

MESSAGE FROM THE CHAIR



Fall 2017 has been a very successful semester for CE. Assistant Professor Ricardo Gonzalez Pinzon was awarded two NSF grants totaling \$1.4M to investigate nutrition transport in the Rio Grande River. PhD student Jake Collison received a \$200K US Bureau of Reclamation research grant, reflecting the department's growing dynamic research environment. In August, CE held the second Resilience Colloquium, along with national and local leaders from industry, the federal government and the national labs discussing infrastructure resilience needs and research gaps. Finally, CE has launched a major fundraising campaign in 2018 to fund its new state-of-the-art computer laboratory, 3D printed concrete and composite laboratories, and upgrade its facilities. As Department Chair, I wish to invite our alumni and industrial partners to participate in this ambitious fundraising campaign toward making us one of the best CE programs in the US.

Mahmoud Taha, Professor and Chair, mrtaha@unm.edu

DR. GONZALEZ-PINZON RECEIVES TWO NSF GRANTS

Dr. Ricardo Gonzalez-Pinzon received two successful research grants (\$1.4 million) awarded by the National Science Foundation to understand the complexities of nutrients in river systems. The goal of these two projects is to study carbon, nitrogen, and phosphorus dynamics in three different contrasting landscapes, along an entire river continuum. These two projects will develop fundamental and actionable science to improve our understanding of how rivers process nutrients introduced both naturally and through human intervention. Additionally, the projects will bring together a diverse group of experts from academia and consulting firms, with backgrounds in water resources engineering, geology, environmental science and biology, to address ongoing challenges related to water quality.

Dr. Gonzalez-Pinzon's research team will continue to develop knowledge to guide stream restoration and management projects. In the photo above are the members of Dr. González-Pinzón's team: from left to right, Dr. Peter Regier (NSF postdoc fellow), Kelsey Bicknell (MS student, AWWA fellowship awardee), Dr. González-Pinzón, James Fluke (MS student, NSF GRFP awardee) and Justin Nichols (undergraduate student).



BS PROGRAMS REACCREDITED BY ABET

The Engineering Accreditation Commission (EAC) of ABET (Accreditation Board for Engineering and Technology) has announced that the BS programs in both Civil Engineering and Construction Engineering in the UNM Department of Civil Engineering have been accredited to 2023. The six-year accreditation is the maximum number of years granted by ABET.



Congratulations to the department and to Dr. Susan Bogus Halter for her leadership in this effort!

MAJOR FUNDRAISING CAMPAIGN

The Civil Engineering Department is launching a major fundraising campaign to upgrade its facilities and shape its roadmap toward 2030. We need your leadership gift to UNM Civil Engineering. For details, please contact:

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Upcoming Events

- 55th Annual Paving & Transportation Conference – organized by UNM CE
January 3–4, 2018
Albuquerque, NM
- Associated Schools of Construction
February 7–10, 2018
Sparks, Nevada
- ASCE Rocky Mountain Student Conference
April 5–7, 2018
South Dakota School of Mines & Technology
- 16th International Congress on Polymers in Concrete – organized by UNM CE
April 29–May 1, 2018
Washington, DC

UNM4NEPAL TEAM COMPLETES SECOND SUCCESSFUL TRIP

The UNM4Nepal team recently returned from their second successful trip to Nepal, where they built a Women's Community Center in one of the earthquake-stricken rural districts. UNM4Nepal, a humanitarian engineering group developed in the Civil Engineering Department, completed the second phase of their project with the construction of a dodecagonal parallel Pratt steel truss roof, exterior flat stone façade wall, and recycled flat stone tile flooring. The circular earth bag structure is in the footprint of an old health clinic that collapsed during the 7.8 magnitude earthquake that struck Nepal in spring of 2015. The team used locally-sourced material, construction demolition waste (CDW), hired local labor, and hosted an All-Hands Meeting with local community members as part of their building resilient communities' initiative.





UNM Resilience Institute held the second UNM Resilience Colloquium—Urban Resilience: Research Gaps and Implementation Roadmap. Over two days in August, 90+ attendees, and national and international experts participated in 12 presentations and 7 panel discussions. Resilience topics included national security, the power grid, transportation infrastructure, urban development, cyber and water infrastructure, and the students' perspective. Invited speakers were from U. of Maryland, U. of Alabama, U. of Buffalo, Texas A&M, US Army Engineer Research and Development Ctr., Dept. of Homeland Security, Sandia National Labs, Electric Infrastructure Security, Public Service Co. NM, Resilient Solutions 21, Shimizu Corp.

(Japan), SixPoints Materials, and UNM Resilience Institute. The colloquium was co-chaired by Dr. Taha from UNM Civil Engineering and Dr. John Quale from UNM Architecture & Planning, and coordinated by Elisa Borowski who is currently pursuing her PhD at Northwestern University after graduating with her MS from CE in 2017.

SPOTLIGHT: UNM CE GOLDEN GRAD



Dennis Lively, UNM Civil Engineering Golden Grad-1967, has had an interesting and accomplished career in his chosen engineering field. However, his lengthy career may never have taken shape had it not been for the injury he sustained during the 1961 Aviation Bowl. Though UNM won the championship, his 4-year football scholarship abruptly ended, and he transferred to CE. In 1969, he accepted a sales engineer position with Armco Building Systems. During his 18-year tenure with Armco, Lively was national accounts manager of the Midwestern US and West Coast areas, where he found success in securing Design & Build contracts for industrial facilities. Lively received his MBA from Pepperdine University in 1987, after which he worked as West Coast Project Development Manager for several large companies, securing \$100M in contracts, before joining Kajima International, the world's largest design and construction company (Tokyo, Japan). In 1996, he became GM of

Bishman Continental Services, based in Guam. Dennis Lively will be honored in Spring 2018 as CE's Golden Grad.

SW EFC HELPS DELIVER WATER TO NATIVE AMERICAN TRIBES

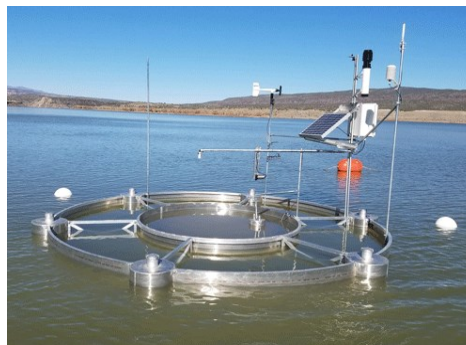
The Southwest Environmental Finance Center (SW EFC) within UNM's Center for Water and the Environment is working with Native American Tribes to help them deliver safe, reliable drinking water to their communities. A Tribal Utility Advisory Committee (TUAC) was established in 2001 to adequately train and certify drinking water operators at Tribal public water systems in New Mexico and the EPA Region 6. Before 2001, these water systems were not run by a certified operator and most systems relied on outside technical assistance providers to operate their facilities. The SW EFC worked with tribal water system representatives on the TUAC to ensure the program met the needs of both the tribes and the EPA Region 6, and to ensure the Tribal water systems' needs are met and



the health of the communities are protected. Since forming this partnership, all Tribal water systems in the EPA Region 6 are now operated by appropriately trained and certified operators.

GRADUATE STUDENT NAMED PRINCIPAL INVESTGATOR

Jake Collison is pursuing a Ph.D. in Hydraulics and Water Resources under Dr. Mark Stone. His research is based on his patent-pending technology that will improve water resources management by measuring lake evaporation more accurately than existing methods. This research recently caught the attention of the U.S. Bureau of Reclamation Upper Colorado Region office, which awarded a \$200,000 grant to expand its scope and duration and named Jake as the lead Principal Investigator. The research now includes two sites on Lake Powell in addition to the existing site on Cochiti Lake. The project duration has been extended to three years and will also include collaboration with the Desert Research Institute at the Lake Powell sites.



Featured Graduate Student



A second year PhD student, Carmen Velasco is advised by Dr. José Cerrato. A chemical engineer from Ecuador, she is investigating the mechanisms

affecting the contamination of metals in organic-rich sediments in abandoned uranium mine wastes in tribal lands in NM. She won first place at the Poster Presentations of the American Vacuum Society (AVS) Annual Symposium and the AWWA Rocky Mountain Section Student Chapter Conference. She wants to pursue a career in the water industry.

Featured Undergraduate Student



A junior in Civil Engineering, Claudia Jimenez Arellano was born and raised in Cadiz, Spain, and moved to the US at age thirteen. Last semester, she

was named the Outstanding Junior in Civil Engineering. Active in student activities, she was Co-Captain of the Concrete Canoe Team in 2016-2017 and currently is the Community Outreach for the Hispanics in Engineering and Science Organization. Last summer she interned for Smith Engineering and she hopes to secure another internship for summer 2018.

CE Facts at a Glance

Number of Faculty	17
Number of Undergrads	272
Number of Grad Students	114
Number of Adjuncts	9

Annual Research Expenditures
FY 2016-2017
\$5.3 Million

Departmental Scholarships
\$69,500 Awarded to
Undergraduate and Graduate
Students