

RECIPIENTS OF THE 2009 PRESIDENTIAL AWARD FOR EXCELLENCE IN SCIENCE, MATHEMATICS, AND ENGINEERING MENTORING

Individuals

Richard L. Cardenas, St. Mary's University

Cardenas is Chair of the Department of Physics and Earth Science and Associate Professor of Physics at St. Mary's University in San Antonio, Texas. Cardenas established the Fiesta of Physics Program, which has provided science education outreach to more than 15,000 low-income, minority families in San Antonio.



Anthony Carpi, John Jay College of Criminal Justice

Carpi is Associate Professor of Environmental Toxicology and Chemistry at the John Jay College of Criminal Justice at the City University of New York. He spearheaded two college-wide efforts – the Mathematics & Science Resource Center and the Program for Research Initiatives and Science Majors – that have significantly increased minority access to careers in the sciences by reducing attrition, improving graduation rates, and dramatically increasing the number of graduates who pursue advanced degrees in the sciences.



Isaac J. Crumbly, Fort Valley State University

Crumbly is Vice President for Career and Collaborative Programs at Fort Valley State University in Fort Valley, Georgia. He created the Cooperative Developmental Energy Program and the Mathematics, Science and Engineering Academy, both of which have provided significant financial support for hundreds of underrepresented minorities and women from grade nine through the baccalaureate level.



Jo Handelsman, Yale University

Handelsman is a Howard Hughes Medical Institute Investigator and a Professor in the Department of Molecular, Cellular, and Developmental Biology at Yale University. While at the University of Wisconsin-Madison, Handelsman co-founded the Women in Science and Engineering Leadership Institute, and her mentoring course and accompanying book are used to teach mentoring at more than 64 universities in the United States.



Douglass L. Henderson, University of Wisconsin-Madison

Henderson is Chair of the Department of Engineering Physics, Professor of Engineering Physics, and Associate Dean of Diversity at the University of Wisconsin-Madison. Henderson created the University of Wisconsin Graduate Engineering Scholars program, a unique fellowship program that offers students a support network of peers and is widely considered to be a “gold standard” among programs that mentor engineering students from underrepresented groups in the fields of science, technology, engineering, and mathematics.



Bruce A. Jackson, Massachusetts Bay Community College

Jackson is Professor of Biotechnology at Massachusetts Bay Community College Wellesley Hills Campus and Associate Professor of Work Environment at the University of Massachusetts, Lowell. He created the Research Integrating Molecular and Environmental Science program, which provides undergraduate scholars from the University of Massachusetts, minority-serving institutions, and community colleges nationwide with rare, hands-on and mentored research experiences in order to elevate the chances that participants' career choices will fall within these disciplines.



Marigold L. Linton, University of Kansas

Linton is Director of American Indian Outreach at the University of Kansas and a former President of the Society for the Advancement of Chicanos and Native Americans in Science. Linton has helped prepare minority students to enter the teacher preparation program and obtain scholarships, trained teacher aides in an on-reservation program for the White Mountain Apache Tribe, and led Arizona State University's participation in the Rural System Initiative project, which served schools on 19 reservations.



Maja J. Matarić, University of Southern California

Matarić is Professor of Computer Science, Neuroscience, and Pediatrics, Director of the Center for Robotics and Embedded Systems, Co-Director of the Robotics and Research Lab, and Senior Associate Dean for Research at the Viterbi School of Engineering at the University of Southern California. She established a number of mentoring programs, including new K-12 courses and programs that have trained generations of teachers and students; assisted placement of PhD students in minority-serving universities; and helped place PhD students from underrepresented groups in top research universities around the world.



Gerard F.R. Parkin, Columbia University

Parkin is Professor of Chemistry at Columbia University. He has broadened participation in science and engineering by traditionally underrepresented groups and institutions by introducing minority high school students in New York City to advanced scientific techniques through hands-on experiences. He also welcomes female students from non-PhD-granting institutions into his lab to provide graduate-level experience in research.



Julio J. Ramirez, Davidson College

Ramirez is R. Stuart Dickson Professor of Psychology at Davidson College in Davidson, NC. He co-founded the Faculty for Undergraduate Neuroscience and the *Journal of Undergraduate Neuroscience Education*, and he created a national mentoring program called "Support of Mentors and Their Students From Underrepresented Minority Groups" to provide research experiences for underrepresented students to enhance their competitiveness for entry into scientific careers. He also works to enhance the mentoring abilities of junior faculty.



Michelle A. Williams, University of Washington

Williams is Professor of Epidemiology and Global Health and Director of the Reproductive, Pediatric and Perinatal Epidemiology Training Program at the University of Washington's School of Public Health, and Co-Director of the Center for Perinatal Studies at Swedish Medical Center. She developed the University of Washington Multidisciplinary International Research Training Program, which trains students from economically and educationally disadvantaged backgrounds for research and leadership careers in public health by addressing real global public health problems with partners in developing countries.



Organizations

Center for Innovation in Engineering and Science Education (CIESE), Stevens Institute of Technology

Since its founding in 1988, the Center, in Hoboken, New Jersey, has developed curricula, conducted teacher professional development and mentoring programs, and implemented capacity-building efforts that have directly impacted more than 19,000 K-12 teachers, 280 community college faculty, and six million students from disadvantaged school districts. Collaborations with community colleges, through which CIESE has mentored faculty to implement science, technology, engineering, and mathematics programs, have resulted in successful replications of CIESE programs in New Jersey and in 21 other states.

Baccalaureate and Beyond Community College Mentoring Program, State University of New York, Purchase College

The Purchase College SUNY Baccalaureate and Beyond Community College Mentoring Program provides a full array of mentoring activities for community college students to assist them in completing their Associate's degrees, transferring to a four-year college, and finally attaining Bachelor's degrees. Students in the program complete Bachelor's degrees at three times the national average for community college students, and 70% of those degrees are in science, technology, engineering, and mathematics (STEM) fields. More than 20% of participating students go on to continue their STEM studies in graduate school.

Grinnell Science Project, Grinnell College

The Grinnell Science Project (GSP) addresses acclimation to college life, non-traditional learning styles, and a lack of mentoring and role models. GSP creates a "web of mentoring" that encourages not only traditional mentoring of students by their teachers but also student-to-student and faculty-to-faculty relationships. GSP has been used as a model by a number of institutions of higher education, including Bowdoin College and Brown University.

Women in Science and Engineering Mentoring Initiatives, University of Illinois

The Women in Science and Engineering program at the University of Illinois at Chicago's Center for Research on Women and Gender reaches out to girls and young women from grade school through the undergraduate level to work with community organizations and local businesses. The program works to attract girls and young women to math and science, provide science, technology, engineering, and mathematics (STEM) tutoring for pre-college women to improve their college proficiency scores, and implement a peer mentoring program for undergraduate women in STEM majors.