset selection and training methods to minimize the introduction of biases. Some codes or standards are addressing privacy protections for end users. Others emphasize the need to ensure that users, whether individuals, groups, or entities, understand and appropriately apply the processes or tools emerging from their research activities. Standards and guidelines have also been established regarding methods to mitigate over-generalizations in the uses or outputs of systems, and to provide justifications or rationales for the use of specific algorithms or statistical models in terms of such factors as ethics or accountability.

With this Dear Colleague Letter (DCL), CISE invites principal investigators (PIs) to submit proposals to its core programs [spanning the [Computer and Network Systems \(CNS\)](#),

Computing and Communication Foundations (CCF), and Information and Intelligent Systems (IIS) divisions and the Office of Advanced Cyberinfrastructure (OAC)] that contribute to discovery in research and practice related to fairness, ethics, accountability, and transparency (FEAT) in computer and information science and engineering. Specifically, CISE is interested in receiving, through these programs:

- Proposals pertaining to *general* topics in computer and information science and engineering while also integrating or applying approaches to advance FEAT; and
- Proposals whose *primary* foci are on methods, techniques, tools, and evaluation practices as means to explore implications for FEAT.

In explorations and use of FEAT, PIs are strongly encouraged to select and articulate their own disciplinary or interdisciplinary definitions consistent or aligned with these concepts.

Please note that exploration and use of FEAT is not intended to replace Broadening Participation in Computing (BPC) plans, which are also strongly valued in CISE (see <https://www.nsf.gov/cise/bpc/> for details about our BPC effort).

PROPOSAL PREPARATION AND SUBMISSION

This DCL is not a special competition or a new program. Prospective principal investigators should meet all requirements associated with the core programs solicitations to which they are responding. Additionally, to call attention to responsiveness to this DCL, project summaries should include the acronym "FEAT" in the keyword list.

REVIEW PROCESS

Proposals responsive to this DCL will be reviewed with other proposals submitted to CISE's core program solicitations and in accordance with NSF's merit review criteria as well as any additional solicitation-specific review criteria identified in the corresponding solicitations.

POINTS OF CONTACT

For further information, interested PIs may contact:

- Tonya Smith-Jackson, Program Director, IIS, telephone: (703) 292-5179, email: tsmithja@nsf.gov;
- Tracy Kimbrel, Program Director, CCF, telephone: (703) 292-8910, email: tkimbrel@nsf.gov;
- Fay Cobb Payton, Program Director, CNS, telephone: (703) 292-8950, email: fpayton@nsf.gov;
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- Rahul Shah, Program Director, CCF, telephone: (703) 292-8910, email: rshah@nsf.gov;
- Sylvia Spengler, Program Director, IIS, telephone: (703) 292-8930, email: sspengler@nsf.gov; and
- Ralph Wachter, Program Director, CNS, telephone: (703) 292-8950, email: rwachter@nsf.gov.

Sincerely,

Jim Kurose
Assistant Director, CISE