## Secure Solutions



Photo courtesy of Zulma Toro-Ramos

As a child, Zulma Toro-Ramos realized that she was different from her sister. Her sister was more involved in the details of an activity while Zulma was more hyper and enjoyed working with her hands. If something was broken, she wanted to fix it.

Initially, Toro-Ramos saw engineering as a path to law school as she had an uncle who had combined both professions. She had always been good at math and liked science. In college she realized she enjoyed industrial engineering because it looked explicitly to the strength and weaknesses of human beings and then, using math and scientific principles, developed practical solutions and technologies useful in meeting problems or needs. Industrial engineers are in charge of those processes and systems which allow the manufacture of a product and/or make providing a service simple.

Toro-Ramos received her bachelor's degree in industrial engineering from the University of Puerto Rico at Mayagüez. After graduating she started out as an assistant professor, working her way up to be department chair and eventually chancellor at her alma mater. She also held visiting positions at universities in Mexico and Peru. After receiving a master's in industrial and operations engineering from the University of Michigan she earned a doctorate in industrial and systems engineering from the Georgia Institute of Technology. She served as the dean at the School of Engineering and Applied Science at the University of New Haven in Connecticut.

In 2005, Toro-Ramos was named dean of the College of Engineering at Wichita State University and became the first woman, as well as the first Hispanic, to head the college. As dean, Toro-Ramos is in charge of the design and delivery of academic programs in engineering. It is her responsibility to implement methods to engage students in programs and to provide them with the best educational experience to which they can aspire.

According to Toro-Ramos, engineering is the only profession that allows you to solve problems and develop technology that will have the most impact in society. A lot of joy is associated with creating something for the betterment of society.

"Engineering is not just for a small, select group of students; it is for all students who believe they can make a difference in society and are creative and innovative," she says.

Because of her dedication to her field, she has served on many science and technology committees over the years, one of which was for the National Science Foundation. Currently, she serves on the Board of Directors of the Exploration Place Science Museum in Wichita; the Kansas Hispanic Education and Development Foundation and is an advisory board member for the WSU Center for Entrepreneurship. Some professional and scientific organizations she belongs to include the Institute of Industrial Engineers, the Society for Advancement of Chicanos and Native Americans in Science and the Society of Women Engineers.

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