Leading the News

Marquette University Professor Developing Robot To Help Children Exercise, Make Better Nutritional Choices.

On NPR (12/18) Tell Me More, host Michel Martin interviewed Professor Andrew Williams, professor and distinguished chair at the College of Engineering at Marquette University. Williams "is developing a robot to help children exercise and make better nutritional choices." Williams said, "The particular robot that we're developing is a two foot tall robot that can talk to them. It can listen to them, understand their commands and actually demonstrate exercises and exercise with them."

Higher Education

University Of Wyoming Program Seeks To Improve On Fracking.

The Casper (WY) Star-Tribune (12/19, Storrow) reports on the University of Wyoming’s School of Energy Resources Improved Oil and Gas Recovery program, which unites “four faculty members from the chemistry, geology, chemical engineering and chemical and petroleum engineering departments” in the search for ways to increase oil and gas production. One of those faculty members, associate professor Vladimir Alvarado, said the goal is to foster collaboration among energy specialists by helping them communicate better. The Star-Tribune writes that, currently, "Techniques like fracking and horizontal drilling usually help recover between 4 to 12 percent of the oil and gas" thought to be in shale formations. Alvarado said the “real R&D question” is how the industry can improve on this, and he thinks they will be able to transfer what they learn about relatively simple shale gas production to shale oil, thus keeping research costs down. The piece notes that ExxonMobil gave $2.5 million to the program earlier this year, which was followed by a matching contribution from the state.

West Virginia State University Awarded $20,000 Grant To Expand STEM Research, Teaching.

The Charleston (WV) State Journal (12/19) reports West Virginia State University has received a grant to expand STEM research and teaching. The $20,000 from the West Virginia Division of Science and Research Instrumentation Grants Program will be used to purchase a new gas chromatograph system for WVSU’s chemistry department. Micheal Fultz, assistant professor of chemistry at WVSU, said, “The WVSU Department of Chemistry has acquired the instrumentation to do modern research while still maintaining a small university feel.” Fultz added, “Students attain a hands-on knowledge in the use of these instruments, which they will apply in their various research projects.”
Article Profiles Texas State University Professor.
The Austin (TX) American Statesman (12/19) profiles Dr. Araceli Martinez Ortiz, Assistant professor of engineering education in the College of Education at Texas State University. Dr. Ortiz works to understand the challenges facing students from traditionally underserved populations and attempts to prepare them for the college and career success. Also, Ortiz "conducts research regarding effective STEM teacher preparation, induction and professional development."

Editorial: Change By Officials Has Lead To An Increase In STEM Graduates.
In an editorial Greenville (SC) News (12/18) said officials made a change that increased the value of South Carolina's LIFE and Palmetto Fellows scholarships for students who majored in STEM. The goal of the change was to increase the number of STEM graduates. According to the Greenville News, "it is apparent that the number of students majoring in" STEM subjects has increased.

From ASEE
VIDEOS
A free guide for Principal Investigators provides current and prospective PIs with peer guidance on building key skills.

ASEE's Engineering Technology Leadership Institute in October brought together engineering technology educators, industry leaders, and government officials. Watch the presentations.

Watch Director of NIST's Advanced Manufacturing Office Mike Molnar on "Sparking a US Manufacturing Renaissance" at the Convocation of Professional Engineering Societies. Watch all of the Convocation videos.

New Report
Read the Phase 1 report from ASEE's Transforming Undergraduate Education in Engineering project, a series of events to develop a strategy for engineering ed that meets the needs of industry in the 21st century.

Industry News

Former BP Engineer Convicted Of Obstructing Gulf Spill Probe.
The AP (12/19, Kunzelman) reports that former BP engineer Kurt Mix was convicted on Wednesday of “trying to obstruct investigators by deleting text messages from his cellular phone” during the probe of the 2010 Gulf of Mexico oil spill. Mix, who worked on BP’s efforts “to stop the nation’s worst offshore oil spill, embraced stunned relatives and friends after jurors convicted him of an obstruction-of-justice charge punishable by up to 20 years in prison.” He was acquitted on a second count of the same charge. Attorneys for Mix, 52, of Katy, TX, pledged to appeal his conviction, which the AP calls “a major milestone in an investigation that already has resulted in a guilty plea by BP itself.”

McClatchy (12/19, Cockerham) reports that Acting Assistant Attorney General Mythili Raman said in a written statement, “Today a jury in New Orleans found that Kurt Mix purposefully obstructed the efforts of law enforcement during the investigation of the largest environmental disaster in U.S. history.” Federal prosecutors had argued that “after Mix learned in October 2010 that his electronic filed were to be collected by a vendor working for BP’s lawyers he deleted from his iPhone a text string that contained more than 300 messages with his BP supervisor.”

The New York Times (12/19, Krauss, Subscription Publication) reports that the Federal jury in New Orleans “deliberated for more than nine hours before deciding that” Mix “intended to destroy evidence when he deleted voice and text communications between himself and a supervisor and a BP contractor. Mr. Mix was acquitted on a second obstruction count.” Federal prosecutors had argued “that some of the messages suggested that company officials knew that an effort to stop the leak in the early days of the 2010 spill – a procedure known as a top kill – would most likely fail, largely because of the overwhelming amount of oil flowing out of the stricken well.”

Bloomberg News (12/18, Fisk, Lawton) reports that Mix “denied intentionally destroying evidence,” and that his attorney, Joan McPhee asked US District Judge Stanwood Duval Jr. “to throw out the guilty verdict.” but Judge Duval “deferred ruling on that motion” and
McPhee asked US District Judge Stanwood Duval Jr. “to throw out the guilty verdict,” but Judge Duval “deferred ruling on that motion” and “released Mix on bond and set sentencing for March 26. Mix faces a maximum of 20 years in prison and a $250,000 fine.” The Los Angeles Times Facebook (12/19, Muskal), Reuters Facebook (12/19, Finn) and other media sources also cover the story.

Ford Engineers Using Virtual Navigation Software In Factories.
The Washington Post Facebook (12/19, Ravindranath) reports a new cloud-based software will allow Ford Motor engineers to virtually navigate 3D mock-ups at its factories. Engineers can walk through factories to see all of the steps in the manufacturing process.

Elementary/Secondary Education

Kentucky Middle School Students Creating Prosthetic Hand For Classmate.
On its website, WXIX-TV Facebook Cincinnati (12/19) reports students in the bio-medical engineering class at Kentucky’s Turkey Foot Middle School are creating a prosthetic hand for their classmate. The students are attempting “to design a fully articulated hand and build it using a 3D printer.” Instructor Dwayne Humphrey said, “3D printers are a tool and when schools have something like that accessible to them it’s amazing what students are able to do with that type of technology.” The report notes that the students are getting assistance with the project from professional engineers and physicians.

North Carolina’s New Bridge Middle School Selected State Winner Of Samsung STEM Challenge.
The Jacksonville (NC) Daily News Facebook (12/19, Hickey) reports North Carolina’s New Bridge Middle School has been chosen as the state winner in the Samsung STEM Challenge. The goal of the STEM Challenge is to raise interest in STEM “by challenging students and teachers to apply their classroom learning to solve a” problem in their community. The school won $20,000 in technology.

The Mercer Island (WA) Reporter Facebook (12/19, Livarchik) reports Maddie Fletcher is a senior at Washington’s Raisbeck Aviation High School. The aviation-themed public high school focuses on STEM. Fletcher said, “I was always more interested in math and science class than language and history.” Her friend Chandler Neames is also a senior at the high school. Neames was encouraged by a math teacher in middle school to apply to the school. Fletcher heard about the school through Neames. “I want to major in mechanical or biomechanical engineering. I love anything to do with machines,” Neames. Fletcher also says that she want to pursue a career in engineering.

Wednesday's Lead Stories
• Number Of Engineering Students Increase At Oregon Universities.
• California Polytechnic State University Satellite Launches From Vandenberg Air Force Base.
• Cellulose Nanocrystals Have Stiffness Of Steel, Purdue University Researchers Say.
• Obama, Tech Industry Executives Discuss NSA Surveillance, HealthCare.gov.
• Henry Ford Community College To Offer Hands-On Engineering Course.