CCEE MONTHLY

The Department of Civil, Construction, & Environmental Engineering

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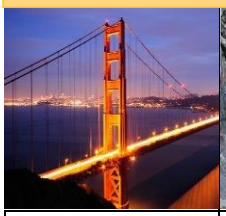
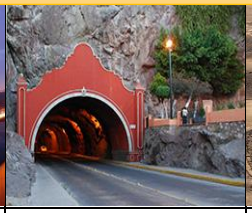



Structural	Geotechnical	Water	Transportation	Environmental	Construction

Graduate Student Spotlight

Lauren Mathews received support from the CSU Council on Ocean Affairs, Science & Technology (COAST) and set out this summer to document the landscape in Alvarado Creek after a brush fire with Dr. **Alicia Kinoshita** and the Disturbance Hydrology Lab. Lauren combines traditional field techniques with terrestrial laser scanning to investigate the coupled interactions between fire, sediment dynamics, and vegetation in urban riverine systems. She concluded several months of baseline data collection and now waits for the winter season to bring rainfall, which has the potential to initiate significant changes such as flooding and erosion. Following the 2018-2019 storm season, Lauren will collect additional data, allowing her to understand previously undocumented processes in urban systems affected by fire. Lauren received her B.S. at the University of Hawaii at Mānoa in Global Environmental Science, and is currently working on her M.S. in Environmental Engineering at San Diego State. She will combine her background in environmental biochemical systems and her engineering education to solve critical issues regarding post-wildfire sediment-vegetation interactions and potential hazards in urban, southern California.

Keynote Lecture

Prof. Victor M. Ponce presented a keynote lecture entitled "The role of geomorphology in civil engineering" at the X Congress of Civil Engineering, in Huanuco, Peru, on October 30, 2018.

The River as a Resource

This article was featured on both *360: The Magazine of San Diego State University* and *SDSU Newscenter*. It was also featured on the front page for the sdsu.edu website. **Dr. Natalie Mladenov** was interviewed for the story and is pictured here with several of her students from the WIRL lab. In the article, she states: "Through strong interdisciplinary collaborations, SDSU is already leading a number of exciting research projects at the San Diego River." http://newscenter.sdsu.edu/sdsu_newscenter/news_story.aspx?sid=77408

IMSD Program

ENVE undergraduate student, **Denise Garcia**, supervised by **Dr. Natalie Mladenov**, was selected for the competitive Initiative for Maximizing Student Development (IMSD) Program, funded by the National Institute of General Medical Sciences (NIGMS), National Institutes of Health (NIH). The SDSU NIH IMSD Program develops talented and motivated students interested in careers as research scientists and contributes to the ongoing efforts of students and faculty to promote diversity. Denise will receive year-round mentorship and professional and academic development, financial support, travel support, and trainee supply funds directly related to her research project on water quality of an urban river.

Dr. Janusz Supernak singing at the 23rd Polish Festival at Pacific Beach – and promoting SDSU-Mission Valley at the same time.

Publication in Remote Sensing

Patrick Poon completed his M.S. in Civil Engineering, Spring 2018. Patrick's second chapter of his thesis was accepted for publication in *Remote Sensing* Special Issue *Advances in the Remote Sensing of Terrestrial Evaporation.* Patrick and Dr. Kinoshita's publication entitled *Estimating Evapotranspiration in a Post-Fire Environment using Remote Sensing and Machine Learning* is the first to demonstrate machine learning as a viable method to create a remotely-sensed estimate of evapotranspiration with application for sites with sparse data observations and information. This is increasingly important as many regions undergo acute or chronic disturbances such as wildfires, which can dramatically alter land surfaces and hydrological processes. This innovative work demonstrates the potential benefit for land and forest managers to understand and analyze the hydrological cycle of watersheds that experience alterations based on this predictive ET model. This work was supported by the National Aeronautics and Space Administration (NASA) Headquarters under the NASA Earth and Space Science Fellowship Program (16-EARTH16F-233) and the journal article is available here: https://www.mdpi.com/journal/remotesensing/special_issues/evaporation_rs

Happy Halloween from Dr. Dowell & CCEE!


Quotes of the Month: "There is only one thing that makes a dream impossible to achieve: the fear of failure." – Paulo Coelho