Conference Focus:

Making Race and Culture Work in the STEM Era:
Bringing All People to the Forefront

As the United States continues to promote the advancement of careers in fields related to Science, Technology, Engineering, and Math (STEM), issues of diversity, equity, and inclusion have been virtually ignored. Although STEM-related careers are perhaps the fastest growing high salary jobs in the world, virtually no attention has been given to the racial and cultural characteristics of the people employed in STEM fields or the issues of people who are affected by them. More generally, one must ask whether there is any place in society for people whose talents and abilities lie in other domains. Three areas of concern are education, health, and mental health services, although there may be many more. Each of these areas has been the focus of research and policy that focuses on the content of STEM fields without regard to service needs of people who have been ignored, devalued, or improperly served by an exclusively STEM content focus.

To address the absence of culture as a focus in STEM education, federal and state governments have provided funds to elementary and high schools to work toward increasing the cultural relevance of STEM curricula that address the underrepresentation of marginalized groups in STEM fields. Moreover, interventions such as culturally relevant STEM high schools and STEM-based out-of-school programming have been implemented with varying success. For their part, U.S. colleges and universities have attempted to increase the race-gender diversity within their STEM programs by increasing the enrollment of underrepresented peoples and have had varying long-term success. Asian American men and women have a much higher representation in the fields of study and occupations related to STEM, than Black women who are more likely than White women to select a STEM major. However, White males predominate in STEM education and subsequent occupations.

Missing from virtually all of the STEM educational interventions is a focus on the racial-cultural-gender experiences of the groups who are not White males. Diversifying interests in STEM requires examining why some race-gender groups thrive in STEM contexts while others do not. In STEM-related work settings, more attention is needed to address questions of why people of Color and White women face interpersonal, professional, and financial discrimination in the workplace, as well as how they cope with their specific experiences of discrimination. Issues raised by people of Color in STEM occupations include limited access to informal and formal social networks, few promotions, and lack of advancement opportunities. Culturally responsive research and interventions would assist employers, practitioners, and
human resources professionals in recognizing and addressing workplace advantages and disadvantages.

Behavioral and social sciences and humanities professions can be helpful to STEM disciplines in recognizing and addressing people issues. The technologizing of the practice of medicine through IBM’s Watson and other forms of computing in hospitals threatens to make service delivery even less sensitive to the patient racial and cultural dynamics that contribute to positive health outcomes. Specialists in the psychology of race and ethnic culture have provided race-culture responsive training to service providers at all levels. Artists have helped STEM fields become person centered by using their creativity to make products more visually and aurally stimulating. Although STEM advancements have far reaching implications for improving the lives of humans in a variety of aspects of society, ignoring or devaluing the contributions of non-STEM people and disciplines threatens to make us a society fit only for robots.

We envision an interdisciplinary forum in which researchers, practitioners, educators, government officials, and social activists explore a variety of perspectives and issues and interact with each other while addressing mutual concerns related to race, ethnic culture, and STEM defined in various ways. We invite proposals from any discipline that addresses some aspect of making race and ethnic culture work in the STEM era. “Work” is broadly defined to include preparation for and involvement in STEM disciplines as well as making STEM function for all people.

Potential areas of interest related to education are out-of-school time programming, culturally responsive mentorship, and bias in the education system. Policy focuses might include the influence of technology in communities of color, and work-force bias in STEM fields with respect to the intersections of gender, race, and ethnicity and its effects on global markets, immigration, and STEM demands. Especially welcome are mental health and education interventions intended to reduce the effects of injustice or promote social justice among individuals, communities, or systems.

Presentations should focus on developments in research, professional practice, education, community activities, or activism pertaining to race or ethnic culture and STEM. Creative conceptual papers and models are encouraged. Our goal is to stimulate dialogue and action with respect to racial or ethnic cultural factors as they pertain to STEM. Strongest consideration will be given to proposals that focus directly on the 2018 Diversity Challenge theme, “Making Race and Culture Work in the STEM Era: Bringing All People to the Forefront.”

**Areas of Emphasis:**
Suggestions for Proposals:

Although many topics are germane to the Diversity Challenge theme, some examples that merit an explicit racial or ethnic cultural focus are:

- School-based interventions to address out of school factors that affect educational outcomes in STEM
- Effects of racism and ethnoviolence in STEM education and professions
- Diversity or culturally responsive training for STEM professionals
- Training teachers to attend to biases and counter-STEM expectations as they pertain to themselves and their students
- After or out-of-school programs addressing issues in education equality within the STEM field.
- Integration of the Arts and Humanities into STEM fields
- Research investigating the STEM experiences of women
- Use of racial or ethnic theories to develop social justice interventions
- Implications of racial and/or ethnic segregation patterns within STEM fields
- Investigations of families’ racial/cultural socialization practices on their children’s interest in STEM.
- Racially-Culturally responsive evaluation of school systems, teachers, and administrators
- Examinations of critical or anti-racist curricula and their outcomes
- Research on cultural and social capital and how it impacts career progression
- Attention to racial or cultural influences on STEM in the global market
- Impact of the improving technologies on job satisfaction and security
- Biases or discrimination in algorithmic decision models and video-game or computer technology