

CIVIL ENGINEERING NEWSLETTER



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MESSAGE FROM THE CHAIR



Spring 2017 was a successful and rewarding time for UNM Civil Engineering. Assistant Professor Dr. José Cerrato was awarded the prestigious NSF CAREER Award for research on abandoned uranium mine wastes in Native American lands. The department was awarded a Regional University Transportation Center (UTC) partnering with Louisiana State University. The new UTC, led by Dr. Susan Bogus Halter, is funded by USDOT and will bring research funds in excess of \$1.5M over the next five years. In April, I was honored by being named a Fellow of the American Concrete Institute (FACI). Furthermore, CE students were recognized in the very competitive EPA RainWorks Challenge. Finally, UNM CE continued strong international research collaborations with outstanding visiting scholars from Turkey and China. We are pleased and proud of the growth and success of UNM Civil Engineering.

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

TRANSPORTATION RESEARCH CENTER



The UNM Department of Civil Engineering is part of a consortium of universities that has been awarded a grant from the U.S. Department of Transportation to establish a regional transportation research center. The Transportation Consortium of South-Central States, or Tran-SET, will focus on improving transportation infrastructure

through the use of innovative materials and construction technology. Dr. Susan Bogus Halter, AGC Endowed Chair and Associate Professor of Civil Engineering, will lead the UNM research activities and serve as Associate Center Director. Tran-SET is one of 32 recipients to be awarded a five-year grant from the U.S. Department of Transportation's University Transportation Center, or UTC, program. Over the 5-year contract period, UNM is expected to receive \$1.5 million to fund faculty and students to conduct transportation-related research and outreach.

DR. CERRATO RECEIVES NSF EARLY CAREER AWARD



Dr. José Cerrato received the NSF CAREER AWARD for his project, *Understanding Reactivity in American Native Impacted Uranium Mines (URANIUM): Research, Education and Outreach*. CAREER is the National Science Foundation's most

prestigious award in support of early-career faculty who have the potential to serve as academic role models in research and education. Dr. Cerrato's project integrates research, education, and outreach activities to identify governing biogeochemical mechanisms affecting the contamination and remediation of metals in organic-rich sediments in abandoned uranium mine wastes in northwest and central New Mexico. The knowledge from this project will help inform reclamation strategies, investigating resources that could be recovered from these wastes to potentially benefit affected communities. Partnerships with Native American communities will facilitate student outreach opportunities.

Upcoming Events

- 14th Annual Student Water Conference
May 22, 2017
Centennial Engineering Center
- Second UNM Resilience Colloquium
August 2017
- 55th Annual Paving & Transportation Conference
January 2018
Albuquerque, NM
- 16th International Congress on Polymers in Concrete
April 29–May 1, 2018
Willard Intercontinental Hotel
Washington, DC

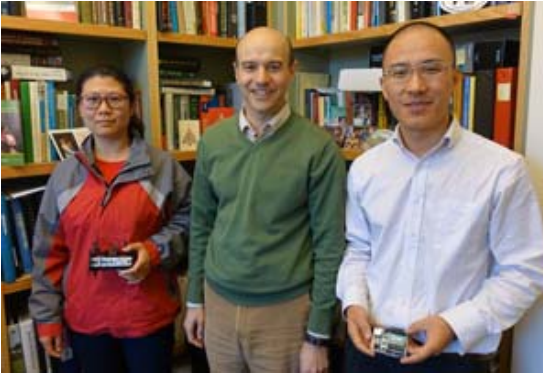
STUDENTS COMPETE IN NAHB CONSTRUCTION MANAGEMENT AND ASCE COMPETITIONS



The department's construction management Lobo Builders team competed in the 2017 Residential Construction Management Competition (RCMC) in Orlando, FL, January 9–13, through the National Association of Home Builders (NAHB). The competition for four-year university programs provides students the opportunity to apply skills learned in the classroom by completing a residential construction and a development management project. During the annual International Builders' Show, students defended their proposals to judges in front of an audience. In the 2017 ASCE Rocky Mountain Regional Conference at the University of Utah, April 6–8, 2017, our students won 3rd place in both the Mystery Design Competition and the women's sprint canoe race.



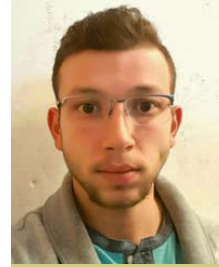
VISITING PROFESSORS FROM CHINA



Professors Xiaoyun Guo and Bideng Liu have been visiting scholars since January 2017 in the Civil Engineering Department, on leave from the Institute of Disaster Prevention (IDP) in China. The IDP is currently the only Chinese University focused on disaster prevention and management. Professor Guo is conducting research on seismic design using ductile nanomodified composites with Dr. Taha. Professor Liu is researching structural health monitoring for earthquake engineering with Dr. Moreu. Dr. Guo's and Dr. Liu's research will promote further collaborations between UNM and IDP, providing UNM students, faculty, and staff research opportunities at IDP in China.

Department & Student News

Featured Graduate Student



Ala Douba, from Aleppo, Syria, is pursuing a master's in Civil Engineering. He is part of Dr. Mahmoud Taha's Structural Health

Monitoring and Nanomaterials Group. His research area is focused on nanomaterials characterization in polymer concrete incorporating nanomaterials. Ala is the Teaching Assistant for the CE 305 Lab, Infrastructure Materials Science. He was a prior recipient of the Robert E. & Evelyn McKee Scholarship, and plans to pursue his PhD in Civil Engineering, specializing in materials science.

Featured Undergraduate Student

Cassy McClintock, a junior Civil Engineering major, has held offices with the student chapters of the Association of General Contractors and Lobo Builders and was on the ASCE concrete canoe team. In Fall 2017, she begins her MS in the 4+1



Program in Environmental and Water Resources Engineering with Dr. Cerrato. This summer, she will intern with Dr. Cerrato on a

National Science Foundation project through the Center for Water and the Environment, researching the use of manganese oxides for water treatment of emerging organic contaminants. The project is in collaboration with the University of Puerto Rico at Mayagüez.

NMGREEN: ADVANCING SUSTAINABLE CONSTRUCTION TECHNOLOGY EDUCATION



Dr. Vanessa Valentin and Dr. Susan Bogus Halter received \$884,573 from the National Science Foundation. In collaboration with the Central New Mexico Community College's (CNM) School of Applied Technologies, the 3-year grant aims to develop: (1) a certificate program at CNM in green construction technologies to provide students with the necessary skills that lead to workforce development; (2) a pathway for students to participate in an internship program and dual credit courses (high school and college credit); and (3) outreach and mentoring efforts to expose underrepresented students to



STEM fields, specifically construction technology and engineering. The program will also support training for high school teachers on sustainable construction. With growth in green construction jobs, this grant focuses on educating the local workforce with the knowledge and skills necessary to obtain and succeed in these jobs.

STUDENTS HONORED IN EPA CAMPUS RAINWORKS CHALLENGE



In Fall 2016, the CE Department led an interdisciplinary team in a proposal to the 5th Annual EPA Campus RainWorks Challenge. The highly competitive program focuses on green infrastructure and resilient designs to address stormwater concerns on college campuses. The group's proposal has been selected for the Honorable Mention Award in the Demonstration Project category. The project, "FLOW, A Proposal for Stormwater Design on the University of New Mexico Campus", will be featured on the EPA website and mentioned in their official press release. The UNM team was made up of CE students Jared Romero (project manager), Rachael

Miera, Christopher Simmons, and Fatima Quarashi, Jeremy Gwinn (Landscape Architecture), Maggie Siebert (Communication and Journalism), Matthew Segura (Community and Regional Planning), and Nirit Finkelshtin (Water Resources), with special thanks to Stephen Ingles-Garcia. Adrienne Martinez (CE Research Engineer) mentored the group and Dr. Mark Stone served as the faculty sponsor.

RESEARCH IN CE DEPARTMENT ATTRACTING INTERNATIONAL COLLABORATION

Dr. Mehmet Emiroglu, Associate Professor, Department of Civil Engineering, Technology Faculty at Düzce University, Turkey, spent one year working in Dr. Taha's lab. His scholarly visit to UNM was funded by The Scientific and Technological Research Council of Turkey (TUBITAK). His research focused on self-healing polymer concrete. Dr. Emiroglu worked in close collaboration with Dr. Taha's research team producing two journal papers and three conference papers. He will present his research findings in September at SMAR 2017 in Zurich, Switzerland.



Want to learn how to best support the CE Department?
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To donate online, <https://www.unmfund.org/fund/civil-engineering/>

CE Facts at a Glance

Undergraduate Enrollment

BS Civil Eng	209
BS Construction Eng	14
BS Construction Mgt	58

Graduate Enrollment

MSCE	53
MENG/MCM	8
PhD	45