NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230

NSF 16-059

Dear Colleague Letter: Citizen Science and Crowdsourcing - Public Participation in Engineering Research

March 9, 2016

Dear Colleagues:

Through this Dear Colleague Letter (DCL), the Divisions of Civil, Mechanical and Manufacturing Innovation (CMMI) and Chemical, Bioengineering, Environmental, and Transport Systems (CBET) within the National Science Foundation's Directorate for Engineering invite proposals in the area of Public Participation in Engineering Research, focusing on Citizen Science and Crowdsourcing.

In Citizen Science, members of the public voluntarily assist in the scientific process, engaging in activities that may include formulating research questions, conducting scientific experiments, collecting and analyzing data, interpreting results, making new discoveries, developing technologies and applications, and solving complex problems. In Crowdsourcing, members of the public, whether at-large or within particular groups, are asked to assist with online, distributed data collection and/or problem solving. Recent Citizen Science and Crowdsourcing applications in areas covered by CMMI and CBET have ranged from post-disaster damage assessment and emergency response, to the development of new systems for continuous monitoring of polluted bodies of water, to large-scale elicitation of preferences for informing product design and feedback.

While Citizen Science and Crowdsourcing methods promise dramatically improved capabilities to support research, concerns have been raised about the reliability, validity and trustworthiness of the data and results they produce. These concerns are particularly acute in situations where these data are used to inform activities that bear upon the well-being of communities, including those exposed to risks from hazards.

To support the continued expansion of research involving Citizen Science, Crowdsourcing, and related forms of public participation, this DCL invites proposals that address these concerns, including underlying theory and methodologies that shape Citizen Science and Crowdsourcing in areas covered by CMMI and/or CBET. Proposals may also address new methods and technologies for improved data collection. Furthermore, CBET will also support novel applications of previously tested methods for purposes of data collection and analysis. Inclusion of social and behavioral science expertise is encouraged where appropriate.

Proposals may be submitted either as requests for supplements to existing awards or as Early-concept Grants for Exploratory Research (EAGER) proposals. See the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 16-1) for guidelines and expectations for these funding mechanisms.

- For EAGER proposals addressing this DCL, the anticipated award size will be up to $100,000, with an anticipated duration of one year.

- For supplements to existing awards, the maximum award size will be limited to 20% of the original award or $100,000, whichever is smaller.

For either mechanism, interested PIs must contact the cognizant CMMI or CBET program officer prior to submission.

Proposals for fiscal year 2016 must be submitted by June 1, 2016, but earlier submissions are encouraged and decisions will be made on an ongoing basis.

Dr. Pramod Khargonekar
Assistant Director
Directorate for Engineering