



MISSISSIPPI STATE UNIVERSITY™
 CIVIL & ENVIRONMENTAL
 ENGINEERING



Welcome from the Department Head

The programs provided by Civil and Environmental Engineering proactively use teaching, research, and service to educate baccalaureate, masters and doctoral students. Our goal is to help our graduates to become creative, socially responsible, ethical engineers ready for a dynamic career. We feel the first and best calling of our graduates is to become a Professional Engineer. By preparing them for licensure we prepare them for whatever career path they choose. This newsletter is our effort to share a snippet of a few of the activities of our faculty & students during this higher education journey.

WITH SUPPORT OF MISSISSIPPI STATE'S ADMINISTRATION & MANY ALUMNI AND FRIENDS
 THE RICHARD RULA ENGINEERING & SCIENCE COMPLEX WILL BE COMPLETED JUNE 2020

THANKS!!!



May the Magic of the Season
 Conspire to Gladden Your Heart
 & Fulfill Every Wish...

American Society of Civil Engineers-Mississippi Section names Dr. Farshid Vahedifard Engineer of the Year

Dr. Farshid Vahedifard is currently an Associate Professor and the Graduate Coordinator of Mississippi State University's Civil & Environmental Engineering Department. He also holds the Civil & Environmental Engineering Advisory Board Endowed Professorship. Dr. Vahedifard began his tenure with the department in 2012. He has taught over two-thousand credit hours and supervised over forty postdoctoral, PH.D. and Masters students in the completion of their research projects. Dr. Vahedifard has also authored and/or co-authored over one-hundred and twenty referred articles in scholarly journals and conference proceedings. Dr. Vahedifard has led several research projects that brought in fundings of more than \$4.5 million. Through much research, Dr. Vahedifard has contributed to the knowledge and understanding of many in the subject of Geotechnical Engineering.

Please help us Congratulate Dr. Farshid Vahedifard!

Article by Allison Matthews, originally published on Mississippi State University website. Read more at <https://www.msstate.edu/newsroom/article/2019/10/msus-vahedifard-tapped-engineer-year-asc-es-mississippi-section>





American Society of Civil Engineers-Mississippi Section 2019 Scholarship Recipients

The Mississippi Section of ASCE named Anna Norris and Brian Batinick as the 2019 scholarship recipients in September. Both Norris and Batinick is outstanding Civil & Environmental Engineering seniors whom are very involved in many organizations at MSU.

Anna Norris has received many awards during career at MSU. She has also held many positions which includes secretary of ASCE, Concrete canoe co-captain and vice-president of ECCO Engineering club. Anna is a member of the Phi Theta Kappa honor society. She is now preparing for the FE Exam as she plans to graduate in the Fall of 2020.

Brian Batinick has received many honors and awards during his career at MSU. He is currently a member of the Presidential Scholars, Tau Beta Pi Engineering Honor Fraternity and Engineers without Borders. Brian is also a recipient of the Academic Excellence scholarship. He is also an active volunteer whom has taught English during his visit to Spain and grew a community garden on campus during his four months of volunteering. Brian plans to graduate in Spring 2020 and furthering his career in Graduate School seeking a master's degree in Structural Engineering.



Congratulations Anna & Brian!

Mississippi State University's Chapter of Engineers Without Borders to receive the 2019 Community-Engaged Service Award



Advisor/CEE Advisory Board Member (Mr. Bill Mitchell), One faculty advisor (Dr. John Ramirez) and our very own CEE Department Head/Faculty Advisor (Dr. Dennis Truax).

The MSU EWB team's assessment found that the community needed to develop an organized system for managing and maintaining the water supply system. The team also discovered that a data collection system was needed and they also evaluated options for replacing and upgrading the two existing ground storage tanks, adding a third water supply and improving the water distribution system to increase flow and pressure. MSU EWB is now working with IERM and the Peace Corps to complete upgrades to the water system.

The Mississippi State University's Chapter of Engineers Without Borders (EWB) will be recognized on April 14, 2020 at The Mill Conference Center at 4:30 pm. The committee reviewed the organization's project "Water Distribution in Ecuador" in which was part of an assessment completed in early May in Santa Teresita, Ecuador after representatives of the Instituto de Ecologistas del Tercer Mundo and the Peace Corps reached out to the chapter for help with the community's failing thirty-two year old water and distribution system.

The MSU's chapter EWB team that visited Ecuador was made up by five undergraduate students (Daniel Resater, Phong Ly, Maddy Murphy, Awbrey Foster and Craid Schexnaydre), A Practitioner



EAA Chapter 1189 Winter Coat Flight

Dr. Dennis Truax and other from the local chapter of the Experimental Aircraft Association (EAA) recently concluded their fourth annual coat drive. The chapter collects and transports winter coats to the students of the Wounded Knee School District in Manderson, South Dakota. These warm winter coats are worn throughout the winter by the children located on the Pine Ridge Reservation. Pine Ridge is home to the Oglala Lakota Nation.

This year's drive collected over one thousand coats. Shipping the coats would be astronomical. So, the first weekend in November, Dr. Truax loaded their airplanes and flew over 1,100 miles to and from Moundridge, KS as part of the first leg of the delivery. The second segment was overland by truck from location. Volunteers vacuum-pack the coats in heavy-duty plastic bags into two-foot cubes.

An overwhelming majority of the tribe's 3,800 enrolled members live in poverty. There are no large town near the reservation and no infrastructure or industry to provide jobs. The unemployment rate hovers around ninety percent and the average annual household income is \$3,500. Therefore, this the poorest county in the United States, with ninety-eight percent of students at WKDS receiving free or reduced-priced lunch.

When the children leave the comfort and safety of their school each day, many go home to substandard housing with no windows and insufficient heat. An average of seventeen people live in each small house, a house that may also lack electricity, running water and beds to sleep in. Others live in tents or cars during the harsh South Dakota winter when temperatures regularly plummet below freezing.



Recent Research Awards

Dr. Veera Gnanaswar Gude and Dr. Benjamin S. Magbanua, Jr. in collaboration with others at MSU have been awarded \$1,000,000 by USEPA for a three-year study to reduce downstream nutrient loads in receiving streams as a result of discharges from a wide array of municipal and agricultural sources. The team will use a hybrid approach combining four integrated activities (water quality monitoring of coupled WWTP-OFWS systems, modeling the impacts on water quality and water quantity at the watershed level, survey of plant species diversity in streams impacted by effluent from WWTP-OFWS systems and field experiment on plant-based nutrient remediation technique). The results of this project will help mitigating impacts water quality or quantity and reduce nutrient loads into the Gulf of Mexico.

Dr. Veera Gnanaswar Gude, Dr. Benjamin S. Magbanua, Jr. and Dr. Dennis D. Truax, are working with a local industry to eliminate toxicity of the discharge for the materials manufacturing process at the plant. Proprietary process and company operations are being assessed initially in a comprehensive survey of waste streams. Later under this open-ended contract the researchers will be examining process changes and treatment options to ensure the company stays in compliance with it NPDES discharge permits.

Dr. Isaac L. Howard and Dr. Seamus Freyne in partnership with the Mississippi State College of Architecture, Art, and Design has been funded by the Precast/Prestressed Concrete Institute (PCI) to study architecture and building construction problems and issues. This four-year, \$100,000 project is expected to improve learning experiences of students studying architecture, construction or engineering as related to precast concrete and will enhance education in collaborative studios supporting both programs.



Lights, Camera, Action with Dr. Issac Howard

Dr. Issac Howard is one of Mississippi State University's Civil & Environmental Engineering professors whom holds the Endowed Materials & Construction Industries Chair. Thanks to the financial support of Mississippi State Board of Contractors Dr. Howard is able to produce many videos to promote construction and provide some education avenues to the general public.

Over the last couple of years Dr. Issac Howard and his team (students & alumni: Alexis Krohn, Jessica Bullock, Willie Thomas, Rachel Booth & Taylor Cagle) produced thirteen videos that highlights the importance of construction to everyday living. The videos also highlights the large number of career paths available in construction. These videos are also used to reach out to high school students when opportunities present.



Video	YouTube Link
1-269 and People That Made it Possible	https://www.youtube.com/watch?v=PENqV282_o
Construction Matters 2: Safety	https://www.youtube.com/watch?v=00DpYd86fWM
Construction Matters 2: Recycling	https://youtu.be/fi08eK6wngM
Construction Matters 2: Networks	https://www.youtube.com/watch?v=27e0TatKAmA
Construction Matters 2: The Military	https://www.youtube.com/watch?v=09Ys3uagQM
Construction Matters 2: Quality of Life	https://www.youtube.com/watch?v=0Yv3kdb7G6c
Construction Matters 2: Sustainability	https://www.youtube.com/watch?v=09Ys3uagQM
How to Build a Highway in Mississippi	https://www.youtube.com/watch?v=9Cp0jMw43&feature=youtu.be
Fast Facts – Building Blocks for Adults	https://www.youtube.com/watch?v=re0jJ5Z7c
Fast Facts – Building our Future	https://www.youtube.com/watch?v=0a8ts0bhem5w
Fast Facts – Erosion Control	https://www.youtube.com/watch?v=Mx48m5SD3p
Fast Facts – Let's Share the River	https://www.youtube.com/watch?v=ckU7K9ZwqE
Fast Facts – Pipe Production	https://www.youtube.com/watch?v=vq956X1TCBU



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