PROJECT SUMMARY

Overview:

Program Elements

Request for Renewal:	previously funded as NSF-1460971 ($342,525; 5/1/15-4/30/18)
Project Title:	REU Site: Research Experiences in Pervasive Computing for Smart Health, Safety, and Well-being
PI:	Jamie Payton, PI; Jie Wu, Co-PI (Computer & Info. Sciences)
Submitting Organization:	Temple University of the Commonwealth System of Higher Education
Other organizations:	none
Locations:	Temple University of the Commonwealth System of Higher Education
Main fields of research:	pervasive computing, wireless networking, computer vision, & information analytics
# of undergraduate participants per year:	10
Type of REU Site:	summer
# of weeks for REU participants:	9
International, RET components:	none
Point of contact for student applicants:	Jamie Payton, (215) 204-1237, payton@temple.edu
REU Site Website:	www.cis.temple.edu/reu

Project Overview: The objective of the REU Site at Temple University is to implement and disseminate effective practices to engage a diverse group of undergraduate students in research to advance the state of the art in pervasive computing solutions for improving health, public safety, and well-being. The site emphasizes participation of promising students from under-represented groups in computing and from institutions that have limited research programs. Each research project has a socially relevant theme centered around public health and safety, providing students with the opportunity to apply and extend their computing knowledge while becoming engaged with the broader community. Our site cultivates a community of practice that develops REU students through just-in-time training in research skills at a weekly workshop. REU students present intermediate work at a regional REU Site conference organized by the PIs and present their final work at an undergraduate research competition. REU students and mentors are encouraged to continue their collaboration after the REU Site program and to submit their work to peer-reviewed publication venues.

Intellectual Merit:

The intellectual merit of this project lies in the discovery of new algorithms, creation of new technologies, and advanced understanding in the fields of pervasive computing and its component areas of wireless networking, computer vision, and data analytics. These findings will be applied to develop innovative pervasive computing solutions to improve health, well-being, and public safety. Faculty mentors have strong publication and undergraduate research advising records, and are well positioned to undertake this research. Furthermore, this project will disseminate institutional knowledge on funding, operating, and evaluating an REU Site.

Broader Impacts:

The broader impacts of this project lie in the potential to increase the interest and preparation of undergraduate students, particularly those from underrepresented groups, in computing research, to promote graduate study in computing. The project?s focus on solving socially relevant problems in cutting-edge fields is a proven approach for engaging minorities and women, and the emphasis on recruitment from undergraduate institutions reaches students not typically exposed to research. The project includes plans to develop a workshop to communicate best practices in REU Site funding, operation, and evaluation, potentially introducing new members to the CISE REU community.