Katarena Matos, Scholarship Recipient

Katarena Matos

Katarena Matos is an undergraduate student enrolled in the College of Science, Hydrology & Water Resources at the University of Arizona. Katarena considers hydrology to be the channel she uses to apply her interests and passions as the solid foundation in which she wishes to build her career. In high school she was a member of the youth organization FFA which teaches students premier leadership and career success through agricultural and educational based career development events. She has been working in the Hydro geophysics laboratory at U of A and volunteers to outreach to various general public groups, elementary school, and middle school groups speaking to children about where water comes from and the importance of each individual's impact is to water supply in Arizona. Most recently Science City at the Tucson Book Festival was the opportunity she experienced to show her knowledge and further her outreach to the community. She was also instrumental in the planning and coordination of El Dia del Agua, as the undergraduate representative for the Hydrology and Water Resources Student Association. This event is the Hydrology Department's symposium where students are provided the chance to showcase their current research.

Katarena is preparing for graduate school and became an Undergraduate Research Opportunity Consortium Prep Scholar. This program requires a student with an under-represented background to prepare for graduate school by answering a research question, writing a research report with a poster and oral presentation. She hopes to finish her bachelor's degree by the spring of 2016 and then immediately pursue a master's degree from the University of Arizona. Her professor's letter of recommendation states, "It is with great pleasure that I provide my full support of Ms. Matos' application to be considered for an AFMA Scholarship. I cannot overstate how rare it is to find a student with as much passion and motivation in her learning and work ethic and who shows such promise and maturity at such a young age."

Daniela Panfil, Scholarship Recipient

Daniela Panfil was unsatisfied with her double major in Sustainability and Business during college. She changed her career path due to her love for math and science, while working on a small scale water treatment system during an internship in Washington. The project was to analyze the nitrogen removal and uptake of a "Duckponics" system, which is similar to aquaponics. The experience rekindled her passion to pursue civil engineering with environmental emphasis and sustainability. She plans to continue and complete a minor in business. The Duckponics project included analysis of water from a duckpond that was cycled through hydroponic grow beds to simultaneously remove ammonia from the pond and grow crops. She was able to analyze the role of hydrology and water management on nitrogen supply and plant growth in the grow beds and knew she had chosen the best career path that would satisfy her desire to help the environment and people.

She is actively involved with the ASU's Engineers Without Borders chapter and serves as the current president. She was active in leading the dam rehabilitation project for a community in Kenya. Currently, she is leading the design and construction of a hydraulics laboratory at the local university in Kenya, and was involved with construction of a waterline project for the Havasupai community in Northern Arizona. Her previous employer stated "Daniela stands out as one of the most promising, young water resources engineers I have met, and she is a driven yet compassionate engineering student capable of leading us into the next decade. Her excellent listening and communication skills allow her to assimilate new ideas and information and formulate environmental sustainable solutions."

Daniela Panfil

Norma Villagomez-Marquez, Scholarship Recipient

Norma Villagomez-Marquez

Norma Villagomez-Marquez is a first generation graduate student enrolled in the University of Arizona's Chemical and Environmental Engineering department. She graduated from San Luis High School in Yuma, Arizona. Her master's thesis focus has been on water treatment desalination using technology similar to reverse osmosis and electrodialysis reversal. She actively participates in various student led clubs and organizations including the U of A chapter of Engineers without Borders. Over the summer this chapter traveled to Marquiri, Bolivia to implement a sanitation project for indigenous families in a remote Andean community. She is very interested in both the quantity and quality of drinking water and believes desalination is the best environmentally friendly solution to combat the water shortage crisis. Her goals and objectives are to develop technologies that can be implemented at large scale and at the same time be cost effective. She expects to graduate in May of 2016 then she will continue to enthusiastically pursue a career in water treatment technologies. She believes AFMA support is essential in completion of her education and she is extremely honored and thankful for our scholarship award.

Norma's college professor states in a letter of recommendation "Norma is one of the most tenacious and self-motivated students I have met during my professional career. She has demonstrated being a hard working person and her performance in my class has been excellent. Norma performed far beyond my expectations." Another letter stated "Norma is one of the top students. Besides, she combines her science academic performance with multiple interests and extra academic activities. She always seizes the moment to learn more and to gain new experiences. As a student, Norma proves to be innovative, reliable and trustworthy with the educational level set by the University of Arizona. She engages with everything she does, and certainly does her best."

Christopher Horstman, Scholarship Recipient

Christopher Horstman

Christopher Horstman came to the water resource engineering profession due to the downturn in the economy when the lack of opportunity for new construction called him to pursue advanced education in engineering. His interest in designing a water efficiency business that specialized in rain water harvesting, responsible landscape design and greywater reuse led him back to the University of Arizona to pursue a master's degree in Water Resources Engineering. He has always been interested in incorporating and understanding water reuse into the built environment, and the field of water resources engineering emerged as an obvious choice in terms of career stability and long term opportunity. Chris spends a good deal of his time translating science and engineering principles into activities for high school and middle school students. During the spring and summer of 2013, Chris was able to join a partnership with the Centre for Water Systems at the University of Exeter in the United Kingdom. This combined work introduced Chris to several opportunities for research into the social and economic viability of a variety of rainwater harvesting solutions. He anticipates that the development of these novel approaches learned from that effort could be tested in Arizona while he pursues his PhD. The scholarship funds could ensure that he completes his education and his research could be fully funded regardless of the university's budget cuts. He realizes his interest in water resources was larger than water distribution networks and rainwater harvesting and is now committed to expanding his interests to floodplain management issues. He is active with the Arizona Section of the American Society of Civil Engineers and WateReuse Arizona.

Chris's recommendation letter stated "His character is of the highest sort, and working with him is a pleasure. Chris had progressively moved along through required prerequisites until he joined my junior level hydraulic engineering class. I was impressed with his grasp of theory, and in his design projects. I was pleased that he had persevered." We can attest to his perseverance by saying when the Post Office returned his scholarship application, he drove the highway from Tucson to Phoenix to ensure on-time delivery on a Friday afternoon with 30 minutes to spare.