



MESSAGE FROM THE CHAIR

In Spring 2018, UNM Civil Engineering continues to excel as one of the leading civil engineering departments nationwide. UNM Civil Engineering was recently ranked 76th by U.S. News and UNM School of Engineering 18th in Best Value Schools. This spring we announced a new \$1.5M endowment from the Dana C. Wood estate, creating a new endowed chair in advanced construction materials and technologies, enabling an unprecedented upgrade in CE facilities, and supporting the creation of a UNM 3D concrete printing laboratory. This endowment honors the legacy of department alumnus Dana C. Wood and his pioneering work in the field of CAD for civil engineering. We hired a new assistant professor, Dr. Nick Ferenchak, to lead New Mexico research in the field of autonomous vehicles and started a new Local Technical Assistant Program (LTAP) at UNM Civil Engineering. We celebrate the successes of our students, in the ASCE Regional Concrete Canoe competition and our graduate student Katie Zemlick winning a prestigious NSF fellowship. In 2018 we started our fund-raising campaign, 12 in 12, a roadmap to 2030 to raise \$12M in the next 12 years to create a number of endowed chair positions and make significant facilities upgrades in UNM Civil Engineering.

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

\$1.5M NEW ENDOWMENT FOR 3D CONCRETE PRINTING



The Department of Civil Engineering has received \$1.5 million from the estate of an alumnus, which will benefit students and faculty in the department by creating laboratory and learning spaces unlike any other in the country. The gift from the estate of Dana C. Wood is the largest cash gift in the School of Engineering's history. \$500,000 of the gift to the department will upgrade a 4,600-square-foot structures and materials lab, located on the ground floor of the Centennial Engineering Center, as well as the civil engineering computer lab. To acknowledge the gift, the lab will be named the Dana C. Wood Materials, Structures and Computer Lab, and the funds will be used to create state-of-the-art lab spaces in 3D concrete printing

and computer-aided design (CAD). This lab will be an asset in attracting high-caliber faculty and students for years to come. The funds will also go toward upgrading the CAD lab which will honor the legacy of Dana Wood's innovation, who was a pioneer in the field of CAD for civil engineering. \$1 million will create an endowed position within the Department of Civil Engineering, which will be named the Dana C. Wood Chair for Advanced Construction Materials and Technologies. The position and funds will be used for advanced construction and materials technologies, including 3D concrete printing. Wood, a native of Gallup, New Mexico, received a bachelor's degree in 1977 and a master's degree in 1990, both in civil engineering from UNM.

Civil Engineering Facts at a Glance

Undergraduate Enrollment (267)

BS Civil Engineering	213
BS Construction Engineering	8
BS Construction Management	46

Graduate Enrollment (110)

MS Civil Engineering	34
Master of Engineering	19
Master of Construction Management	15
PhD	42

Number of Faculty	18
Annual Research Expenditures	\$5.5M

CE RANKED #76 NATIONWIDE



The Department of Civil Engineering placed extremely well in a recent report completed by U.S. News. U.S. News ranked us #76 in Best Graduate Civil Engineering Programs. In addition, Best

Value Schools ranked UNM SOE #18 based upon ABET accreditation, net price, percentage of graduates majoring in STEM, and early-career pay.



Student and Department Events

- International Congress of Polymers in Concrete (ICPIC)
April 29-May 1, 2018
Washington, DC
- UNM Water Conference
May 17, 2018
UNM Student Union Building
- Third UNM Resilience Colloquium
August 2018
University of New Mexico

DOCTORAL STUDENT RECEIVES PRESTIGIOUS NSF FELLOWSHIP



Katie Zemlick, who successfully defended her Ph.D. dissertation on April 2, 2018, has recently been awarded a two year Postdoctoral Research Fellowship from the National Science Foundation to continue her research on the relationship between energy production and water resources in the southwest. Dr. Zemlick's Ph.D. work, under the direction of Drs. Bruce Thomson and Kerry Howe, investigated the impacts of uranium, oil, and gas development on water resources in New Mexico. Her postdoctoral research will utilize advanced data analysis techniques including GIS, system dynamics modeling and agent based modeling to analyze the linkage between energy and water in the Permian Basin of southeastern New Mexico and west Texas. Dr. Zemlick will work with Dr. Kerry Howe in Civil Engineering, Dr. Janie Chermak in Economics, and Dr. Vince Tidwell at Sandia National Laboratories.

AWARD FOR CONCRETE CANOE DESIGNED BY CE STUDENTS



Students from UNM Civil Engineering who attended the 2018 ASCE Rocky Mountain Regional Conference and participated in the concrete canoe competition represented the department very well. The Presentation, given by Pily Rodriguez,

Patience Raby, Kay-Keikilani Torres, and Cassy Scarlott-McClintock, placed 3rd in that category. In other areas of the competition, CE students placed 1st in Mystery Design, 8th in Pre-Design, 5th in Concrete Canoe, 3rd in Technical Paper, and 7th in Non-Technical Paper for an overall rank of 5th. Two students won individual awards: Justin Nichols placed 3rd in Technical Paper, and Brianna Carabajal placed second in the Pre-Design competition. UNM CE students success was noted by all the judges. The conference was held April 5-7, 2018, at South Dakota School of Mines. Professor Walter Gerstle is the faculty advisor for the CE team.

LTAP CENTER AT UNM CIVIL ENGINEERING

During the Spring of 2017, the New Mexico Department of Transportation (NMDOT) began a partnership with UNM's Civil Engineering Department to provide local governments and municipalities in New Mexico with technical assistance, training, and information as part of the Federal Highway Administration's (FHWA) Local Technical Assistance Program (LTAP). The center provides local agencies with training courses, technical assistance, and technology transfer related to the most recent innovations in roadway design, construction and maintenance, giving local communities access to the latest transportation technology. The day-to-day activities of the center are coordinated by LTAP Manager, Josh Johnson. Josh brings to the center extensive experience in transportation planning and works closely with LTAP Center Directors - Dr. Greg Rowangould and Dr. Susan Bogus Halter. For more information visit the LTAP website at ltap.unm.edu.

NEW TRANSPORTATION FACULTY MEMBER



UNM Civil Engineering welcomes a new faculty member in fall 2018, Dr. Nick Ferenchak, as Assistant Professor in Transportation. Dr. Ferenchak's research interest is focused on autonomous vehicles and also includes traffic safety, proactive exposure metrics, active transport and health, spatial analysis, and emerging technologies. He most recently earned his Ph.D. through the Civil Engineering Department at the University of Colorado Denver. He has professional experience in both transportation engineering and planning. He has been awarded two Eisenhower Fellowships from FHWA and was a 2017 Eno Future Leaders Fellow. His work has won paper awards from ITE and FHWA, and he currently holds leadership positions on two TRB subcommittees.

MOREU COLLABORATES WITH CHINESE EARTHQUAKE ADMINISTRATION

Dr. Fernando Moreu conducted experiments during fall 2017 at the Institute of Engineering Mechanics (IEM) of the Chinese Earthquake Administration (CEA) in Beijing, China. Dr. Moreu's Chinese counterpart, Dr. Tao Wang, is the director of the CEA Beijing Laboratory, the largest dynamic laboratory for earthquakes in China. The experiments were designed to simulate transverse impacts of highway trucks on railroad bridges. This research studied the design of impact attenuators (or bridge bumpers) that can reduce the effects of these unpredictable events. Preliminary results were presented at the Transportation Research Board conference in January 2018. Dr. Moreu and Dr. Wang plan to expand this collaboration in 2018 and 2019 with undergraduate and graduate student exchanges.



Department & Student News

Moneeb Genedy, Ph.D. Candidate



Moneeb Genedy, a candidate for PhD in the CE Department, is part of Dr. Taha's research group. His

research focuses on polymer nanocomposite repair materials for restoring wellbore seal integrity. In 2016-2017, Moneeb taught CE 305 Infrastructure Materials Science, and he is the conference coordinator for the International Congress of Polymers in Concrete (ICPIC 2018) in Washington, D.C. Moneeb was voted best graduate student in the CE Department for 2017-2018.

Maria del Pilar, B.S. Candidate



A senior in the Civil Engineering Department, Maria del Pilar (Pily) Rodriguez is earning a second

degree after a B.A. in Environmental Planning and Design. She is a 2016 Dwight D. Eisenhower Minority Fellow with the Transportation Research Board, and a Co-Captain for the 2017-2018 Concrete Canoe Team. She has been a Traffic and Transportation Intern at Bohannon Huston, Inc. for the last two years. She will continue to work in the transportation sector and plans to earn a Master's in Civil Engineering in the next few years.

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 for UNM Civil Engineering. For details, please contact: Dr. Mahmoud Taha, CE Department Chair mrtaha@unm.edu 505-277-1258 Kara Clem, SOE Director of Development kara.Clem@unmfund.org 505-277-2051