ERIKA CAMACHO HONORED BY HISPANIC WOMEN’S CORPORATION

When the Hispanic Women’s Corporation held its 26th National Professional Development and Leadership Institutes last month at the Phoenix Convention Center, one of the six individuals selected as 2011 Award Winners was New College faculty member Erika Camacho.

An assistant professor of mathematics in the Division of Mathematical and Natural Sciences, Camacho received the National HWC Latina Leadership Award for her work mentoring and supporting students. Other award recipients honored during the event were Lucia Navarro from CNN en Espanol; radio and television personality Yarel Ramos; Daniel Hernandez, the University of Arizona student credited with saving Congresswomen Gabrielle Gifford’s life when she was shot in Tucson; Dulce Matuz, president and founder of the Arizona Dream Act Coalition; and poet, writer and performer Mayda del Valle, who has recited her poetry at the White House.

“I was truly honored to be acknowledged in the same ceremony as these individuals,” Camacho says. “To me this is a testament that what I have sacrificed is not in vain and the spirit of Jaime Escalante’s commitment to making a difference, which has lived in me since our lives crossed, is thriving and still making an impact in others.”

The reference to Escalante, the legendary high school math teacher who was portrayed by Edward James Olmos in the film “Stand and Deliver,” is a heartfelt one for Camacho. She was one of the hundreds of students whose lives were forever changed when Escalante became their math teacher at Garfield High School in East Los Angeles.

“Jaime was like a parent,” Camacho says. “He had high expectations and wouldn’t allow you to make excuses.”

Because of the support she received from Escalante and others, Camacho feels a moral obligation to serve in a mentorship role to her own students and help create opportunities for them to advance.

Camacho’s love for mathematics, engendered by Escalante, led her to focus on the field of applied math. Among her current areas of research focus is the use of differential equations to model physiological processes. One project involves working to understand interactions of photoreceptors in the eye with the goal of gaining insight into certain degenerative diseases.

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With her students, Camacho uses real-world issues to spark their enthusiasm for the practical applications of mathematical modeling. One project applies modeling to provide insights into drinking patterns on college campuses. She encouraged a student in her differential equations class to use data from his job with a golf equipment company to develop equations to model how far a golf ball will travel when struck by different clubs. Her calculus students read and analyze journal articles focusing on topics such as gender gaps in education and specifically in math achievement.

“Working in applied math, you have the opportunity to see the impact of your work on the community and humankind,” she says.

“Dr. Camacho is a superb scholar-teacher who embodies the best of New College,” says Elizabeth Langland, New College’s dean. “She is highly attuned to the needs of our students and models for them the ability to achieve their highest aspirations with hard work and dedication.”

Camacho says she would not be where she is today without mentors helping to guide her. First there was Escalante. It was in 1990 that Camacho entered Escalante’s algebra classroom at Garfield High School. Then in 1996, when she was an undergraduate student at Wellesley College, Camacho was the first student admitted to the Mathematical and Theoretical Biology Institute (MTBI), a summer program established by Carlos Castillo-Chavez at Cornell University. Its goal is to increase the number of Ph.D.s from underrepresented U.S. populations in fields where mathematical, computational and modeling skills play a critical role.

In 2004 the MTBI program, and Castillo-Chavez, relocated to ASU. Castillo-Chavez is a Regents’ Professor and the Joaquin Bustoz Jr. Professor of Mathematical Biology in the School of Human Evolution and Social Change on ASU’s Tempe campus. He also is director of the Mathematical, Computational and Modeling Sciences Center in ASU’s College of Liberal Arts and Sciences.

In 2003 Camacho became the first former MTBI participant to earn a Ph.D. when she completed her doctorate in applied mathematics at Cornell. She then spent a year as a postdoctoral research associate at Los Alamos National Laboratory. Camacho next held a tenure-track faculty position at Loyola Marymount University, while also co-founding and co-directing the Applied Mathematical Sciences Summer Institute, with a mission similar to the MTBI program at ASU. She joined New College in 2007.