Tech Center News®

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SEPTEMBER 2, 2019

New Bolt Charge Capacity Eases Range Fears

In February of 2015, Alan tomer feedback and we heard the Batey, senior vice president Global Chevrolet, told the Midwest Automotive Media Association about the promise of the new Chevy Bolt and how it would take care of the problem known at range anxiety – the fear that an EV driver would run out of power and have no where to plug in.

Chevy has kept Batey's promise. The game-changing Chevrolet Bolt EV will now take customers even farther. Starting with model year 2020, the Bolt EV will offer a remarkable EPA-estimated 259 miles of range on a full charge, a 21-mile increase over previous model years, sad GM spokeswoman Katie Minter.

The Chevrolet Bolt EV's combination of long range and affordability continues to attract new customers to the electric vehicle segment, and the 2020 Bolt EV will appeal to even more customers by allowing them to travel farther between charging sessions, said Tim Grewe, director of Global Battery Cell Engineering and

"The Bolt EV set the benchmark for long-range, affordable electric vehicles, and we're excited to raise the bar by offering nearly 10 percent more EPA-estimated range for the 2020 model year," said Grewe. "At Chevrolet we're constantly listening to cusdesire for more range. The team worked diligently to find ways to improve battery energy, giving customers the confidence to go more than the extra mile.

To achieve this range increase, Chevrolet's battery engineering team improved the energy of the cell electrodes by making small but impactful changes to the cell chemistry, Grewe said. This thinking allowed the team to implement the range increase without needing to change the physical battery pack and the way it is integrated into the vehicle struc-

CONTINUED ON PAGE 3



The new Bolt has improved its range between battery charges.

Trauma Expert Speaks at TACOM on PTSD

Detroit Arsenal teamed up with the John D. Dingell Veterans Administration Medical Center for a question and answer session to create awareness about Post Traumatic Stress Dis-

PTSD can happen to anyone, any time after experiencing highly stressful or life threatening events, said Tara Consolino at the August Q&A. She is a counselor for the medical center, said Scott Wakefield of the TACOM Pubic Affairs Office.

Consolino told people that PTSD is an anxiety disorder that can affect anyone, but typically affects individuals that are more prone to anxiety in general.

Symptoms can sometimes include an individual reliving the event that caused the PTSD, feeling anxious, emotional numbness, or a desire to avoid being around other people or situations, Consolino said.

The Detroit Arsenal Army Substance Abuse Program Manager, Billy Hallmark, helped set up and fa-

cilitate the session, said Wakefield.

"A lot or people don't know if they have PTSD, and if you're really not sure and you fall into one of the categories, then it won't hurt for you to try and find out if you have it and get help," Hallmark said.

"PTSD should be looked at along the same lines as dia-Consolino said. "It betes." shouldn't prevent individuals from living their lives."

CONTINUED ON PAGE 2

Ford Takes Rochester Hills' Mayor on an Argo Al Ride

New automotive technology presents lots of challenges, not the least of which is the need for communities being ready for it.

Which is why Ford and Argo Al are working with governments to understand how AV tech will affect local cities.

"At Argo AI, and in collaboration with Ford, our plan is to work directly with cities as we prepare to launch services enabled by self-driving vehicles, engaging local leaders to learn how we can deploy this technology in a way that best serves their needs," Peter Rander, president,

This may take different forms in different cities, depending on community priorities, but we are committed to staying connected with city officials and engaging them in ongoing conversations about how self-driving cars can work for their people.

As part of that effort, Argo AI recently invited Rochester Hills Mayor Bryan Barnett, who is also the new president of the U.S. Conference of Mayors, to Detroit for a ride in one of the protype self-driving test vehicles, said Jim Farley, president of Ford New Business, Technology and strate-

"Few people know cities like mayors do. Through frequent in-

CONTINUED ON PAGE 4



(l-r) Rander, Barnett and Farley with the Argo AI test vehicle.

Causes Extra Driver Stress It turns out there is such a

Too Much Tech

thing as too much of a good thing.

Some alerts on Advanced Driver Assistance Systems (ADAS) are so annoying or bothersome that many drivers disable the systems and may try to avoid them on future vehicle purchases, according to the J.D. Power 2019 U.S. Tech Experience Index (TXI) Study.

This is a major concern for automakers keen to market these lucrative technologies and pave the way for more highly automated vehicles in the future, said Kristin Kolodge, executive director of Driver Interaction & Human Machine Interface Research at J.D. Power.

"Automakers are spending lots of money on advanced technology development, but the constant alerts can confuse and frustrate drivers," said Kolodge. "The technology can't come across as a nagging parent; no one wants to be constantly told they aren't driving correctly."

A prime example of this is lane-keeping and centering systems. On average, 23 percent of customers with these systems complain that the alerts are annoying or bothersome, Kolodge said. This ranges from just 8 percent for one domestic brand to more than 30 percent for a couple of import brands. For these owners, 61 percent sometimes disable the system, compared with just 21 percent of those that don't consider the alerts annoying or bothersome.

Owners wanting the feature on their next vehicle ranges from 63 percent for those that consider the alerts annoying or bothersome to 91 percent for those who do not.

"Some brands are succeeding at making their safety technology effective without being overbearing," Kolodge said. "Some are good at one aspect but weaker at another, and some are struggling with both. This is why one brand has 90 percent of its

CONTINUED ON PAGE 2



Software from Mirari generates an image directly onto tablets and smart phone screens.

Local Company Uses Latest 3D Tech to Aid Designing

by Jim Stickford

When is a seat not a seat? When it's a two-dimensional computer projection that can be used for designing in three dimensions.

That's what the technology of startup Mirari can do, said company CEO David Pollock.

"We create augmented reality solutions," Pollock said. "This is different from virtual a computerreality. That's generated simulation of a threedimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sen-

Augmented reality is created

when someone using a smart phone or tablet can "overlap" computer information onto video of the real world, Pollock

As an example, Mirari created a two-dimensional full-scale model of a pair of airplane seats. So now someone with a smart phone or tablet with the two-dimensional rendering entered into it can see how the seats would fit into real space by looking at the view screen.

"Point your tablet at the floor and the view screen will have the seats on the floor," Pollock said. "It's very useful for doing designs. You can see how objects would fit in real space."

Mirari has been around since January of 2018, Pollock said.

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31201 Chicago Road South Warren, Michigan 48093

586-939-6800

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TACOM Hosts Expert on War Trauma

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PTSD has come to the forefront due to its association with veterans, but Consolino said it can happen with any individual no matter if you were a veteran or a civilian.

She also said that many individuals equate PTSD with being "crazy", but indicated that is not the case.

"PTSD is a normal response to an abnormal situation," Consolino said

The medical center uses a variety of medication treatments, non-medication treatments, and other therapies to assist individuals that are coping with PTSD.

"I will never be able to take away someone's memories, sadly you're stuck with those," Consolino said.

However, those that live with PTSD can learn to control their actions and not let the anxiety prevent them from living a productive life.

Consolino indicated that she wanted to continue to work with Detroit Arsenal supervisors to help them develop skills in dealing with employees who are coping with PTSD related issues and mentor them on how to help their workers through their PTSD diagnosis.

The majority of the Detroit Arsenal workforce are Army civilian employees. Civilians are critical to preserving continuity and providing essential support to the Army mission. TACOM's partnership with the VA Medical Center to create awareness about PTSD benefits the total Army force – soldiers and civilians.

Warren Library Hosts Author

Author and Southfield Mayor Ken Siver will be talking about his book "An Uncommon Criminal: The Extraordinary Life of Edwin Turner Osbaldeston" at the Dorothy Busch branch of the Warren library on Wednesday, Sept. 18, starting at 6:30 p.m.

Osbaldeston was Siver's greatgrandfather was well as a fraud who posed as a doctor, professor and war hero. Call 586-353-0580 to reserve a spot.

Study Shows Too Much Tech Turns Off Vehicle Buyers

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customers wanting lane-keeping/centering on their next vehicle, while another brand has just 59 percent of its customers saying the same thing."

Overall satisfaction with new-vehicle technology ranges widely across the vehicles in the study, Kolodge said. The best-performing vehicle in the study is the Kia Stinger, scoring 834 (on a 1,000-point scale). The overall average is 781, with the lowest-scoring model achieving just 709.

The study, now in its fourth year, measures owners' experiences, usage and interaction with 38 different driver-centric vehicle technologies at 90 days of ownership.

The study provides clarity to auto manufacturers, insurance carriers, telecommunications companies and consumer electronic companies regarding ways to minimize the gap between driver experience and technology feature execution.

The major technology categories analyzed in the study are entertainment and connectivity; collision protection; comfort and convenience; driving assistance; smartphone mirroring; and navigation.

Collision protection has the highest score (813) among the six categories measured in the study. Smartphone mirroring (789) is second, followed by comfort and convenience (787); entertainment and connectivity (782); driving assistance (768); and navigation (744).

Additional key findings of the 2019 study found that Apple and Google taking over? More than half (69 percent) of respondents say they have Apple CarPlay and/or Android Auto in their vehicle. This is starting to jeopardize future sales of the automak-

ers' factory-installed navigation systems.

More than two-thirds (68 percent) of owners with Apple CarPlay and/or Android Auto want factory-installed navigation on their next vehicle, compared with 72 percent of those without Apple CarPlay or Android Auto. This is a significant future profit loss for the automakers.

Also found was that built-in apps not meeting users' expectations, Kolodge said. The attribute for "ease of using built-in apps" is the lowest-performing attribute in the entertainment and connectivity category (7.63 on a 10-point scale).

Among the 29 percent of owners who have discontinued the use of built-in apps, 46 percent say they "do not need it" and 18 percent say they "have another device that performs the function better." Apps on external devices are a competitive threat, so it's imperative for automakers to ensure intuitiveness and ease of use.

High satisfaction drives recommendation and repurchase intent, Kolodge said. Owner satisfaction with their vehicle technology experience strongly determines whether they will recommend or repurchase the brand.

When overall satisfaction is greater than 900, 75 percent "definitely will" repurchase the same make again and 95 percent "definitely will" recommend it. Automakers looking to drive loyalty need to provide a highly satisfying tech usage experience.

"Consumers are still very concerned about cars being able to drive themselves, and they want more information about these complex systems, as well as more channels to learn how to use them or how and why they kick in," Kolodge said. "If they

can't be sold on lane-keeping – a core technology of self-driving – how are they going to accept fully automated vehicles? Dealers remain a partner in the process of helping translate to consumers what these technologies bring to the table, but consumers still need that element of trust that systems are

going to kick in when they're supposed to."

It's essential that the industry recognize the importance of an owner's first experience with these lower-level automated technologies because this will help determine the future of adoption of fully automated vehicles, Kolodge said.



 ${\it Pollock\ operating\ systems\ from\ a\ smart\ pad\ at\ a\ recent\ Novi\ show}.$

Local Company Uses New Augmented Technology

CONTINUED FROM PAGE 1

Customers include OEMs, Tier I and now Tier II auto suppliers.

"We help brands plan, develop and deliver content for new mediums," Pollock said. "We inform and educate the market thru events and best practices through our partnerships."

Currently located at a Macomb County innovation center located at 18 Mile and Mound, the company will soon be moving to a labatory at Lawrence Technical University, starting in the beginning of October of this year, Pollock said. This kind of augmented reality technology is just getting started, Pollock said. As it advances, it will be more and more integrated into the design and engineering process.

Pollock said right now Mirari is a small company with only a handful of employees, but the future holds a great deal of promise for Mirari's future.

"We are really excited about the growth of the industry and always looking for solutions that can support our clients," Pollock said.

Michigan Apple Crop Looks Strong in 2019

TRAVERSE CITY, Mich. (AP) – Michigan apple growers are expecting another strong showing this fall.

A crop estimate of 25.25 million bushels was announced Fri-

That's about the same as the harvest in 2018.

Executive Director Diane Smith of the Michigan Apple Committee says the estimate is based on reports from various regions of a clean crop with good-sized fruit.

Smith says the cool, rainy spring and hot July weather provided favorable weather condi-

Michigan apples typically are shipped from mid-August through the following June to more than 30 states and 18 nations.

The state has more than 11.3 million apple trees in commercial production, covering 35,500 acres (14,366 hectares) on 825 farms.



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SEPTEMBER 2, 2019 COVERS THE TECH CENTER AND THE IMMEDIATE AREA



Fear of not finding a charging station concerns Possible EV owners.

New Bolt Helps Ease Fear Of Running Out of Juice

CONTINUED FROM PAGE 1

"The Chevrolet Bolt EV has been changing consumer perceptions of electric vehicles since its launch in 2016," said Steve Majoros, director of Chevrolet Passenger Car and Crossover Marketing. "Great range - now even more - is the foundation of the Bolt EV's success, and when paired with features like one-pedal driving, Regen on Demand and the instant torque of the EV motor, the vehicle delivers an exceptional driving experience. Chevrolet also is helping to encourage EV adoption by providing customers the necessary tools and services to make EV ownership more convenient."

Currently original purchasers of new Bolt EVs have access to Chevrolet's exclusive Energy Assist feature through the my-Chevrolet mobile app, Minter

Energy Assist allows customers to view and search for charging stations, plan a trip with multiple waypoints and charging stops, monitor their route, and receive alerts if their destination becomes unreachable.

Last year, the myChevrolet mobile app was updated to enable smartphone projection of the Energy Assist feature to the vehicle's infotainment system via Apple CarPlay and Android Auto4 for drivers with model year 2017 or newer Bolt EVs. Minter said.

Chevrolet recently entered into a partnership with Omerit that will enable EV owners a seamless way to find and obtain quotes from certified electricians to install at-home charging equipment, Minter said. Chevrolet is the first non-luxury car brand to offer this service, and its partnership with Qmerit will provide customers with a more accessible athome charging solution.

The 2020 Bolt EV will arrive in dealerships later this year with a starting MSRP of \$37,495 (includdestination and freight charges, excludes tax, title, license, dealer fees).

Additional updates include two new exterior colors: Cayenne Orange Metallic (additional cost option) and Oasis Blue, Minter said.

Volkswagen Recalling 679,000 Cars

DETROIT (AP) - Volkswagen is recalling approximately 679,000 cars in the United States to fix a problem that could let the vehicles being recalled roll away unexpectedly.

The recall covers certain 2011 through 2018 Jettas; 2015 through 2019 GTIs; 2015, 2016, 2018 and 2019 Golfs; 2012 through 2019 Beetles and Beetle Convertibles; and 2017 through 2019 Golf SportWagens.

All have automatic transmis-

sions, manual hand brakes and keyless entry.

VW says silicate can build up on a shift lever switch, allowing the key to be removed if the lever isn't in park.

That could let the cars roll off unexpectedly.

Dealers will add a switch and circuit board to fix the problem. The recall starts on Oct. 11.

A VW spokesman says he's not aware of any crashes or injuries due to the problem.



UAW Car Show Coming to Warren Soon

The UAW Region 1 Veterans Council and Solidarity Riders will be holding will be holding their annual Car and Motorcycle Show.

The event is scheduled to take place on Sunday, Sept. 15, at the UAW Region 1 headquarters at 27800 George Merrelli Drive in Warren.

UAW Region 1 has been putting on the show for the past several years, said Greg Ezyk, event spokesman and recording secretary for UAW Local 412.

This event is open to anyone who wants to attend or enter a classic car or motorcycle," said

Ezyk.
"We have free rides for the kids, music by D.J. Jose Gonzalez, a raffle as well as food."

The show is scheduled to run from 11 a.m. to 4 p.m. Vehicle registration will take place between 8 and 11 a.m. The cost to attend is free, Ezyk said, but there is a fee for those entering a vehicle to dis-

'The cost to register a vehicle is \$20 on Sept. 15," Ezyk said. "Car show proceeds are used by the Veteran's Council to support veterans causes and awareness of veteran's issues.

"The pre-registration \$18. To learn more, people can call 586-427-9200.

Ezyk said that this year's show will have a variety of different show categories for both cars and motorcycles.

Car categories include:

- Original 1900-1994;
- Original modified at least three major enhancements, at least 25 years old;

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- Street rods 1900 to 1948;
- Custom/special interest:
- Pro street tubbed: reduced axle;
- Street machines 1949 and up;
- Trucks all years.

This year's motorcycle categories include:

- Cruiser soft tail, road king, etc.;
- Bagger hard bags, cruise
- control; Metric - foreign production
- bikes: Custom build - chopper/nonproduction bikes.

Art Van Stores Raising Money for Charity

share.

"The Midwest's No. 1 furniture and mattress retailer's sixdecade commitment to giving back to those in need continues with the official launch of the 2019 Art Van Charity Challenge," said Art Van spokeswoman Diane

Participating charities will compete to raise the most money from Sept. 9 through 27. The top 10 fundraising nonprofits will be honored and receive their grants at Art Van Furniture's 60th anniversary gala on Oct. 24.

Powered by nonprofit fundraising platform Mightycause, the

Art Van Furniture has love to Art Van Charity Challenge has donated more than \$10 million to Midwest charities and helped to raise over \$26 million for 450 charities since the competition began in 2009

> Nonprofit organizations were invited to compete for ten grants totaling \$250,000, ranging from \$5,000 to \$100,000, and \$15,000 in bonus challenges.

Cindy Crawford, businesswoman, philanthropist and international supermodel, is the charitable campaign's official ambassador for the fifth consecutive year, Charles said.

"For 60 years, Art Van has been investing in the communities we

serve by providing jobs, home furnishings for families to create lifelong memories, and by giving back," said Ron Boire, president and chief executive officer of Art Van Furniture.

"Nonprofit organizations play an immeasurable role in improving lives in their communities, and we love supporting and enhancing their efforts."

Charities submited applications starting in July for the eleventh annual competition which is open to any 501(c)(3) nonprofit organization focusing on women, children or human services in the communities Art Van Furniture serves.



OEMs Praised for Going to the Dogs with Vehicle Features

When it comes to making canine companions bark in approval, the 2019 models of the Buick Regal TourX, Chrysler Pacifica and Jeep Wrangler stand out as among the best. All three vehicles were recently revealed by *Autotrader* as among the 10 Best Cars for Dog Lovers.

The list, drawn up for the sixth consecutive year by *Autotrader*, helped mark National Dog Day, celebrated on Aug. 26.

Editors at *Autotrader* created the list of the best rides to help shoppers find the perfect new car for traveling with their fourlegged friends, said *Autotrader* spokeswoman Nichole Mrasek.

In its press release, *Autotrader* stated that dogs "are considered members of the family and with this in mind, the list includes vehicles that are" safe and comfortable for pets and their owners."

"At *Autotrader*, our goal is to help people navigate the car-buying process through our extensive lists of vehicles that suit consumers' various needs," says Brian Moody, executive editor at *Autotrader*.

"With this in mind, we came up

When it comes to making canne companions bark in approval, the 2019 models of the actick Regal TourX, Chrysler Pacius with a list of cars that offer both comfort and convenience features pet owners should consider if they're buying a car."

While comfort is an important factor when choosing a vehicle, safety is of the upmost importance, Moody said.

The vehicles selected have extensive features geared at keeping both human and canine passengers safe – including a level cargo floor, rear air vents and more.

The honor is the latest for the Chrysler Pacifica, said FCA spokesman Darren Jacobs. The Pacifica includes convenient dogfriendly features, such as an available Stow 'n Vac integrated vacuum powered by RIDGID for quick cleanups.

The Stow 'n Go seating and storage system with Stow 'n Assist and Easy Tilt, as well as optional power-folding Stow 'n Go third-row seats, clear out extra room for pets without needing to remove seats, Jacobs said.

Helping the Wrangler, as well as the Pacifica, make tails wag in approval are available Mopar pet-friendly accessories for both of the vehicles. The lightweight Mopar pet kennel features two pockets, three doors, a carrying handle and tie-down straps that secure to the cargo area to help prevent sliding, while Mopar allweather floor mats and cargo mats protect the interior.

"Buick is happy to be on *Autotrader's* most dog-friendly vehicle list two years in a row, first with

the Encore and now with the TourX," said Stuart Fowle, Buick Communications manager.

"Between our lineup of SUVs and the Regal TourX and Sportback, our current vehicle portfolio boasts rear cargo liftgates across every model, which we hope for pet owners means that Buick is barking up the right true."



It's possible to directly strap a dog carrier into the back of the Pacifica.

Famed German Auto CEO Piech Dies

BERLIN (AP) – German auto industry power broker Ferdinand Piech, the longtime patriarch of Volkswagen AG and the key engineer of its takeover of Porsche, has died, his widow confirmed Aug. 26. He was 82.

His wife, Ursula Piech, told the dpa news agency in a statement provided by their family lawyer that her husband died Sunday "suddenly and unexpectedly" but did not give a specific cause.

"Ferdinand Piech's life was marked by his passion for the automobile and for the workers "He was an enthusiastic engineer and car lover until the end."

Piech – a grandson of Ferdinand Porsche, who founded the company that bears his name and designed the first version of VW's signature Beetle – was an auto industry mainstay for more than four decades. He was credited with turning around Volkswagen in the 1990s, leading it back to profit during a nine-year stint as chief executive.

Ford Takes Rochester Hills Mayor for Ride in Argo Car

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teraction with residents, businesses, and community organizations, they develop a deep understanding of their cities," Rander said.

"They know where their community is thriving or how it may be struggling, so it's important to help familiarize city leaders with technology that has huge implications for their residents."

Rander said that he was honored to host Mayor Barnett and discuss some of these implications as they rode through Detroit.

Barnett also found the experience interesting and had a lot to say about it.

"I tend to have a lot of faith in technology, but sitting in one of Ford and Argo Al's new self-driving test vehicles as it drove through downtown Detroit was still an eyes-wide-open experience," Barnett said. "The car smoothly navigated traffic and even handled unexpected situations impressively - like when a truck surprisingly cut us off and the car properly slowed down in order to let it pass. Scenarios like this serve as a reminder of just how much technology and preparation goes into helping a machine like this operate in a safe manner."

As a mayor of a city in Michigan, Barnett said that it's crucial for self-driving car companies to remain in regular conversations with cities, and to visit communities to see how each one is different

"Mayors and local officials may not have technology expertise, but they know their cities," Barnett said. "They can provide important information about how self-driving vehicles can be rolled out to address the specific needs of their residents. The more we work together, the more successful this technology will be for everyone – and the faster it will be accepted, and even embraced, by everyone.

"Very often, when I talk to people about self-driving cars, one of the first things they mention is the potential to be more productive during their commute to work, as well as being able to relax and use their phone without having to worry about driving. Those are valuable benefits, but we can aim higher."

Much of what is done in local communities is serving large aging populations, and that's universally true in all corners of the country, Barnett said. So anything that help provide that service is welcomed.

"Self-driving cars give us the opportunity to expand mobility and extend the quality of life for people far past their personal ability to drive safely – and this is just one situation that autonomous technology can address," Barnett said.

"The same holds true for people with disabilities. I have personally seen the excitement that comes to the face of a disabled person who realizes the independence and freedom that will come with this new era and dimension of mobility."

Barnett said he doesn't think there's a mayor in the United States who is not excited about the way self-driving cars can improve life for the communities and residents these same mayors serve.

"They have the chance to improve quality of life for just about everyone in the community regardless of level of education, income, ability, or zip code," Barnett said.

"Of course there are a lot of questions to answer about a major disruptor like this, but if companies like Ford and Argo AI continue to work with cities to figure out how to launch this technology, we can manage this transition just as our forefathers managed to move on from horse-drawn carriages."







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Explore Michigan

Great Lakes Shipwrecks

Why not visit the Great Lakes Shipwreck Museum, located at 18335 North Whitefish Point Road in Paradise, Mich.

The Great Lakes Shipwreck Museum has become one of Michigan's most popular destinations in the cultural tourism industry, attracting over 75,000 visitors each season," said museum Operations manager Sarah "The museum is open every day May 1 to Oct. 31, from 10 a.m. to 6 p.m. Museum patrons learn about the perils of maritime transport on the Great Lakes at the Whitefish Point Light Station, an Historic Site on the National Register of Historic Places. Visitors get to see the Whitefish Point Light Tower, in continuous operation for 155 years, the oldest operating lighthouse on Lake Superior."

The museum was founded by Great Lakes Shipwreck Historical Society, which itself was founded in 1978 by a group of divers, teachers, and educators to commence exploration of historic shipwrecks in eastern Lake Superior, near Whitefish Point in Michigan's scenic Upper Peninsula, said Wilde.

"Today, this non-profit organization operates two museum sites on historic properties: The

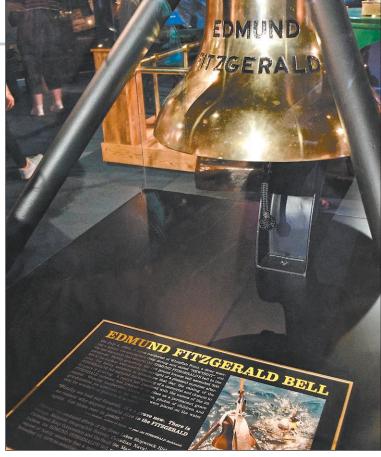
Looking for something to do Great Lakes Shipwreck Museum, Whitefish Point Light Station, Whitefish Point; and the U.S. Weather Bureau Building, Soo Locks Park, Sault Sainte Marie, Mich." Wilde said

Whitefish Point is located at the extreme southeastern end of Lake Superior, Wilde said. It is a critical turning point for all vessel traffic entering and leaving this largest of all the Great Lakes. The Whitefish Point Light Station was established by Congress in 1849; since then, a life-saving beacon has illuminated these dangerous waters for mariners continuously.

Today, the Whitefish Point Light is the oldest operating lighthouse on Lake Superior. The present light tower was constructed in 1861 during Abraham Lincoln's administration.

The Shipwreck Museum is open to the public seasonally from May 1 to Oct. 31; and the Weather Bureau is open yearround.

"We will be holding our 'Run for the Light' fundraiser on Saturday, Oct. 13," Wilde said. "All proceeds from this annual event, a race, fun run, or walk, benefit ongoing restoration efforts of the 1861 Whitefish Point Lighthouse. This is an interesting story. We own the land and the building, but the actual light in the build-



The Great Lakes Shipwreck Museum houses many famous items.

ing is still an active aid to navigation, so the light is actually run by the U.S. Coast Guard."

For information, or to register, please visit the Shipwreck Society's web site at www.shipwreckmuseum.com.

The Shipwreck Society is a diverse organization that regularly

publishes a newsletter, DVDs, booklets, and commissioned works of maritime art.

Using its 47-foot Research Vessel David Boyd, the Society actively searches and documents historic shipwrecks each year during the diving season, Wilde

ASBE Holding Annual Golf **Fundraiser**

The American Society of Body Engineers Foundation (ASBE) will be holding its annual golf outing on Friday, Sept. 6.

The gathering will be held at the Springfield Oaks Golf Course in Davisburg.

Foundation spokesman Art Bryant said the course is a scenic 18-hole par 71 course.

"The front nine is open and hilly," Bryant said. "The back nine is tighter, with more trees and water. Springfield Oaks has been named as 'One of the Best Places to Play' for its value for the money, for its service and the condition of the course by Golf Digest in 2007."

Activities and amenities include 18 holes with a cart, a scramble format, morning coffee and donuts, a hot dog and drink at the turn, first and second place cash awards.

The ASBE promotes design and engineering as a career, Bryant said. It encourages and recognizes the achievements and creativity of students with scholarships and awards.

It also conducts its "Design Challenge" competition. The event is designed to provide high school students an opportunity to develop the skills needed to solve "problems" in automotive-based design.

To register online, go to asbe-Foundation.org.

Ex-Google Employee Named As Thief of AV Technology

vehicle pioneer who used to work for Google has been charged with stealing secrets from the company before he joined Uber's efforts to build robotic vehicles.

Anthony Levandowski was charged with 33 counts of trade secrets theft in an indictment filed Aug. 27 by the U.S. attorney's office in San Jose, Calif. The criminal case arose out of a lawsuit that Google self-driving spinoff Waymo filed against Uber alleging technology theft.

Here's how it wound up in the criminal courts:

HOW IT STARTED - Former Uber CEO and founder Travis Kalanick believed that the company could not survive without being the leader in autonomous vehicles. One of Uber's biggest expenses is to pay drivers for ferrying passengers, and that cost could be reduced or eliminated with vehicles that drive themselves. Uber feared it would face a cost disadvantage if another company started an autonomous ride-hailing service first.

Levandowski in 2015. Levandowski soon left Google to help found Otto, a self-driving truck startup. Uber bought Otto for \$680 million in 2016 and got both Levandowski and Otto's technology.

Google sued Uber accusing it of stealing autonomous vehicle secrets and alleging that Levandowski downloaded documents before he left the company. The theft allegedly included Google technology for laser sensors that give the cars the ability to see their surroundings.

Uber denied knowing about the documents, and Levandowski invoked his Fifth Amendment right against self-incrimination leading up to a trial. He was eventually fired by Uber. HOW THE CIVIL

TURNED CRIMINAL - About a week after the trial began in early 2018, Uber agreed to settle the case and pay \$245 million to Google's self-driving car spinoff, now called Waymo. The Google

DETROIT (AP) - A self-driving spinoff also got guarantees to prevent its technology from being used in Uber's autonomous

> But before that happened, U.S. District Judge William Alsup in San Francisco, who was overseeing the Waymo-Uber lawsuit, took the unusual step of referring the case to the U.S. attorney's office based on testimony and evidence unveiled ahead of a

> **DID UBER KEEP DEVELOPING SELF-DRIVING VEHICLES?** – Yes, but it ran into serious trouble in March 2018 when one of its autonomous test vehicles, a Volvo SUV, killed a pedestrian on a darkened street in Tempe, Ariz. Elaine Herzberg, 49, was pushing a bicycle when the crash occurred. Investigators later determined that Uber's human backup driver was streaming the television show "The Voice" on her phone and was looking downward before the crash. Investigators concluded the crash could have been avoided had Vasquez not been distracted.

The NTSB released a prelimi-That led Uber to start recruit- nary report saying the autonomous driving system on Uber's SUV spotted Herzberg before hitting her, but didn't stop because the system used to automatically apply brakes in potentially dangerous situations was disabled "to reduce the potential for erratic vehicle behavior."

Uber suspended its autonomous vehicle testing on public roads after the crash, and it was also put on hold by Arizona's governor. Uber resumed testing autonomous vehicles in Pittsburgh in December 2018 after getting clearance from Pennsylvania officials. The cars run autonomously but have two human safety operators called "mission specialists" in the front seat. Uber also is gathering data with human drivers in control in San Francisco and Toronto.

WHAT HAPPENS NOW IN CRIMINAL CASE? Charges will proceed against Levandowski, who faces up to 10 years in prison and \$250,000 in fines per criminal count.

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Srini Kambhampati

LTU Names New Dean

named the new dean of the College of Arts and Sciences at Lawrence Technological Universitv. He succeeds Hsiao-Ping Moore, who retired.

Kambhampati comes to LTU from The University of Texas at Tyler, where he was associate provost for research, said Lawrence Tech spokesman Matt Roush. Earlier, from 2011 to 2017, he was S.A. Lindsey Professor and Chair of the Department of Biology.

Kambhampati started his career at Kansas State University in 1992, where he was an assistant professor of entomology. He was promoted to associate professor of insect genetics and evolution in 1998 and to full professor in 2002.

In addition, Khambhampati was a by-fellow in the Laboratory of Development and Evolution at the University of Cambridge in the United Kingdom in 1999, and an assistant faculty fellow and postdoctoral research associate at the University of Notre Dame from 1987 to 1992.

He has authored or co-au-

Srini Kambhampati has been thored more than 70 scholarly papers and has been involved in grant applications resulting in more than \$5 million in research funding for the institutions where he taught. He described his research-based approach to education this way: "I believe in the thrill of self-discovery rather than information."

Kambhampati received his bachelor of science in agriculture from Andhra Pradesh Agricultural University in Hyderabad, India, and his master's degree in pest management in the Department of Biological Sciences and his doctor of philosophy in biological sciences from Simon Fraser University in Burnaby, British Columbia, Canada.

At LTU, the College of Arts and Sciences is home to the university's programs in chemistry, communications, computer science, humanities, mathematics, nursing, physics, and more. It is comprised of the Department of Humanities, Social Sciences, and Communication; the Department of Mathematics and Computer Science; and the Department of Natural Sciences.

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