

MAKING SPACE TRAVEL INCLUSIVE FOR ALL

Mary Cooper, an aerospace engineering student and below-the-knee amputee, experiences a weightless, microgravity environment **PAGE 8**



SAN DIEGO'S BEST INNOVATIVE LAW FIRMS 2021

THE VOTES ARE IN! CHECK OUT OUR HONOREES ON PAGE 10

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COVER STORY:

Making Space Travel Inclusive for All

In a weightless, microgravity environment like space, what do ability and disability look like? How can someone with partial sight or impaired mobility navigate in a confined space like the space station? As scientists and innovators continue to push the boundaries of spaceflight and the possibility of human life on other planets, how can we build space infrastructure that is inclusive of all humans? The Mission: AstroAccess project aims to answer these questions. Page 8



Regional Cyber Innovation Center

The City of San Diego has received federal grant funding to develop a new San Diego Regional Cyber Innovation Center to help local agencies prevent and protect against cyberattacks.



San Diego's Best Innovative Law Firms

The region's best innovative law firms are featured in this report, and range from some of the oldest, such as Higgs Fletcher & Mack and Kirby & Kirby, to some of the youngest, such as Crosbie Gliner Schiffman Southard & Swanson, or CGS3.



Cubic Corp.'s New Headquarters

Cubic Corporation, the 70-year-old San Diego company that serves the defense and transportation industries, has witnessed the completion of its new headquarters on Balboa Avenue in Kearny Mesa, the result of combining its two main campuses into one.



Wireless Industry Scheme Widens the Digital Divide

Larry Ortega, founder of Community Union Inc., a nonprofit corporation that trains consumers living in the digital divide, and a 35-year veteran of the technology center, offers a commentary on how America's telecom companies have schemed to widen the digital divide, leaving millions of Americans unconnected.



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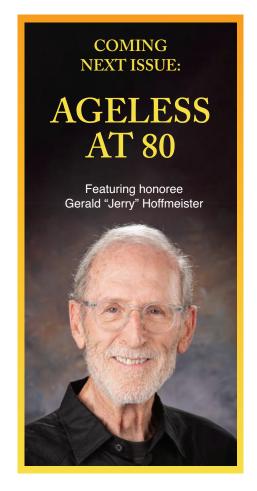
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SAN DIEGO SCENE

City of San Diego receives grant to develop new Regional Cyber Innovation Center

The City of San Diego has received federal grant funding to develop a new San Diego Regional Cyber Innovation Center to help local agencies prevent and protect against cyberattacks.

The Cyber Innovation Center will provide the greater San Diego region with coordinated cybersecurity awareness through collaborative access to tools, intelligence and a trained and capable workforce. The goal is to enhance cybersecurity resilience through timely sharing of information and analysis, and specialized training with safe environments to simulate and defend against cyberattacks.

Cyber crime has soared in recent years with an estimated \$6 trillion in damages in 2021, according to industry expert Cybersecurity Ventures. There have also been several recent attacks on San Diego's local agencies and institutions, including Scripps Health, the Port of San Diego, the City of San Marcos and UC San Diego Health.

The city received two grants from the U.S. Department of Homeland Security totaling about \$928,000 to develop a project management plan for the San Diego Regional Cyber Innovation Center.

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San Diego Press Club presents 48th annual Excellence in Journalism Awards

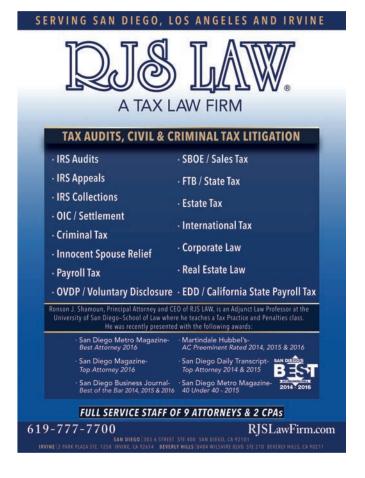


Award-winning journalists Jeff McDonald, left, Scott McGaugh and Phyllis Pfeiffer

The San Diego Press Club hosted its 48th annual Excellence in Journalism awards program on Facebook and Twitter live stream on Oct. 25. The program recognized 500 award recipients in more than 180 categories and 10 divisions.

The event also included three special career achievement awards. Recipients:

- Jeff McDonald: Harold Keen Award for outstanding contributions in journalism. McDonald is a member of the investigative reporting team at the San Diego Union-Tribune and writes about government and institutional misconduct and waste in San Diego County and beyond.
- Scott McGaugh: Andy Mace Award for career achievements in public relations. McGaugh began his career at a local San Diego marketing firm in 1985, serving clients in the hospitality, recreation, agriculture and real estate industries before opening his own firm with co-owner Peter MacCracken in 1996. Later, he became a founding board member and the founding marketing director of the USS Midway Museum before retiring in 2002.
- Phyllis Pfeiffer: Jim Reiman Award for excellence in media management. Pfeiffer Pfeiffer is president and general manager of the Union-Tribune Community Press, a group of nine community newspapers in San Diego County. She began her career as publisher at the La Jolla Light in 1977 and has also held such roles as general manager of the Los Angeles Times San Diego Edition.





Average new-car price tops \$45,000 - an all-time high

For the first time ever, the average price of a new car has edged past \$45,000, according to a new report from Kelley Blue Book and data from TrueCar, a Consumer Reports partner that provides market analysis and an online marketplace for cars.

Buying a car—just about any car—has been difficult for months now, and new data shows that new cars, like used ones, are costing consumers more than ever. Blame it all on the pandemic, and the resulting global semiconductor shortage that has hobbled automakers' ability to crank out new cars, crimping supply, pushing up prices and limiting availability.

"We are seeing new transaction prices hit all-time highs," says Nick Woolard, an analyst with TrueCar. "In September, we saw the average transaction price increase 7.7 percent over a year earlier."



Credit: © Can Stock Photo / Stocksolutions

to Birch Aquarium in summer 2022

Little Blue Penguins have come to Birch Aquarium at Scripps Institution of Oceanography.

"Little Blue Penguins and other seabirds, are sentinel species for our ocean's health and help us understand how we can be better stewards for our planet," said Jenn Nero Moffatt, senior director of animal care, science and conservation. "We hope that one look at their awkward waddling, their pint-sized bodies, torpedo swimming and social nature will leave our guests enchanted, and wanting to learn how to aid in conservation efforts."

The Beyster Family Little Blue Penguins exhibit is named in honor of a \$1 million gift from the Beyster Family, who are long-time supporters of Scripps Institution of Oceanography and Birch Aquarium.

The 2,99-square-foot exhibit, which will open in summer 2022, will include rocky and sandy shore habitat and an 18,000- gallon pool where guests will observe the penguins socializing, interacting, and nest building. The exhibit also includes a small amphitheater for guests to observe birds swimming, and a discovery cave to closely observe Little Blue Penguins on land and inside a nesting box.



Rendering of the Comic-Con Museum in Balboa Park (Courtesy San Diego Comic Convention)

UC San Diego breaks ground on a multiphase, multi-billion-dollar redevelopment of Hillcrest Medical Campus

Construction began this week on a 10-acre site on the Hillcrest campus. It marks the first phase of a multi-phase plan to redevelop the full medical campus, providing new facilities, new technology, increased capacity, expanded are offerings and other community services and amenities.

The first phase of redevelopment includes a 250,000-squarefoot outpatient pavilion anticipated to open in 2025, which will house specialty clinical programs including oncology, neurosurgery and orthopedics, as well as ambulatory surgery operating rooms, gastroenterology procedure rooms, advanced imaging, infusion and radiation oncology.

This phase also includes a 1,850-space parking structure anticipated to open in at the end of 2023, which will allow for the demolition of the existing Bachman and Arbor parking structures, consolidating patient and employee parking for improved patient and caregiver access and experience.



The first phase of redevelopment includes a 250,000-square-foot outpatient pavilion and a 1,850-space parking structure.

Facial recognition technology comes to San Diego

Restaurateur Dennis Lee, owner of sushi restaurant Pokedon (Japanese for "Sushi Bowl"), near San Diego State University, believes facial recognition technology will help his business recover after being closed for 10 months on account of COVID-19.

Lee was forced to take on a lot of debt before reopening his 1,000-square-foot restaurant with a limited staff in January. When he got a call from a representative from PopID, a provider of facial recognition technology, he thought it would be a good time to introduce the technology.

Allowing customers to "pay with their faces" would make it easier, he reasoned, and the technology did not require a big investment on his part

"Currently, our only fee to merchants is our processing fee of 1.5 percent plus 11 cents," said Tom Costello, a PopID senior project manager. "This fee is significantly lower than the vast majority of processing companies."

Customers must create an account on PopID and enter their credit/debit card information to use the payment system, known as PopPay.

"Right now we're on five campuses, San Diego State, University of Santa Barbara, Chapman, Pasadena City College, and the fifth being USC (University of Southern California)," Costello said. "For our product to be truly adopted, we need to be in the place that students want to go, so location is a huge factor."

The preceding information was gathered from San Diego State's Daily Aztec and Kiosk Marketplace.

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Our office gained prominence in the San Diego community, through our diligent client representation, a history of successes, and the glowing recommendations received from our past and current clients. RJS LAW consistently appears before the Internal Revenue Service, Franchise Tax Board, Employment Development Department, and the California Department of Tax and Fee Administration. RJS attorneys also work with the Department of Justice – Tax Division, as consultants on IRS Wealth Squad audits, and with various US Attorney's Offices throughout the country.

RJS LAW was founded by Ronson J. Shamoun, a three-time graduate of the University of San Diego. He is an Adjunct Professor and Advisory Board Member of USD's School of Law and School of Business. Ronson has over 20 years of experience in the field of taxation. In 2016, Ronson co-founded the annual USD School of Law RJS LAW Tax Controversy Institute – a leading educational event for tax professionals and the tax community at large to discuss current issues including newly enacted legislation, IRS initiatives and programs, criminal prosecutions, and other tax topics of interest. USD School of Law RJS LAW Tax Controversy Institute is one of a few prestigious tax institutes in the United States.

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AstroAccess Ambassador Azubuike 'Zuby' Onwuta is a Harvard-MIT trained innovator and U.S. Army veteran who is legally blind. Viirre braces himself behind Onwuta, as he ensures a safe on-board experience for all participants. (Photo credit: Al Powers for Zero Gravity Corporation.)

n a weightless, microgravity environment like space, what do ability and disability look like? How can someone with partial sight or impaired mobility navigate in a confined space like the space station? As scientists and innovators continue to push the boundaries of spaceflight and the possibility of human life on other planets, how can we build space infrastructure that is inclusive of all humans?

The Mission: AstroAccess project aims to answer these questions, starting with a historic parabolic flight that took off from Long Beach on Oct. 17, 2021. A group of 12 disabled scientists, veterans, students, athletes and artists launched into a zero-gravity environment as a first step toward understanding what is needed to make space inclusive for all.

"The whole point of this project is to demonstrate that people with disabilities are able to fly safely into space," said Dr. Erik Viirre, director of The Arthur C. Clarke Center for Human Imagination at the University of California San Diego, and a neurologist at UC San Diego Health. Viirre served as medical and flight operations lead for the AstroAccess flight, ensuring a safe environment for all 12

AstroAccess Ambassadors and their partners on board. "What we're working on in this initial flight are demonstrations of a variety of different tasks that our Ambassadors will have to carry out, including navigating up, down, left and right; clear communication; and being able to move to a set location."

In addition to Viirre, aerospace engineering student Brenda Williamson, the former president of the UC San Diego chapter of the American Institute of Aeronautics and Astronautics (AIAA), served as head of the logistics committee in preparation for the flight.

The AstroAccess project is led by a group of scientists, engineers, and social workers with a common goal: inclusive space exploration. In the United States, 26 percent of the population has a disability, yet people with disabilities make up only 8.4 percent of the country's employed scientists and engineers. AstroAccess wants to make STEM, and space, accessible to this large portion of the population.

To get a better idea of what is needed for more inclusive space travel, AstroAccess plans to conduct a series of follow-on parabolic flights after this inaugural launch. On these flights, conducted by the Zero Gravity Corporation (Zero-G), a plane equipped with a special

padded section flies up to an altitude of around 32,000 feet and then begins a rapid descent at about 4 miles per second. This quick descent creates a free fall, or microgravity, weightless effect lasting roughly 30 seconds. Afterwards, the plane climbs back up to a stable altitude, and repeats the process again. On the Oct. 17 flight, the process was repeated roughly 15 times.

The 12 AstroAccess Ambassadors selected for this first microgravity flight included four blind or low-vision Ambassadors; two deaf or hard-of-hearing Ambassadors; and six Ambassadors with mobility disabilities, all carrying out a variety of tasks and challenges in the weightless environment. One of the challenges was seeing whether all crew members could perform basic safety and operational tasks, like navigating to oxygen masks. The crew also tested a procedure to see whether sound beacons can be used for blind members to orient themselves, and the effectiveness of haptic devices in communicating commands. They're also investigating how American Sign Language will be impacted by microgravity.

When it comes to the physiology of microgravity and understanding how the human body is affected, Viirre has a wealth of information and experience. This wasn't his first flight with Zero-G; Viirre was also the chief medical officer in charge of Stephen Hawking's microgravity flight in 2007, and has served as CMO on several gravity-free flights for people with disabilities since. The Arthur C. Clarke Center for Human Imagination at UC San Diego is an official sponsor of the AstroAccess program.

"We still have lots of things to learn about traveling in space," he said. "Our destiny really is out there."

Williamson, an aerospace engineering student at UC San Diego, has been involved with the project for months now, working to ensure the October launch went off without a hitch.

"As the lead of logistics, I manage all of the nitpicky details we need to know for our five-day trip in Long Beach, including transportation, food, catering, ASL interpreters and company tours," Williamson said. "We're doing quite a bit these few days and it's my job to make sure we make that all happen."

As former president of the AIAA chapter at UC San Diego, Williamson was responsible for hosting events with guest speakers, organizing club trips, and planning events to help prepare students for graduate school or industry jobs. She believes that this helped her prepare for her role with AstroAccess. For her, contributing to AstroAccess' goal is also personal.

"My whole career goal is to make the average person able to go to outer space, where you don't have to be a crazy trained astronaut with impeccable physical abilities and health to visit outer space," she said. "I grew up on Star Trek, so the idea of exploration is really important to me."

Williamson and Viirre are enabling a path for more Tritons to join the storied history of UC San Diego alumni in space. UC San Diego is home to a number of astronaut alumni and faculty members, including Sally Ride, former professor of physics at UC San Diego and the first American woman in space; current NASA astronauts Megan McArthur and Jessica Meir, alumnae of the Scripps Institution of Oceanography; and Kate Rubins, a biology alumna of UC San Diego.



Dr. Eric Viirre (right) served as chief medical officer on Stephen Hawking's microgravity flight in 2007, and was medical and flight operations lead for this AstroAccess flight. Viirre directs The Arthur C. Clarke Center for Human Imagination at UC San Diego and is a neurologist at UC San Diego Health.



Brenda Williamson, an aerospace engineering student at UC San Diego, served as head of the AstroAccess logistics committee in preparation for the flight.

SAN DIEGO'S BEST INNOVATIVE LAW FIRMS

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Founded in San Diego in 2013 by five longtime partners of large law firms, CGS3 is a new generation commercial real estate law firm with practice areas covering the full commercial real estate life cycle. In just eight years., CGS3 has emerged as the largest real estate law firm in San Diego. It has offices in San Diego and Los Angeles, and has been involved in some of the region's most important real estate transactions, from high-profile retail leasing deals to complex commercial sales and acquisitions. CGS3 has helped its clients navigate the challenges of Covid-19. It has extensive experience across all industries within the commercial real estate sector. Practice areas include acquisition and dispositions, financing, construction, and development, commercial leasing, tax and entity formation land use and environment.



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NOONAN LANCE BOYER & BANACH LLP

Noonan Lance has a singular focus on achieving the best results for its clients in the most efficient way possible. The firm's attorneys are experienced litigators, who represent both plaintiffs and defendants in a wide variety of practice areas and industries. They are most well-known for their work in "Bet the Company" cases – large, complex matters where an entire business may be at risk. Noonan Lance lawyers have extensive experience in state and federal courts, as well as in arbitration.





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Cubic Corporation's newly completed headquarters brings its San Diego-based workforce together Photos by Haley Hill Photography

Cubic Corporation, the 70-year-old San Diego company that serves the defense and transportation industries, has witnessed the completion of its new headquarters on Balboa Avenue in Kearny Mesa, the result of combining its two main campuses into one.

Groundbreaking for the new headquarters occurred in July 2019. Cubic partnered with Cisterra Development for the construction. The entire design was handled by Ware Malcolm, an awardwinning international design firm.

Two 125,000-square-foot, three-story buildings were built on the site at 9333 Balboa Ave.

Ware Malcolm said the architectural design for the new buildings uses Cubic branding as a focal point for the project. Many design features were incorporated in the main entrance and lobby areas featuring a floating Cubic logo, a three-story feature stair that wraps

the exterior glass wall, promoting interaction and movement through the space. Including the new facilities, the overall campus square footage totals approximately 415,000 square feet.

The overall office design features a modern and efficient workplace to promote cross-pollination between departments and encourage innovation. Ware Malcomb also designed various amenities spaces throughout the campus including a full-size kitchen/café, outdoor lounge, conferencing center and a fitness center. The cafe features a glass wall designed to reduce solar heat in the summer and allow the sunlight to warm the interior slab during colder months.





WIRELESS INDUSTRY SCHEME WIDENS THE DIGITAL DIVIDE

By Larry Ortega | Special to CalMatters

For almost 30 years, America's telecom companies have been receiving billions of dollars in rate increases and extra fees to finance the build-out of a national fiber optic network. Along the way, they discovered that such a network would hamper their opportunity to make a financial killing with wireless technology. So in 2010, they stopped upgrading phone customers with fiber optics, thus widening the digital divide and leaving millions of Americans unconnected.

This is not just another digital divide story about rural or inner-city residents who lack access to broadband services. This is a story about a skillfully thought-out, well-financed scheme that involves the American Legislative Exchange Council (ALEC), Koch Industries (the largest privately held company in the U.S.) and a gang of lobbyistsjoining forces to write legislation.

This legislation would use the levers of state government to fast-track the deployment of an unregulated and a highly profitable wireless business. In state after

state, the same political forces that are legislating away voting rights and increasing the power of corporations are pushing fast-track 5G legislation under the guise of fixing the digital divide.

The wireless industry claimed that rapid deployment of 5G technology will bring great new benefits to consumers, and just like that, almost every one of our California legislators were on board. What the industry purposefully omits is that fiber optics (wired) connections are 10,000 times faster than 5G, more secure, less expensive for the consumer and future-proof.

In fact, it was the phone companies themselves that abandoned the completion of fiber connections midstream, leaving millions of miles of "dark fiber" in the ground. A 2018 Network Exam by the California Public Utilities Commission detailed how abandoning fiber optic upgrades to low-income and rural areas left consumers with wireless-only options. This is a well-known — and unethical — strategy called "harvesting."

These attacks on consumers by ALEC

and the telecommunications industry have been constant. Gov. Gavin Newsom faced off with telecom when he was mayor of San Francisco. Federal Communication Commission Commissioner Brendan Carr had fought the city's effort to ensure consumer protections. Carr wrote the FCC's current regulations on 5G, known as Carr's 5G Orders.

These orders obliterate state and local government oversight of infrastructure build-out, throwing out both financial and physical safety protocols, all in the name of a race to third place. Even when 5G can be successfully deployed, it is still slower than fiber optics and cable TV.

ALEC, Carr and the phone companies are working in tandem to ensure that consumers in California and the U.S. do not get access to world-class telecommunication services. Fiber optic upgrades would slash profits by hundreds of billions of dollars, breaching telecoms' fiduciary duty to their shareholders. The telecoms want no part of profit-slashing and therefore have chosen to drive a

strategy that ensures the persistence of a digital divide.

Community groups, unions (such as the Communication Workers of America) and parents who fear their children may be harmed by unregulated deployment of wireless infrastructure are on to this nonsense. They recently asked for, and were granted, the governor's veto on Senate Bill 556, one of the ALEC bills. The effort was a massive grassroots undertaking. But while this cohort of consumers and activists prevailed this time, it is not a sustainable long-term strategy.

The veto of SB 556 is a victory for local governments in California, but it's only temporary. ALEC and friends have a history that has had a devastating impact on families living with the digital divide, starting with 2012's SB 1161, which the CPUC Network Exam points to as a culprit in exacerbating the digital divide; followed by 2017's SB 649, which was vetoed by Gov. Jerry Brown; and 2021's AB 537, which created a "deemed granted" law that puts safety protocols at risk. Gov. Newsom signed AB 537 into law.

Consumers, telecoms and our legislators are charged with the task of ensuring that all Californians have quality, high-speed, fiber optic access to online resources, be they in the rural cities of Huron, Mendota or Firebaugh or the inner-city MacArthur Park,

Huntington Park or Leimert Park neighborhoods of Los Angeles.

It is time for the governor to call for an investigation into why these ALEC bills keep landing on his desk. Consumers deserve to know how it is that the telecom industry's plans since 1993 to upgrade consumers with fiber optics still have not been delivered. At no point did consumers agree to a more expensive, less efficient wireless network. Wireless technology has its application, but to reiterate, 5G is 10,000 times slower, requires higher maintenance and will consume much more energy than fiber optics once deployed, guaranteeing a larger, not smaller, carbon footprint.

We might begin by looking at increasing oversight of fiber optics deployed under Title II of the Communications Act of 1934 — a federal mandate that all customers shall be served. This increased oversight, by itself, might be able to close the digital divide.



Larry Ortega is founder of Community Union Inc., a nonprofit corporation that trains consumers living in the digital divide, and a 35-year veteran of the technology sector.

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