

Expanding the Pipeline

Coalition to Diversify Computing Launches Tapia Celebration of Diversity in Computing Series

By Valerie Taylor

On October 18-20, 2001 in Houston, Texas, the Coalition to Diversify Computing (CDC) held its inaugural celebration of diversity in computing. The Richard Tapia Celebration of Diversity in Computing Symposium (<http://www.sdsc.edu/Tapia2001/>) was sponsored by the Association of Computing Machinery (ACM).

Designed to celebrate the technical contributions and career interests of diverse people in computing fields, the symposium offered a mix of technical and non-technical talks and panels, a poster session, and a unique awards banquet. The symposium program was designed around the theme of "Expanding Horizons," reflecting a focus on access to powerful knowledge from diverse researchers in computing, expanding the community of people in the field of computing, and the sharing of knowledge between the different disciplines of computing.

The celebration honored Dr. Richard A. Tapia, a mathematician and professor in the Computational and Applied Mathematics Department at Rice University in Houston. Dr. Tapia is a member of the National Academy of Engineering, the first recipient of the A. Nico Habermann Award from the Computing Research Association, and a member of the National Science Board; he is equally well known for his commitment to educational equity, mentoring, and student success.

In naming the symposium, only one name came to mind to all CDC members, simultaneously—Richard Tapia. CDC members discussed Richard Tapia's significant impact on his/her career, either as a role model, mentor, colleague, or very dear friend. His impact was felt throughout the symposium, where hundreds of people shared their impressions of Tapia's influence on their lives; newcomers were able to get to know Richard Tapia and absorb his great energy and enthusiasm about increasing diversity in computing.

Tapia's keynote address, "Diversifying Computing: Its Contradictions, Challenges, and Successes," was a candid assessment of current educational policy and reform initiatives that urged attendees to close the education gap, engage minority youth in the world of science, and hold high the bar of academic excellence. Jackie McNab of KDH Science gave an invited plenary talk entitled "Breaking through Barriers: A Journey to Success." McNab's talk, which was targeted to the student attendees, provided examples of questions to ask and standards to use to "think outside the box," aim high, and capitalize on one's unique gifts. She provided proof of her methods with her own successes and challenges.

The symposium had a number of technical sessions on a broad range of topics from geographic information systems (GIS) to culture-specific approaches to e-learning. Speakers included David Nealey, EI Technologies; Ken Kennedy, Rice University; Sandra Baylor, IBM; Valerie Taylor, Northwestern University; Charles Isbell, AT&T Research Laboratories; Nate Dean, Rice University; Barbara Simons, retired, IBM Research; Oscar Garcia, Wright State University; Juan Gilbert, Auburn University; Vipin Kumar, University of Minnesota; Juan Meza, Sandia National Laboratories; and Agnes Chan, Northeastern University.

In addition to the technical sessions, the Tapia Symposium 2001 offered a number of student-oriented panels on the graduate school experience, strategies for finishing the Ph.D., and the importance of mentoring and role models.

Poster presentations at the symposium provided an opportunity for students and researchers to describe their research results and experiences directly to the symposium attendees. The posters demonstrated the growing interdisciplinary nature of computing, with the prize for best poster overall going to a team led by Jenice Rankins, a nutritionist at the Florida State University. Her team, which included Juan E. Gilbert, Auburn University; Perry Brown, Florida A&M University; Carlise A.R. Pemberton, University of the West Indies, St. Augustine, Trinidad; and Charles J. Kacmar, Ernest L. McDuffie, Florida State University, won for its presentation of "I-CAN: An Interactive Computer-Assisted Network for Bridging the Chronic Disease Divide between African Americans and Caucasians."

The best student poster prize was split between Carmeliza Navasca and Arthur J. Krener, University of California, Davis, for their poster, "Local Solutions of the Dynamics Programming Equations in Discrete-Time," and Diane C. Jamrog, Rice University; George N. Phillips, Jr., University of Wisconsin, Madison; and Richard A. Tapia and Yin Zhang, Rice University, for "A New Global Optimization Strategy for the Molecular Replacement Problem."

A highlight of the symposium was a banquet honoring Richard Tapia for his educational outreach programs at Rice University, his success in producing women and underrepresented minority Ph.D.s, and his commitment to excellence in science, math, and engineering education. Other facets of his life were recognized as well, including his roles as a husband, father, music lover, and vintage car enthusiast. Tapia's response held a powerful message for the attendees:

"I feel a deep sense of gratitude that a symposium addressing a matter of such national importance carries my name. I want this symposium to serve as a symbol, and also as proof that we, as members of underrepresented groups, can and must contribute to science and technology at the highest levels."

Speakers at the banquet included Malcom Gillis, the President of Rice University; Neal Lane, former director of the White House Office of Science and Technology Policy; current and former students; car-club friends; and his wife, Jean Tapia. Neal Lane surprised Richard Tapia with a congratulatory letter from former President William Clinton. More than 300 people attended the dinner and program, which also honored Tapia's Texas and Mexican roots with mariachi music and cultural dancing.

After an introduction of the awardee by Roscoe Giles of Boston University, Richard Tapia himself presented the inaugural "Richard A. Tapia Achievement Award for Scientific Scholarship, Civic Science, and Diversifying Computing." This award is intended to honor a person who exemplifies Tapia's work as a "civic scientist"—a scientist who recognizes that at the center of the complex technological and scientific world are people—and recognizes a scientist who has demonstrated extraordinary leadership in increasing the participation of underrepresented groups in the sciences. The 2001 Award went to Dr. Bryant York of Portland State University, who is a co-founder of the Institute for African American E-Culture and was the 1998 recipient of CRA's A. Nico Habermann award for outstanding contributions to underrepresented groups within the computing community.

The Tapia Symposium 2001 ended with a "Town Hall Meeting." Attendees were able to give immediate feedback to the symposium organizers and make suggestions to Juan Meza of Sandia National Laboratories and Bryant York, the general co-chairs of the Richard Tapia Celebration of Diversity in Computing Conference 2003.

The symposium was a great success, as indicated by the conference evaluation and quotes from participants. More than 96 percent of the participants found the symposium intellectually stimulating. Further, 76 percent of the participants felt the symposium increased their desire to conduct research in the areas of science, mathematics, engineering, and technology; and 61 percent felt motivated to conduct interdisciplinary research as a result of the symposium. Some attendees expressed their views of the symposium:

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“Although I have always been planning on attending graduate school, the conference exceeded my expectations in expediting my decision of when to go, where to study, and what to study. I was impressed by the diversity of attendees. They were diverse in race, personality, interests, and talents, all of which combined to create an amazing setting for networking, and friendships that I will carry through the rest of my life.”

“I just want to let you know how much our students enjoyed the symposium. I was with them yesterday at the undergraduate advisory committee meeting and they were telling everyone about it with such enthusiasm!!”

Just as with the Tapia Symposium 2001, the Tapia conference in 2003 will make an effort to involve as many students as possible. Scholarships will again be provided, and students will be asked to contribute ideas for speakers and conference activities.

The Tapia Symposium 2001 planning committee included: Valerie Taylor, Northwestern University, and Richard Alo, University of Houston-Downtown, as general co-chairs; Bryant York, Portland State University, and Sandra Baylor, IBM, as program co-chairs; Raquell Holmes, Boston University, technical posters chair; Cynthia Lanius, Rice University, banquet program

chair; Rose McKeon, Wanganui Polytechnic, scholarship chair; Valerie Taylor, Northwestern, Kevin Franklin, San Diego Supercomputer Center, and Yasha Karant, CSU San Bernardino, fundraising co-chairs; Patrick Bobbie, Southern Polytechnic State University, finance chair; Ann Redelfs, San Diego Supercomputer Center, publicity chair; Carlton Bruett, ACBDesign, designer; Jennifer Matthews, San Diego Supercomputer Center, Webmaster; Theresa Chatman, Rice University, Career Information Center and local arrangements chair; and Barbara Simons, ACM representative.

The Tapia Symposium 2001 was sponsored by ACM, with additional support from the National Science Foundation; the Alliances for Graduate Education and the Professoriate at Rice University; Argonne National Laboratory; the Computing Research Association; the Education, Outreach, and Training Program, Partnership for Advanced Computational Infrastructure; Microsoft Corporation; NASA; Rice University; and USENIX.

ACM's Richard Tapia Celebration of Diversity in Computing was planned by the Coalition to Diversify Computing (CDC - www.npaci.edu/Outreach/CDC), whose mission is to increase the

visibility of people of color in computing research and to provide networking opportunities for minority researchers, faculty, and students. CDC is a joint committee of the Association of Computing Machinery (ACM), the Computing Research Association (CRA), and the Institute of Electrical and Electronic Engineering (IEEE) Computer Society. For more information on CDC, see <http://www.npaci.edu/Outreach/CDC>.

Valerie Taylor, CDC Co-Chair, is an Associate Professor of ECE at Northwestern University. ■