

## **Workshop: Assessing the Broader Societal Impact of Funding Techno-scientific Research**

This research workshop will gather together an interdisciplinary and international group of researchers to address issues surrounding the NSF's second "Broader Impacts" merit review criterion. Since the current generic merit review criteria were instituted in 1997, although members of the scientific and engineering community have displayed a general facility with regard to describing and assessing the "Intellectual Merit" of proposals (Criterion 1), many continue to express confusion regarding how to describe and assess the "Broader Impacts" of proposed research. The working hypothesis of this workshop is that we can improve our understanding, communication, and decision-making related to the assessment of the broader societal impact of investments in scientific and technical research by exploring how various stakeholders' background beliefs and underlying assumptions regarding the science-society relation contribute to attitude formation and expectations regarding such assessment. Workshop participants will focus on the case of Criterion 2 in order to (1) contextualize Criterion 2 in terms of the values of scientific freedom and responsibility, (2) improve the scientific and engineering community's ability to describe and to assess the broader impacts of proposed research, (3) improve all stakeholders' understanding of the role background beliefs and underlying assumptions play in forming various expectations regarding the assessment of broader impacts, (4) improve policy-crafting with regard to assessing broader societal impact, and (5) lay the foundation for future research regarding the part scientists and engineers can play in assessing the broader impact of their research.

The intellectual merit of this workshop lies in its role in advancing knowledge and understanding both within and across the fields of philosophy, science, technology, and society (STS) studies, the policy sciences, and political science, as well as across the larger science and engineering community. By gathering together some of the leading researchers on the science-society relation to focus on the role of Criterion 2 in assessing the broader impacts of funding techno-scientific research, this project furthers a growing discussion of the values inherent in the science-society relationship: What is the societal value of science? What is the proper relationship between science and policy-making? How does science affect societal values? How do societal values affect science? Moreover, examining the case of NSF's Second Criterion should help to inform current efforts to develop a "Science of Science Policy." Finally, by focusing on NSF's second criterion, this project will not only interest scholars *of* science and technology, but also practicing scientists and engineers. The workshop will be co-sponsored by the Scientific Freedom, Responsibility, and Law Program of the American Association for the Advancement of Science.

The broader impacts of this workshop are closely allied with and follow directly from its intellectual merit. By focusing its scholarly research on NSF's second criterion, this workshop will contribute to the practical application of the second criterion to the benefit of both the scientific and non-scientific communities. (1) This workshop will broaden the participation of underrepresented groups not only through their inclusion as workshop participants, but also in being open to and encouraging public participation. (2) It will focus on the broad dissemination of its research findings -- in addition to publishing a special issue of "Science and Engineering Ethics," the PI will develop a website to publish transcripts of the actual proceedings (including participant presentations, roundtable discussions, and open discussions with the audience). Moreover, the papers for "Science and Engineering Ethics" are to be written after and as a result of the workshop. Whereas many workshops publish reports containing only the papers actually presented at the workshop, in this case participants will also benefit from the interaction the workshop provides, go home, think some more, and then write. The idea is that the workshop should be a learning experience for participants, as well as for a larger audience. Finally, (3) an elucidation of the linkage between techno-scientific research and societal benefit through a critique of the second criterion and of the values underlying the science-society relationship will prove beneficial to scientists and engineers by helping them understand and address the relationship between their own research and society, a requirement for meeting the second criterion. This will in turn benefit society, insofar as researchers will be able better to focus on research geared toward societal benefit.