Final Report

DOE Grant DE-SC0013568
DOE Workshop at Tapia Conference

1. Tapia Conference

The DE-SC0013568 DOE Grant, in the amount of $11,822.79, was used to support five doctoral students from underrepresented groups to attend the 2015 Richard Tapia Celebration of Diversity in Computing Conference, held February 18-21 in Boston, MA. Each scholarship was approximately $1200 to cover conference registration, travel, and lodging for the duration of the conference. The remaining $5,822.79 was used to support a DOE Breakfast Workshop during breakfast on Thursday, February 19. The Breakfast supported approximately 140 graduate students from underrepresented groups to learn about the different career opportunities at the different DOE National Laboratories.

The program for the DOE Breakfast Workshop consisted of the following presentations:

7:00	Participants Arrive/Breakfast Served
7:10	Welcome: Valerie Taylor, Tapia Conference Steering Committee Chair
7:15	Lawrence Berkeley Laboratory: Elizabeth Bautista
7:25	Lawrence Livermore National Laboratory: Kevin Griffin
7:35	Oak Ridge National Laboratory: Kristina Thiagarajan
7:45	Q&A
7:55	Closing Remarks - Valerie Taylor

The Richard Tapia Celebration of Diversity in Computing Conference is the main conference for celebrating the diversity that exists in computing. The conference mission is to bring together undergraduate and graduate students, professionals, and faculty in computer science and computer engineering from all backgrounds and ethnicities to:

- **Celebrate** the diversity that currently exists in computer science and computer engineering.
- **Connect** with others with common backgrounds, ethnicities, disabilities, and gender so as to create communities that extend beyond the conference.
- **Receive advice** from and make useful contacts with computer science and computer engineering leaders in academia and industry.
- **Be inspired** by great presentations and conversations with successful people in computer science and computer engineering who have similar backgrounds, ethnicities, disabilities, and gender to the attendees.

The conference series was named in honor of Dr. Richard A. Tapia, a University Professor and holder of the Maxfield-Oshman professorship in the Department of Computational and Applied Mathematics at Rice University in Houston, Texas. Dr. Tapia is internationally known for his research in the computational and mathematical sciences. In addition, he is a national leader in education and outreach programs. Some of his recent honors and awards include the 2011 National Medal of Science, the highest scientific award given by the U.S. government; a Distinguished Public Service Award from the American Mathematics Society; as well as the 2004 Society for Industrial and Applied Mathematics (SIAM) Prize for Distinguished Service to the Profession of Applied Mathematics. Hispanic Engineer & Information Technology Magazine also selected him as one of the 50 Most Important Hispanics in Technology and Business in 2004 and in 2007. Dr. Tapia received the 1997 Lifetime Mentor Award from the American Association for the Advancement of Science (AAAS). In 1996, President Clinton appointed Dr. Tapia to the National Science Board (NSB) - the governing body of the National Science Foundation. Also in 1996, he received the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring and was named the 1996 Hispanic Engineer of the Year by Hispanic Engineer Magazine, the first academician to receive this honor. In 1994, he was the first recipient of the A. Nico Habermann Award from the Computing Research Association for outstanding contributions to aiding members of under-represented groups within the computing community. In 1992, he was elected to the National Academy of Engineering (NAE) for his seminal work in interior point methods, the first native-born

Latino to win this award. Dr. Tapia holds the highest academic position at the university, University Professor; sixth in the history of Rice University to have this title.

The Tapia Conference has grown from 164 attendees in 2001 to 806 attendees in 2015. The 2015 Tapia Conference was held in Boston, MA, with the following attendee demographics:
- 53% women
- 34% of the attendees were Black/African American,
- 22% Hispanic/Latino,
- 19% White/Caucasian
- 10% Asian/Southeast Asian
- 1% Native American/Native Alaskan/Native Hawaiian/Pacific Islander
- 3% Multiracial
- 4% Persons with Disabilities or Active/Inactive U.S. Military

In addition, 63% of the conference attendees were students, of which 72% were undergraduate students.

Based upon the conference survey,
- 86% of the students agreed or strongly agreed that attending Tapia 2015 increased their dedication to completing their degree.
- 92% of the students agreed or strongly agreed that they received valuable advice at Tapia 2015 for getting through their educational program.
- 91% of the students agreed or strongly agreed that attending Tapia 2015 reaffirmed their belief that a computing career is right for them.

2. History of Tapia Conferences

The first Tapia event was organized as the Richard Tapia Celebration of Diversity in Computing Symposium and was held in Houston, Texas in October 2001. The symposium consisted of 164 attendees. Based upon the overwhelmingly positive feedback from attendees at the symposium, the symposium evolved into a conference to be held every other year. In 2014, the conference evolved to an annual conference. Below is the history of the Tapia Conference series:
- **Tapia 2001:** held October 18-20, 2001 in Houston, TX with **164** attendees
- **Tapia 2003**: held October 15-18, 2003 in Atlanta, GA with **259** attendees
- **Tapia 2005**: held October 19-22, 2005 in Albuquerque, NM with **346** attendees
- **Tapia 2007**: held October 14-17, 2007 in Orlando, FL with **438** attendees
- **Tapia 2009**: held April 1-4, 2009 in Portland, OR with **389** attendees [Note: the month was changed to April instead of October so as not to conflict with the annual Hopper Conferences]
- **Tapia 2011**: held April 4-7, 2011 in San Francisco with **517** attendees
- **Tapia 2013**: held February 7-10, 2013 in Washington, DC with **550** attendees
- **Tapia 2014**: held February 5-8 2014 in Seattle, WA with **700** attendees
- **Tapia 2015**: held February 18-21, 2015 in Boston, MA with **806** attendees

The Tapia Conferences include inspiring speakers who are leaders in computing. Key speakers for each conference are given below:

Tapia 2001
- Dr. Ken Kennedy (passed away in Feb. 2007), John and Ann Doerr University Professor in the Computer Science Department at Rice University

Tapia 2003
- Dr. Warren M. Washington, former chair of the National Science Board

Tapia 2005
- Dr. Mark E. Dean, IBM Fellow and Vice President

Tapia 2007
- Dr. Shirley Malcom, Head of AAAS Directorate for Education and Human Resources Programs

Tapia 2009
- Dr. Hector Garcia-Molina, Leonard Bosack and Sandra Lerner Professor in the Department of Computer Science and Electrical Engineering at Stanford University

Tapia 2011
- Dr. Irving Wladawsky-Berger, former chair of the IBM Academy of Engineering

Tapia 2013
- Dr. Vint Cerf, Google's VP and former-ACM President and Dr. Anita Jones, University of Virginia

Tapia 2015
- Dr. Freeman A. Hrabowski III, President, University of Maryland – Baltimore County
- Dr. Jack Dongarra, University Distinguished Professor, University of Tennessee

In addition to technical talks, the Tapia Conference series generally includes the following components:
- *Student-oriented panels* focused on topics such as graduate school, resume writing, and career paths in computing.
- *Professional development workshops* focused on topics such as navigating the tenure process, climbing the corporate ladder, and proposal writing.
- *Birds of a feather sessions* that facilitate the formation of communities focused on particular topics related to diversity in computing.
- *Leadership panels* that include top leaders that can provide strategies for effective leadership based upon experience.
- *Industry Panels* that focus on the latest areas of technological innovation and research.
- *Student poster competition* that allows students to present their latest research results and compete based upon presentation of their research and the ability to answer questions.
- *Doctoral Consortium* that takes place the day before the first day of the conference and allows senior doctoral students to present their research to experts in their area and receive very valuable and detailed feedback.
- *Supporter information area* that allows conference supporters to disseminate materials particular to their organization or university and talk one-on-one with conference attendees.

All of the conference components feature diverse professionals, faculty, and students who can serve as excellent role models for the diverse conference attendees. Further, the conferences include significant time for networking and community building that can extend beyond the conference.