UNM Civil Engineering *Newsletter*

Issue 4

Fall 2014

Message from the Chair

Welcome to UNM Civil Engineering!! I am pleased to write about our vibrant and growing Department. We celebrate numerous successes for our faculty and students beginning with the start of our new Center for Water and the Environment funded by the National Science Foundation's (NSF) Centers for Research Excellence in Science and Technology (CREST). This national center of excellence brings to New Mexico outstanding opportunities for research and education. We enter 2015 with 18 faculty members, 123 undergraduate, and 102 graduate students. Our research expenditures for FY 2014–2015 will exceed $4.0 M, a 30% increase from our highest previous annual research dollars. These funds bring a state-of-the-art research and education environment to our students, enabling us to participate in solving our nation's needs for resilient infrastructure, clean water, and a sustainable built environment. We look forward to a terrific academic year starting 2015 with our 52nd Annual Paving and Transportation Conference followed by the ASCE Rocky Mountain Bridge and Canoe Competition which UNM will host. I invite all our alumni and friends to visit our new website and observe our progress and successes in UNM Civil Engineering.

Mahmoud R. Taha, Professor & Chair
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NSF Awards $5 Million CREST Grant

The National Science Foundation awarded $5M from its Centers for Research Excellence in Science and Technology (CREST) program to the UNM Civil Engineering (CE) Department. The 5-year grant will fund the new Center for Water and the Environment, and support three themes of research projects: watershed-level processes, treatment technologies, and the water/energy nexus. CE Professor Kerry Howe, Director of the Center, and 7 CE faculty, 10 graduate, and 2 undergraduate students are participating in the research. Watershed projects investigate wildfire impact and watershed management strategies. Treatment technology projects investigate wastewater treatment with biofilms, membrane distillation and wastewater treatment for water reuse, and prevention of silica scaling on reverse osmosis membranes. Water/energy projects include: biodiesel production from mixed algae populations, in-situ leach mining for uranium on groundwater, energy development on water resources in Northwest New Mexico, and wellbore damage as a mechanism for groundwater. The Center and CREST Grant bring national recognition to UNM Civil Engineering's research on water and environmental issues.

Center for Water and the Environment faculty: front, Ricardo Gonzalez-Pinzon, Jose Cerrato; back, Vanessa Valentin, Kerry Howe, John Stormont, Julie Coonrod, Mark Stone, Andrew Schuler.

Student Chapter of Homebuilders Association Wins National Award

Congratulations to Lobo Builders of UNM, October's National Association of Home Builders (NAHB) Student Chapter of the Month! Mentored by Home Builders Association (HBA) of Central New Mexico board members, students will compete in the 2015 Residential Construction Management Competition in Las Vegas, one of three contenders for Rookie of the Year. With student fundraising and support from local builders, the UNM chapter plans to raise $15,000 to cover the trip. HBA of Central NM is committed to developing tomorrow's leaders and proud to be recognized for building the future of the home building industry.

Updated Website!

Visit our redesigned website: civil.unm.edu

Upcoming Events:

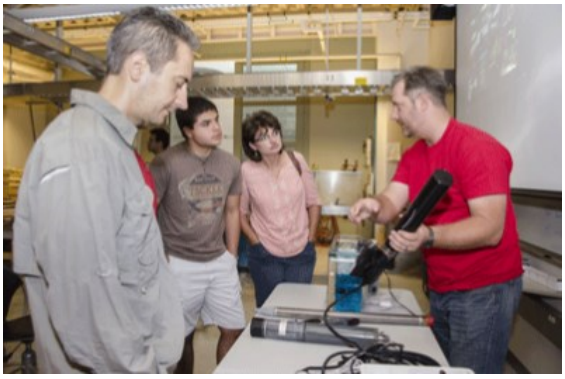
- 52nd Annual Paving & Transportation Conference
  Jan 5–6, 2015
- ASCE Rocky Mountain Region Competition
  Apr 9–11, 2015

UNM BIMSmart SUMMIT 2014

The UNM Department of Civil Engineering hosted the 2014 BIMSmart SUMMIT in September. The Summit, sponsored by bimSMART Foundation, was well-attended by industry, government, and academia. Presentations featured the current status and future vision of Building Information Modelling (BIM) theory in the construction industry and its academic integration in course work.

Summit Highlights—
Thomas Gay, FM Global: BIM in insurance and risk management industries.
John Tomaszewski, UNM Planning and Campus Development: Initiatives, documentation and facility efficiencies.
Ron Balmer, Bridgers & Paxton: BIM projects' 5-year Return on Investment.
Nick Davis, Bohannan-Huston: Live BIM model of seismic bracing for structural engineers.
Alix Loiesau, VDCO Tech: Real World, Real BIM, Real Value; construction and global potential.
Bryan Cowles, IMAGINit Technologies: BIM with 3-D scanning, automation and documentation of databases.
Birgitta Foster, bimSMART Foundation's event organizer: Advancement of information exchange and status of development and implementation of COBie exchange at both the national and international levels.

School of Engineering Open House November 2014



National Distinguished Lecture Series, Dr. Jesús M. de la Garza

The Department of Civil Engineering hosted the first of a series of National Distinguished Lectures. In order to foster academic interactions, Dr. Jesús de la Garza, Vecellio Endowed Professor in Construction Engineering and Management, Virginia Tech, visited November 5th. Dr. de la Garza is a former Program Director of the Civil and Mechanical Systems Division in the National Science Foundation and the current Editor-in-Chief for the American Society of Civil Engineers' *Journal of Construction Engineering and Management*. Dr. de la Garza has been inducted into the National Academy of Construction. He has received the Construction Industry Institute's Distinguished Professor Award, and he is a Fellow of the Construction Management Association of America (CMAA). Dr. de la Garza presented his seminar "Three Things You Would Rather Not Know About from CPM Calculations" and had the opportunity to visit our facilities and meet with faculty and students.

Grad Student Receives Prestigious DOE Fellowship

Melissa Mills, CE graduate student received a prestigious Department of Energy Nuclear Energy University Programs (NEUP) fellowship.

The fellowship is awarded to only 33 graduate students across the country each year to help cover graduate research and studies that are relevant to the DOE - Nuclear Energy's mission. The award allots $50,000

annually for the next 3 years to cover tuition, fees, books, a monthly stipend, and research travel.

Under the advisement of Professor John Stormont, Mills' research will be directed toward the possible disposal of spent nuclear fuel and radioactive waste in deep geologic salt formations.

CE Facts at a Glance

Undergraduate Enrollment	
BS Civil	89
BS Construction Eng	6
BS Construction Mgt	28
Graduate Enrollment	
MSCE	52
MENG	4
MCM	2
PHD	44

CIVIL ENGINEERING
Sustainable Infrastructure Systems—Improving the Quality of Life