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September 30, 2020

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IN A \$3M NSF CLIMATE RESILIENCE GRANT.

HaptX Wins \$1.5 Million NSF Grant To Create Full-Body Haptics For VR

[GeekWire](#)   (9/29) reports Seattle-based HaptX has received a \$1.5 million National Science Foundation “grant and will work with Virginia Tech and the University of Florida on a 4-year project called ForceBot. The system combines HaptX’s microfluidic touch feedback technology with a ‘robotic exoskeleton.’” According to GeekWire, “The idea is to let people feel and touch in a virtual environment, or manipulate objects from afar with a robotic avatar.”



[VentureBeat](#)   (9/29, Horwitz) says, “Initial VR applications are expected to include training for industrial skills, emergency responses, and professional sports.” [Forbes](#)

  (9/29, Fink) reports the research is intended to “develop the first program to bring force feedback to upper and lower limbs in virtual environments, ForceBot.”



HIGHER EDUCATION



William Paterson University Awarded STEM Grant

The [Wayne \(NJ\) Patch](#)   (9/29) reports that William Paterson University “was awarded a five-year, \$1 million Scholarships-in-STEM grant from the National Science Foundation, the university announced.” The grant “will support WPU students majoring in mathematics and computer science through scholarships and mentoring, according to the university.”

Iowa Lawyer, Tulane Alumna Gives School \$3M For New Department



The [AP](#)   (9/29) reports that “an Iowa attorney and Tulane University alumna has given \$3 million to one of the newest

departments at the private university in New Orleans.” The Department of River-Coastal Science and Engineering “is so new that undergraduate and graduate programs are still in the works.” Charlotte Beyer Hubbell of Des Moines said in a university news release Tuesday, “I want to do something for Tulane/Newcomb in appreciation of the excellent education I received there. The Department of River-Coastal Science and Engineering fits with my interests.”

Clemson Taking Part In Project To Increase Access To Smart Manufacturing Education In South Carolina, Florida



[GSA Business](#)   (9/28) reports, “Educators in South Carolina and Florida are launching a \$4 million Clemson University-based project designed to give students greater opportunity to learn the job skills that are growing in demand as manufacturers embrace smart manufacturing technologies such as robotics and internet-connected machines.” The A2 project, funded with \$4 million from the National Science Foundation, “proposes to build on the success of Clemson University’s Center for Aviation and Automotive Technological Education using Virtual E-Schools.”



ED Announces \$126 Million In CARES Act Funding For Workforce Development Programs

[EdScoop](#)   (9/29) reports ED “has announced it will disperse \$126 million to eight states and universities to help ‘lifelong learners’ develop new skills in ‘high demand areas.’” ED will allocate CARES Act funding for its Reimagine Workforce Preparation grants program so participants “can use the expertise and facilities of universities, develop new training programs and encourage employers to provide workforce preparation



programs.” The article quotes Education Secretary DeVos saying in a statement, “America’s workers and entrepreneurs have been among the hardest hit by the pandemic, and this administration is committed to reigniting the entrepreneurial spirit and helping Americans reenter the workforce as the economy recovers. By breaking down barriers between education and industry and supporting local entrepreneurs and small businesses, we can help workers thrive and get America’s economic engine running at full speed again.”

House Democrats Debate Bill On Student Loan Discharges In Bankruptcy



[Forbes](#)   (9/29) reports that House Democrats “on Tuesday are marking up and debating a bill that would amend the U.S. bankruptcy code to permit student loans to be easily discharged in bankruptcy.” The bill, H.R. 2648, “also known as Student Borrower Bankruptcy Relief Act, would simply strike the section of the bankruptcy code that makes it much more difficult for student loan borrowers to discharge their student debt in bankruptcy.”

Column: Student Loans Included In New Stimulus Package Proposal. In an column in [Forbes](#)   (9/29), author Zach Friedman writes that “House Democrats proposed a new \$2.2 trillion stimulus package that includes \$1,200 second stimulus checks and \$600 weekly unemployment benefits.” Tucked inside the new stimulus plan, “which is a proposal and not yet law,” is also relief for student loans, including deferrals, no interest accrument, and student loan forgiveness.

NYTimes Analysis: Pandemic Imperils Promotions For Women In Academia

The [New York Times](#)   (9/29, Scheiber) reports the pandemic has been “brutal on many working mothers,” and “experts say it may be uniquely unforgiving for mothers in so-called up-or-out fields, where workers face a single high-stakes promotion decision.” According to the Times, the “angst has been especially evident on some college campuses, which tend to be more fertile grounds for activism than other up-or-out workplaces.”

William Paterson University Awarded STEM Grant

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ASEE Industry 4.0 Workforce Summit - Starting Oct 9, 12-1:30pm ET

Join today's leaders for a program preparing students for The Fourth Industrial Revolution. The Summit's focus is curricular improvements, work-based experiences, policies, and practices. [Register Now!](#)

DELTA Future Faculty Institute - October 14, 21, and November 4

The DELTA FFI is a foundational, instructor-led program preparing graduate students and individuals in industry considering careers as engineering faculty members. Participants will obtain the tools to positively launch their faculty careers. Registration closes October 7. [Learn more.](#)

Webinar: Supporting Underrepresented Engineering Students in the Time of COVID-19 - Oct. 22 at 2 PM, ET

Explore how the COVID-19 crisis is impacting traditionally underrepresented students in engineering and how faculty and administrators can better support these students, sharing preliminary insights and lessons learned from two NSF RAPID grants. [Register Now!](#)



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RESEARCH AND DEVELOPMENT





Monterey Peninsula College



The [Monterey County \(CA\) Herald](#)   (9/29, Wright) reports that the National Science Foundation “awarded a four-year, \$1.3 million grant to the Marine Advanced Technology Education Center at Monterey Peninsula College to support community college students to participate in its global underwater robotics competition.” The center “was established at MPC in 1997 with funding from the National Science Foundation.” The Remote Operated Vehicle Competition “was created as a core part of the center’s mission to educate and prepare students for the technical workforce.” Remotely operated vehicles, or ROVs, “are used in a variety of

underwater activities including construction and inspection, search and recovery, energy operations, aquaculture, national defense, conservation, and research and exploration by scientists such as those at the Monterey Bay Aquarium Research Institute.”



West Virginia University Engineers Work On \$3M Natural Gas Project

The [AP](#)   (9/29) reports that the U.S. Department of Energy “has awarded \$3 million to a couple of West Virginia University engineers for a project to develop a low-cost process to convert natural gas commonly flared at industrial sites, the university said.” Staler College of Engineering and Mineral Resources John Hu and Xingbo Liu engineer “want to mitigate carbon dioxide emissions and harness natural gas into high-value solid carbon and hydrogen for fuel, the university said in a news release.”

University Researchers Say “Super-Enzyme” Speeds Up Breakdown Of Plastic



The [New York Times](#)   (9/29, Kwai) reports that “a new cocktail of enzymes that degrades plastic faster is a step to fully recycling soda bottles and other waste, British and American researchers said this week.” A new cocktail of enzymes “that speeds up the degradation of plastic offers a step forward in finding a new form of recycling that is faster, more affordable and works on a larger scale than current methods, British and American researchers said this week.” The “super-enzyme” could be “employed to break down plastic bottles much more quickly than current recycling methods and create the raw material to make new ones, according to the scientists” and it may “make it easier to repurpose the material.” Said Jim Pfaendtner, a professor of chemistry at the University of Washington, “This is a very exciting development for plastics recycling and environmental stewardship.”

NSF Gives University Of Maryland Researchers \$2.35 Million Grant To Improve Baltimore Public Transit Planning

[WBAL-TV](#)   Baltimore (9/29) reports the National Science Foundation has given researchers at the University of Maryland a \$2.35 million grant “to improve transportation in Baltimore.” The researchers are “partnering with public officials, transit advocacy groups and other universities to improve transportation options for Baltimore City residents, particularly those in low-income neighborhoods that rely on bus and light rail systems. Be an Advocate for public TransportatiOn (BALTO) joins University of Maryland faculty from the College of Information Studies (iSchool) and the School of Architecture, Planning and Preservation with researchers at Morgan State University and the University of Baltimore. Together, they will develop and deploy a digital toolkit designed to spark community-informed, actionable transportation solutions for eight yet-to-be-identified neighborhoods in Baltimore, a statement said.”



GLOBAL DEVELOPMENTS

Volkswagen’s Herbert Diess Acknowledges That Automaker Needs To Reinvent Itself In This New Era



In an interview with [Reuters](#)   (9/29, Schwartz, Wissenbach), Herbert Diess, chairman of Volkswagen Group’s Management Board, “acknowledged that Volkswagen, which also has a stable of trucks, needed to reinvent itself for an era of electric and autonomous cars.” Diess said, “We are constantly looking at our brand portfolio, this is particularly true during the phase of fundamental change in our industry. In view of the market disruption, we must focus and ask ourselves what the transformation means for the individual parts of the group.” Diess continued, “Brands must be measured against new requirements. By electrification, by reach, by digitalization and connectivity of the vehicle. There is new room for maneuver and every brand must find its new place.”

INDUSTRY NEWS

AYRO Partners With Karma To Produce Electric Delivery Vehicles



[Reuters](#)   (9/29, Lee) reports that electric-vehicle maker AYRO Inc. said Tuesday that it will produce more than 20,000 electric delivery vehicles with Karma Automotive LLC between now and 2023 as part of a \$300 million contract. The “deal comes as delivery fleet operators face regulatory pressure in California and other states to buy electric vehicles, while coronavirus lockdowns have led to a surge in package and restaurant deliveries.”

GM, Nikola Talks On Deal To Build Electric Pickups, Hydrogen Fuel Cell Tractor-Trailers Are Ongoing

[Reuters](#)   (9/29, Klayman) reports that GM and Nikola Corp “have not finalized their deal to jointly build electric pickup trucks and hydrogen fuel cell tractor-trailers, one day ahead of the date targeted, and are continuing discussions, GM said on Tuesday.” GM spokeswoman Juli Huston-Rough said in a statement, “Our transaction with Nikola has not closed. ... We are continuing our discussions with Nikola and will provide further updates when appropriate or required.” Reuters adds that a statement from Nikola “echoed GM’s.”







Boeing To Shift All Production Of 787 Dreamliner To South Carolina, Sources Say







The [Wall Street Journal](#)   (9/29, Tangel, Cameron, Subscription Publication) reports that sources claim Boeing this week will announce plans to move all production of the 787 Dreamliner to its factory in South Carolina from its plant in Washington state.



ENGINEERING AND PUBLIC POLICY





Chao Announces \$574 Million For Road, Bridge Repairs





[GrayDC](#)   (9/29) reports Transportation Secretary Elaine Chao announced on Tuesday that the US Department of Transportation will be extending \$574 million to “help states repair and rebuild roads and bridges damaged from natural disasters.” GrayDC reports the funds “will be used to reimburse states, territories, federal land management agencies, and tribal governments for eligible expenses associated with damage from natural disasters or other emergency situations.” [WRDW-TV](#)   Augusta, GA (9/29) features a video of Chao saying the funds are “helping communities recover and rebuild and reclaim their lives again.” Chao said USDOT is working with state departments of transportation to select the projects.

























[Engineering News-Record](#)   (9/29) reports California was awarded the largest portion of funds at \$64.5 million, followed by North Dakota with \$47.5 million, Nebraska with \$46 million, North Carolina at \$37.5 million, and New York at \$35.8 million. ENR says the funds will go to mitigate the impact of disasters “dating as far back as the Sept. 11, 2001, attack on the World Trade Center in New York City, and as recent as a bush fire in Arizona in June 20. The federal funds reimburse states and other agencies.”

The [Midland \(MI\) Daily News](#)   (9/29) reports the Mid-Michigan disaster region was awarded \$25,363,229 from the Federal Highway Administration to help five counties impacted by flooding. Rep. John Moolenaar (R-MI) said in a statement, “This funding from the federal government will help rebuild the roads and bridges damaged by the May flooding and make it easier for residents to visit their neighbors and local businesses.” He added that the funding “also means a lot to the state and local communities because the costs of this disaster have exceeded the resources they have.” [WNEM-TV](#)   Flint-Saginaw, MI (9/29, Owczarzak) reports online that the funding includes \$25,363,229 for flooding from May and \$1,030,381 for flooding in July. Chao said on [WEYI-TV](#) Flint, MI (9/29), “When we all saw on television what was happening in Michigan, it just broke our hearts, and we saw the intense rainfall resulting in severe flooding, and the failure of two dams in that area. So we’ve been working with the Michigan Department of Transportation, who estimates that there are damages to about 70 locations on federal aid roadways.” [WJBK-TV](#)   Detroit (9/29) also reports.

[KCRG-TV](#)   Cedar Rapids, IA (9/29) reports online that Iowa was awarded \$13 million for bridge and highway repairs from flooding in the southwest portion of the state in 2019. KCRG says the funding will go towards repairing I-29, I-680, and US Highway 34. Chao is quoted saying, “A lot of communities feel the impact for years to come. So this funding will help strengthen communities and improve the quality of life in the areas that have suffered from no fault of their own.”

[KDDR-AM](#)   Oakes, ND (9/29) reports the North Dakota Department of Transportation will receive 13 grants for a total of \$46,191,477.48 to repair and replace bridges and roads damaged in floods and blizzards. KDDR highlights a \$7.52 million grant to fix highways damaged in the West James River Basin flood and \$2.11 million to address damage in the Sheyenne/James River Basin flood. [KXMB-TV](#)   Bismarck, ND (9/29) features a complete list of the grants awarded to North Dakota.



The [Associated Press](#)   (9/29) reports Nebraska was granted \$46 million to fund repairs to roads and bridges damaged by flooding in the spring of 2019. The AP says the floods necessitated the closure of 3,300 miles of highway and damaged 27 bridges in the state. [KLIN-AM Lincoln \(NE\)](#)   Lincoln, NE (9/29) reports similarly.



Additional coverage of the grants from around the country included [WJTV-TV](#)   Jackson, MS (9/29), [KEYC-TV Mankato \(MN\)](#)   Mankato, MN (9/29, Heier), [Arkansas Democrat Gazette](#)   (9/29), [KBJR-TV](#)   Duluth, MN (9/29), [Tulsa \(OK\) World](#)   (9/29), [WTVQ-TV](#)   Lexington, KY (9/29), [FreightWaves](#)   (9/29), [CDL Life News](#)   (9/29), [Informed Infrastructure](#)   (9/29), [WMBB-TV](#)   Panama City, FL (9/29), [News Is My Business \(PRI\)](#)   (9/30), and [KTAR-FM](#)   Glendale, AZ (9/29). Local television coverage of the grants included broadcasts from [KCRG-TV](#) Cedar Rapids, IA (9/29, 5:20 p.m.

CDT), [KBJR-TV](#) Duluth, MN (9/29, 5:15 p.m. CDT), [KDLH-TV](#) Duluth, MN (9/29, 5:04 p.m. CDT), and [WHO-TV](#) Des Moines, IA (9/29, 12:25 p.m. CDT).


Brent Spence Bridge Not Included In Funding Round. [WXIX-TV](#)   Cincinnati (9/29, Riva) reports the greater Cincinnati area will be receiving \$3.4 million for road and bridge repairs, however, none of the funding will be used on the Brent Spence Bridge replacement project. Transportation Secretary Elaine Chao said that when selecting projects to receive grants, the US Department of Transportation looks for projects where “community and states agree on a course of action” and where “there is consensus and agreement on a project.” WXIX reports that Spence Bridge replacement project lacks “agreement, consensus, a budget and a schedule.” [WXIX-TV](#) Cincinnati (9/29) also reported on local television.

Colorado Regulators Green Light New Drilling Rules



The [AP](#)   (9/29) reports the Colorado Oil and Gas Conservation Commission has “provided preliminary approval for new regulations for well drilling sites, including a 2,000-foot (610-meter) buffer requirement from homes.” The panel is “not expected to undertake a final vote on the measures until November to allow for some revisions.” The new rules “represent the first regulations aimed at a new law requiring the commission to prioritize public health, safety, welfare, the environment and wildlife over oil and gas development.” They “include adopting requirements for analyzing alternative locations for oil and gas facilities, widening who has legal standing to participate in commission hearings, adding language intended to consider those disproportionately impacted and providing increased collaboration between state and local governments in oil and gas regulations.”

[Reuters](#)   (9/29, Hampton) reports that among the rules is a requirement of “a 2,000-foot (610 meter) separation between new oil and gas wells and public spaces, compared to as little as 500 feet currently.” According to energy consultancy Enverus, “wider setbacks could hurt Colorado drillers.” Analysts said “PDC Energy could see 89% of its total acreage off limits for new well pads as a result of the rule, while 73% could become non-viable for Extraction Oil & Gas and 71% for Occidental Petroleum Corp.” The Colorado Oil and Gas Association “on Tuesday said the longer setbacks were ‘arbitrary, not based on science and were made without any substantive consideration on the impacts to our industry.’”

Withdrawal From Paris Accord Drove Up US Emissions

[NPR](#)   (9/29) reports that following President Trump’s announcement in 2017 that the US “intended to back out of the promises it made under the Paris Agreement,” there has been “no mass exodus from the landmark accord” as some climate activists feared. However, “some countries, including American allies such as Japan, have eased up on cutting emissions.” Meanwhile, the US “itself has fallen short of the goals it pledged to reach in order to avert the worst-case scenarios of extreme weather.”

Rhode Island Lawsuit Against Shell Allowed To Move Forward

The [Providence \(RI\) Journal](#)   (9/29, Kuffner) reports in continued coverage, “A lawsuit alleging that Shell has failed to adequately protect its fuel terminal on the Fields Point waterfront from the impacts of climate change is set to move forward because a federal judge rejected much of the oil and gas giant’s motion to dismiss the case.” However, US District Court Chief Judge also “accepted Shell’s argument that the Conservation Law Foundation, the plaintiff in the case, lacks standing to sue the company for harms that may occur far in the future and are based on projections of sea level rise and other uncertain effects of climate change.” In the ruling, Smith found that the plaintiff does have standing regarding potential near-term harms.

TUESDAY'S LEAD STORIES

- [Drone Transports Research Kidneys](#)
- [NSF Gives University Of Arkansas Grants To Expand Diversity In STEM Fields](#)
- [Entrance Of 3D Printing Into Healthcare Could Bring Sweeping Changes](#)
- [FAA, Brazil Approve Embraer's Synthetic Vision Guidance System](#)
- [Airbus Receives Order For A330 MRRT](#)
- [Congressmen To Introduce Bill To Bolster FAA's Role In Certification](#)
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