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LEADING FROM THE FRONT

Several companies included in the Chamber's annual ranking of **"Best Places to Work®"** count UAH alumni among their leadership

A wellspring of highly trained graduates and a seedbed of innovation, The University of Alabama in Huntsville (UAH) has long provided a reliable pipeline of intellectual talent to the region's employers. And as expected, many of those alumni have ascended to positions of leadership over the years, both within those organizations and at companies they would go on to found and, in part, staff with UAH graduates who came after. So it came as little surprise to learn that several of the companies named by the Huntsville/Madison County Chamber in their 2017 ranking of "Best Places to Work®" include UAH alumni among their leadership.

"UAH's commitment to meeting the advanced workforce needs of the Tennessee Valley has been the backbone of our partnership with the community that surrounds us," says Dr. Robert Altenkirch, UAH President. "But equally important is our commitment to ensuring that our graduates are prepared not just to contribute but to *lead*, as the university's mission statement attests. The inclusion in this ranking of companies whose leadership comprises UAH alumni is a testament to both the high-quality education they received and their dedication to creating a professional environment that nurtures tomorrow's leaders as well."

The ranking, which is now in its 10th year, is based on an Employee Engagement Survey that asks employees to rate their company on a variety of workplace issues and topics. Companies can fall into one of five categories: micro (10 to 20 employees), small (21 to 50 employees), medium (51 to 100 employees), large (101-250 employees), and extra-large (251+ employees).

"Huntsville/Madison County has no shortage of top-notch companies, and our Best Places to Work Awards honor the mainstay of our economy – the economic engines that make our community a smart place to live, work, and play," says Pammie Jimmar, the Chamber's small business and events director. "Every year, we are even more impressed with the quality of

"I'll stack UAH engineers up against any engineers in the country."
– John Troy

work/life balance, company benefits, and employee dedication that our Best Places to Work winners offer. Everything they do as a team makes Huntsville/Madison County truly a place of innovation and dreams."

TROY 7 INC.

One multiyear mainstay of the Chamber's ranking is Troy 7 Inc., an aerospace engineering company that specializes in the flight-testing of missile systems. Taking gold in this year's "small" category, it was founded in 2007 by two UAH alumni: Lynn Troy, who earned her Bachelor of Science in electrical engineering and now serves as chief executive officer; and John Troy, who earned his Bachelor of Science in math and computer science and now serves as chief scientist.

"It was like 'Titanic' – I jump, you jump," says Lynn of their decision to leave their longtime careers with Teledyne Brown and start Troy 7. "My mom thought we were insane!" Fortunately, the pair had recently received some welcome encouragement from Lynn's former UAH engineering professor and founder of deciBel Research, Dr. Bassem Mahafza. "We just happened to be sitting next to each other on a flight and he helped push me over the edge," she says. "He said, 'You're going to look back and say, why didn't I try? Don't be that person. Try and see what happens.' He was great."

Today, Troy 7 comprises 46 employees, seven of whom – like the Troys – are UAH graduates: Brett Seymour, Brittany May, Joseph Gordon, Renee Campbell, Scott Williss, Seth Thompson, and Andria Gunn. "I'll stack UAH engineers up against any engineers in the country," says John with pride. But regardless of where they were educated, all enjoy the nurturing environment envisioned by the Troys when they set out to establish the company and successfully executed these past 10 years.

"We knew what it was like to be a cog in the machine and we didn't want that," says John. "We wanted to finish out our careers in a company where we feel our contributions are valued and recognized, and we want our employees to have the same thing." Lynn couldn't agree more. "We're a family," she says, adding that she "literally cried" upon learning they had once again won the Best Places to Work award. "Our team being happy at the end of the day is what's important for me."

"This environment allows us to attract some of the best talent in the community. I'm proud to be associated with our team."

– Carol Daniel

QTEC AEROSPACE

Like Troy 7, QTEC Aerospace has also been named to the Chamber's list on multiple occasions, most recently taking the top spot in the "medium" category. "We provide systems engineering, project management, engineering analysis, and operations and logistics services for missile defense, aviation, and space programs," says Carol Daniel, who earned her master's degree in computer science from UAH. As vice president and director of QTEC's Space & Missile Systems Sector, Daniel serves as "the focal point" for their Battle Management & Command and Control work and leads their Model-Based Systems Engineering team.

Joining her on the QTEC team are eight other UAH alumni: John Brooks, Kyle Clark, Kenneth Ellis, Kirby Porterfield, Jay Rinkel, Chris Thomas, Matt Watson, and Joanne Towne, who serves as deputy director of QTEC's Astronautics Sector. "Approximately 15% of our workforce holds a UAH degree," says Daniel, who cites the university's proximity to Cummings Research Park and its strong degree programs as advantages. "Had I selected a different graduate school, my career could well have taken a different path, and I might not have been a part of those early years of ballistic missile defense system engineering."

She also wouldn't have met, and ultimately worked with, Dr. Sarah Graves, UAH computer science professor and current director of the university's Information Technology and Systems Center. "Dr. Graves was more than just my major professor; she was a supportive mentor and a great role model," says Daniel. "I drew strength from her confidence in me through the challenges of juggling a demanding career and graduate school. I am deeply appreciative of her support and guidance."

These days, however, it is Daniel herself who is in a position to provide support and guidance to those just beginning their careers, be they UAH graduates or otherwise. "QTEC offers an environment where an individual can apply a varied set of talents and try new things, if they are so inclined," she says. "This environment allows us to attract some of the best talent in the community. I'm proud to be associated with our team." And if the company's ongoing presence on the list of "Best Places to Work" is any indication, that admiration goes both ways.

PRACTICAL ENERGETICS RESEARCH

Practical Energetics Research (PER), bronze winner in the "micro" category, may have a smaller workforce than that of Troy 7 or QTEC, but fully half of the company's 16 employees are UAH alumni. In addition to founder and president Scott Hill, who earned his undergraduate degree in mechanical engineering at UAH before attending MIT for his master's degree, these include Jacque Hill, Justin Sweitzer, Marty Williams, Ben Sweitzer, Christina Sweitzer, Todd Dutton, and Olesya Berenbak.

From the beginning, Hill was determined to create a work environment that was both welcoming and inspiring. "I envisioned an engineering company that was lean, solved problems with innovative solutions, and where people could be themselves and enjoy the work part of their life," says Hill, adding that he based his company's structure on Google's pioneering model. "Now, I am not saying we will be the next Google! But I appreciated their openness and transparency."

PER's employees, for example, regularly participate in social activities and community service projects and are included in making important decisions with regard to benefits. "I believe this helps with the sense of being a part of the company," says Hill. The structure also enables Hill to spend less time running the company and more time doing what he likes best. "I really started PER so I could be more involved in technical work," he says. "So my primary efforts focus on helping customers with the design, testing, and evaluation of their products."

But while Hill is quick to cite his UAH education – and the support he received from mentors like UAH Russian professor Dr. Ostap Stromecky – as essential to his professional success, his real connection to the university goes far beyond the classroom. "While taking Russian classes at UAH, I met the woman who would become and still is my wife," he says with a smile. "Good choice in my opinion."

Photo credit: Huntsville/Madison County Chamber

> "I really started PER so I could be more involved in technical work. So my primary efforts focus on helping customers with the design, testing, and evaluation of their products."
>
> – Scott Hill

In addition to Troy 7, QTEC, and PER, three other companies that count UAH alumni among their leadership were named to the Chamber's 2017 list: PeopleTec Inc. and Integration Innovation Inc. in the "large" category, and Intuitive Research and Technology Corporation in the "extra-large" category.

"It's a welcome reflection of the impact our alumni are having as they pursue their professional goals and the realization of our efforts to strengthen the university's connection to the community," says Dr. Altenkirch. "As our enrollment grows at a record pace, and as more of our graduates enter the advanced workforce prepared to meet the challenges of the fast-paced global economy, we are hopeful that this trend will continue well into the future."

BRINGING HISTORY TO LIFE

Students in Dr. Molly Johnson's upper-level history class on "Nazi Germany and the Holocaust" recently paid a visit to Temple B'Nai Sholom, where they gained a deeper understanding of the history of Judaism in Huntsville and how the community was affected by the events of the Holocaust.

"All but one of the students had never been inside a Jewish house of worship, so this was a way for them to see firsthand that Judaism is a living religion right here in our community," says Dr. Johnson, associate professor of history. "It was also a way for them to go beyond the Holocaust as just a historical topic and to be able to understand death and loss as 'absence' on a more personal level."

The temple is home to an original yellow "Jude" star worn by Jews in Nazi-occupied Europe.

During the visit, the students met with Rabbi Elizabeth Bahar and Margaret Anne Goldsmith, a congregant and a descendant of two of the first Jewish families – the Goldsmiths and the Schiffmans – to arrive in Huntsville in the 1870s. They also saw an original yellow "Jude" star worn by Jews in Nazi-occupied Europe and the temple's Torah. Photography professor José Betancourt and student intern Katelyn Henderson accompanied the students to record their experience.

"Hearing the Rabbi and Ms. Goldsmith speak about how they each came to understand the Holocaust, listing members of their families by name, and taking turns in generational chronological order was a lesson that is hard to articulate," says Madison Butler, a sociology major and women's & gender studies minor. "Multiple students, myself included, asked the Rabbi questions to which she answered repeatedly, 'with great intentionality.' Those words have been in my head since our visit, and I don't think I will ever forget them."

Fellow student Meagan Bojarski, a history and English double major, was equally moved by the words of both Rabbi Bahar and Goldsmith. "It was really powerful going to the temple, because it gave names and personalities to the unimaginable numbers that you hear about so often in classes," she says. "It's easy to debate and discuss historical events until you hear from the families and see just how much was destroyed when xenophobia was put into practice."

Given the success of the visit, Dr. Johnson is already envisioning future outings that will give her students firsthand experience with what they're studying in class. In the meantime, her initiative has inspired fellow history professor Dr. Dylan Baun to take the students in his "Modern Middle East" class to the Huntsville Islamic Center for Friday prayers. "I look forward to embracing these future opportunities with our students," says Dr. Johnson, "which not only enhance their academic experience, but also help them experience the past and present diversity of Huntsville and North Alabama."

◂ Top left: Students in Dr. Molly Johnson's history class visited Temple B'Nai Sholom to gain a deeper understanding of the history of Judaism in Huntsville.

◂ Bottom left: The temple's Yartzeit calendar marks the death anniversary of deceased temple members so they can be remembered by the congregation in prayer.

Photo credit: José Betancourt and Katelyn Henderson

A "RAD" PROJECT

▲ The RISE Assistance Device (RAD), which provides independent mobility to a RISE student with cerebral palsy, was designed and built by a team of seven mechanical and aerospace engineering majors at UAH.

▲ Thanks to the RAD, Obembe is able to interact more easily with his teachers and neurotypical peers and engage more fully in educational and social situations.

Just over a year after moving onto the UAH campus in 2013, the RISE School became an official service and outreach unit of the College of Education. Now, however, those professional ties have become more personal, thanks to a team of seven mechanical and aerospace engineering majors in Dr. Christina Carmen's Engineering Design – Product Realization course.

This spring, the UAH seniors presented four-year-old Toga Obembe, a care-dependent RISE student with cerebral palsy, with a custom-made independent mobility device that he can use to move independently and safely around his classroom. "We were all so very excited to see him use it for the first time," says team member Greg Duke. "Some tears of happiness may have been shed by various parties!"

The project actually took shape a year prior, when Dr. Carmen reached out to Deana Aumalis, director of UAH's Early Learning Center, of which the RISE School is a part. "I suggested the possibility of having UAH engineering students design and build needed products for her school, and Deana was thrilled," she says. The timing could not have been better either, as Aumalis was looking for a solution to a problem that had arisen over the last few months. "Toga's classroom assistant had asked me if there was any type of device that would allow him more mobility, but I realized there was nothing on the market," says Aumalis. "So when Dr. Carmen reached out to me, I realized it would be perfect for a senior design team project."

After securing the necessary funding from Toyota USA and the North Alabama Section of the American Society of Mechanical Engineers, Dr. Carmen then pitched the RISE project to her class last August. Duke and six of his fellow classmates – Adam Elmore, Chris Beckham, Michael Delp, Doug Hess, Anthony Jones, and Joshua Minott – all jumped at the chance to help Obembe. "I liked all of the projects offered for various reasons," says Duke, "but this project had a special customer."

They ended up deciding on an electric-powered chassis for Obembe's favored tumble form seat that could be operated by foot pedals, designing and building it over the course of two semesters. The result was the RISE Assistance Device (RAD), which the team presented to Obembe and his family shortly before graduation this spring. "It brought tears to my eyes," says Aumalis. "Toga was able to move forward using the footplate switches the first time he tried."

With the product now delivered, the team's members understandably have their sights set on other, more timely considerations. For Duke, that means pursuing a full-time position in robotics before returning to UAH for his graduate degree. But while the project may be over, he feels certain that the experience of helping Obembe will last much longer for everyone involved. "No matter what career path I end up taking," he says, "I will always remember the positive impact we made on this child's life."

AN ENTREPRENEURIAL SPIRIT

Padgett is riding Cobus, a Friesian imported from the Netherlands who was a three-time 1st premie and is now a Reserve World Champion.

Hannah Padgett, the owner of Twin Lakes Stable, is already well known as an accomplished saddleseat trainer and riding instructor. But none of the major milestones she's reached in her life so far would have been possible without the support and encouragement of her grandmother, Jean Gilbert.

It was thanks to Gilbert, after all, that Padgett initially discovered her passion for horses. "I was four or five when my grandmother agreed to get me lessons," she says. "She figured I'd grow out of it, but after just two, I entered my first horse show and won. It was in my blood after that."

Gilbert was also responsible for introducing Padgett to the importance of accountability. "When I was 15, I told my grandmother that I thought I could do as good a job as my trainer at the time," she says. "She said, 'Ok, you can work the horses yourself then!' So I did. It taught me a lot about discipline." Not long after, she began taking on students of her own while learning more about the responsibilities of managing the farm.

That on-the-job training proved crucial just a few years later when Gilbert lost her battle with pancreatic cancer, leaving Padgett in charge. "When she got sick, I had been doing the bare minimum to keep the business going," she says. "So when I started back up, I had $1,000 and a borrowed horse." Fortunately, she adds, "I'm always up for a challenge!"

With tenacity and hard work, she soon parlayed those modest assets into a premier training, boarding, and breeding facility with more than 40 horses and clients across the country. All of which begs the question of why Padgett, who clearly knows more about running a thriving business than most people her age, would go back to school to earn her undergraduate degree in finance from UAH's College of Business.

The answer, not surprisingly, can be traced back to Gilbert. "My grandmother wanted me to go to college," she says. "She was a teacher, and so that was her one thing. You can never know too much!"

Now, like many new graduates, Padgett has her sights set on what's next. But unlike many of them, she has a thriving business to fall back on while she decides where her finance degree will take her. "I'm thankful I don't have to worry what I'm going to be doing after school – I have a choice," she says. "My grandmother would have been very happy."

In addition to showing horses, Padgett – shown here driving Reserve World Champion Red Tide – also spends her time and resources rehabilitating and re-homing rescue horses.

OUT OF THIS WORLD EXPERIENCE

Saroj Kumar spends a lot of time thinking about Mars. As a master's candidate in aerospace engineering at UAH, his research centers on the use of nuclear fusion propulsion to send rockets – and astronauts – to other planets. So it was something of a surreal experience when Kumar actually had the chance to spend two weeks as a "Marsnaut" at the Mars Desert Research Station (MDRS) in Hanksville, UT, whose unforgiving environment is Earth's closest approximation to that of the Red Planet. "That feeling of living my dream since I was nine of one day going to Mars was really special," he says.

Kumar was an undergraduate at the REVA Institute of Technology and Management in Bangalore, India, when he first learned about the MDRS, a full-scale analog facility designed for Earth-based Mars-related research that is owned and operated by the Mars Society. But rather than apply as an individual who would then be matched with an unknown crew, he opted instead to form a team of colleagues with whom he'd be more comfortable sharing the station's living area – a cylindrical habitat, or "hab," just eight meters in diameter.

So from across the globe, Team Planeteers assembled. Joining Kumar were Dr. Mamatha Maheshwarappa, a space systems engineer at QinetiQ; Sneha Velayudhan, a graduate engineering student specializing in advanced wireless communication systems at the Rochester Institute of Technology; Arpan Vasanth, a product design engineer at Faurecia; Dr. Sravani Vaddi, a research fellow at the National Center for Radio Astrophysics; and Sai Arun Dharmik, a recent graduate in ocean and atmospheric sciences from the University of Hyderabad.

With invaluable assistance from several mentors, including NASA Astrobiology Institute director Dr. Penelope Boston, the team submitted their application. A few months later, they were informed of the Mars Society's decision: Team Planeteers had been selected for the station's 16th field season and would be serving as the MDRS' Crew 174.

Equipped with the clothing and supplies they were advised to bring, including space suits sponsored by QinetiQ and experiment kits sponsored by NASA's Ames Research Center, the team assembled in Grand Junction, CO, and made the drive to the MDRS, a little over 150 miles to the west. For the next two weeks, they had no contact with the outside world beyond a nightly two-hour communication window with "mission control" to submit their report of the day's activities and receive information about the next day's weather.

Each day began at 5 a.m. with a modest breakfast of dehydrated food and milk. "That was not great," laughs Kumar. "But because it's going to be that way on Mars, we had to learn how to deal with it." Not only was space at a premium given the hab's small size, but so too was water – an issue that worsened when the water pump broke about a week into their stay. "It happened in the middle of the night, so we made a team decision that we needed to go out and fix it," he says, explaining how they cobbled together a patch until they received a new pump on a resupply mission a few days later. "We were so happy to be able to flush again!"

After breakfast, the crewmembers would then split off individually or partner up to work on their respective research experiments. For Kumar, the focus was on human-microbial contamination on Mars and sample protocol implementation to minimize astronaut contamination; other experiments examined the growth of fenugreek with different levels of vitamin D, the engineering challenges posed by the Martian environment, and the geological challenges of extravehicular activities (EVAs) outside of the station's hab.

▸ UAH graduate student Saroj Kumar, a master's candidate in aerospace engineering, spent two weeks as a crew scientist and executive officer at the Mars Desert Research Station.

"The EVAs were the most surprising thing about the experience," says Kumar. To begin with, they required a significant investment in human resources. "The protocol was that there had to be at least two crewmembers outside of the habitat and two inside," he says. Navigation was also difficult. "We were provided with maps, but we're so used to using GPS that we got lost a lot. We ended up using a lot of hand signals because the wind made it hard to communicate." And finally, there was the unpredictability of the weather. Outside the hab, a combination of freezing temperatures, gusting winds, and dust storms battered the Marsnauts as they attempted to move about in their bulky space suits, each with a 40-pound life support system. "Every day I planned something and I couldn't complete it – a 20-minute task could take two hours," says Kumar.

But far from being demoralized by the challenges they faced while at the MDRS, the crew relished them. "There's no point in preparing for a year and then not being authentic," says Kumar. It also reminded them of just how precious their own planet is in comparison. "When I was young I would have gone to live on Mars forever, but now I realize I'd love to go on a round-trip mission," he says. "On Earth you have all these beautiful things, but on Mars we never saw any other signs of life – no birds, no snakes, no bugs, nothing! It made me understand how special we are, how we need to take care of this planet and not take it for granted."

The team used rovers to navigate the challenging desert terrain.

All too soon, the time came for Team Planeteers to wind up their mission and hold a new handover ceremony to welcome the next crew to the MDRS. Kumar, now back at UAH, has returned to his research on nuclear fusion propulsion. With his advisor, Dr. Jason Cassibry, an assistant professor in the Department of Mechanical and Aerospace Engineering and a researcher at UAH's Propulsion Research Center, he hopes to reduce the amount of time it takes astronauts to travel to Mars. "Currently it takes nine months to get there and then you can only stay for one month before spending nine more months to come back," he says. "With fusion propulsion, we believe we can get there in less than 90 days."

But while Kumar is skeptical that humanity will terraform Mars in his lifetime, his experience at the MDRS has only served to deepen his commitment to – and enthusiasm for – helping those who will one day do so. "From my childhood in India, I've been really passionate about space," he says. "I plan to get my Ph.D. here at UAH, and then my dream is to help further the Mars exploration program."

◂ Visit page. The MDRS is located in Hanksville, Utah, whose harsh environment most closely approximates that of the Red Planet.

▸ To carry out their extravehicular activities, crewmembers wore space suits and life support systems weighing 40 pounds.

Photo credit: Sai Arun Dharmik

PLANTING THE SEEDS FOR **FUTURE GROWTH**

▲ Rigved Joshi comes to UAH after recently managing new ventures, strategy, and innovation at Vanderbilt University.

As the newly appointed director of the D. S. Davidson Invention to Innovation Center (D.S. Davidson I²C), Rigved Joshi will be engaged in establishing policies, networking in the community, developing processes, and recruiting tenants to the business incubator. Joshi, an MBA holder, comes to UAH after career experience in venture capital, private equity, startup incubation, and intellectual property monetization.

"The D.S. Davidson I²C presents a dynamic opportunity to serve as a platform to launch and develop high-tech startups into sustainable, scalable, and investable businesses," Joshi says. "It's the first of its kind for Huntsville, and to be able to lead this initiative and leverage the intellectual bandwidth that exists within the ecosystem is tremendously exciting."

The incubator will use resources at UAH to bring technologies into the marketplace through identification and funding of entrepreneurs both at the university and within a 15-county region. It will also provide a range of services to convert ideas, research, and prototypes into viable commercial products. The resulting startups will reside there for about three to five years before launching on their own.

"The D.S. Davidson I²C will strive to be the primary focal point for students, faculty, and the larger entrepreneurial community interested in innovation and finding a home for launching immersive experiences," says Joshi, adding that the incubator's location adjacent to UAH's College of Business will come with strategic benefits. "The D.S. Davidson I²C and the College will collaborate on three key areas: entrepreneurial curriculum development, experiential learning, and entrepreneurship events. It will also provide support for UAH student entrepreneurs who are interested in developing early-stage business ventures by providing them faculty and student support, office space, and access to mentors and subject matter experts."

Groundbreaking is scheduled for the fall and projected completion is in 2019. "The D.S. Davidson I²C is all about delivering a positive impact on accelerating technology development and new venture creation for students, founders, investors, mentors, and other related parties," says Joshi. "I consider myself fortunate to be a part of the leadership team, and I look forward to building it to be the platform for collaboration, co-working, and co-creation, and furthermore to serve as a rich resource for students, faculty, and the entrepreneurial community to explore jobs, collaborative research, and spin-off opportunities."

HIGH-ALTITUDE AUDITION

A pioneering effort to detect ultra-high-energy cosmic rays gets a test run aboard NASA's Super Pressure Balloon

The EUSO-SPB Payload for NASA's Super-Pressure Balloon Launch from Wakana, New Zealand.

In late April, NASA's Extreme Universe Space Observatory Super Pressure Balloon (EUSO-SPB) took flight from Wakana, New Zealand, carrying a new telescope designed to detect ultra-high-energy cosmic rays interacting with the Earth's atmosphere.

EUSO-SPB is a prototype engineering test bed for the future satellite launch of EUSO's instrumentation. It was launched at 4:50 p.m. Huntsville time on April 24 and flew for 11 days.

UAH scientists were key to supplying and calibrating critical systems for EUSO-SPB. The team included Dr. James Adams, a principal research scientist at UAH's Center for Space Plasma and Aeronomic Research (CSPAR); Malek Mastafa, a graduate student in UAH's Department of Physics; Evgeny Kuznetsov, a CSPAR engineer; and Doug Huie, an engineer with UAH's Rotorcraft Systems Engineering and Simulation Center.

"UAH provided the solar-power system, the onboard-calibration system, and a tracker system that provided the capability to guide an airplane under the balloon in order to calibrate the instrument in flight," says Dr. Adams. "UAH also provided a calibration system that flies on the airplane."

As for the telescope aboard the balloon, its high-speed ultraviolet video camera is capable of recording 400,000 images per second, enabling it to capture the ultraviolet fluorescence produced by the ultra-high-energy cosmic rays as they interact with nitrogen molecules in the Earth's atmosphere.

Once this technology has been successfully tested at sub-orbital altitude, it can then be launched aboard a satellite mission.

EUSO-SPB was designed with participation from scientists and engineers from 16 countries. The U.S. effort, which is funded by NASA, was led by the University of Chicago and includes UAH, the Colorado School of Mines, NASA's Marshall Space Flight Center, and Lehman College at the City University of New York.

To see a video of the launch, visit **youtube.com/watch?v=L0GJ16WuTyQ**.

EYES ON THE SKIES

Fans of the HBO show "Game of Thrones" will know Viserion as Daenerys' fearsome white and gold dragon. But a different Viserion took to the skies at the 2017 NASA Student Launch competition held in early April, this one a rocket designed and built by a team of UAH engineering students.

Viserion is actually the latest iteration of UAH's ongoing participation in NASA's University Student Launch Initiative. The program gives students eight months to design, build, and launch a reusable rocket to an altitude of one mile with a payload, which this year consists of one of the following: landing detection and controlled landing, roll induction and counter roll, and fragile material protection. Since the competition's inception in 2000, UAH's team, known as Charger Rocket Works (CRW), has racked up several victories, coming in first in 2007 and 2010, and second in 2009, in addition to earning various category awards.

Over time, CRW has evolved from a club team of volunteer students into a two-semester, for-credit endeavor, with its members invariably drawn from the senior design capstone course offered by UAH's Department of Mechanical and Aerospace Engineering. This year's team comprised project manager Zane Roland; safety officer Vivian Braswell; chief engineers Robert Jacoby (upper airframe team lead), Daniel Ireland (payload team lead), and Holly Strutzenberg (lower airframe team lead); technical writing lead Jacob Eaton; outreach coordinator/webmaster Summer Roden; upper airframe team members Jordan Tuten, Harpreet Singh, and Michael Williams; payload team members Spencer Elmlinger, Chris Bracket, Zach Taylor, and Hayden Arceneaux; and lower airframe team member Ty Carlton.

"They all start with little-to-no experience with rockets, so they have to learn how to design it, how to build it, and how to test it," says course instructor Dr. David Lineberry, a research engineer at UAH's Propulsion Research Center. Add to that the other tasks required by the competition, such as creating – and sticking to – a schedule and budget, submitting numerous reports and design reviews, developing and maintaining a website that documents the team's progress, and holding educational outreach events in the community, and "it's a lot of work!" he says.

While Viserion may not have taken the top spot at this year's competition, all of the students walked away with something more valuable than bragging rights. "It was fulfilling to know you put all this effort into this one thing and you got to see it do what it was designed to do," says payload team lead Ireland. "You realize you accomplished what you set out to do."

To see the team's website, visit **https://chargerrocketworks.wordpress.com/**.

UAH's Charger Rocket Works team took fourth place with their entry, Viserion, in NASA's Student Launch Competition, which was held on Saturday, April 9, at Bragg Farms in Toney, AL.

◀ UAH's sports performance team includes head strength coach Tyler Shimizu, head athletic trainer Jeff Kinard, assistant athletic trainer Jen Cole, graduate assistant Matthew Aldred, assistant athletic trainer Sean Venckus, and assistant athletic trainer Cameron Street.

▼ Cole is part of the university's sports performance team, which provides diagnostic, preventative, rehabilitation, and strength training services to UAH's 380 student athletes.

VALUED MEMBERS OF THE TEAM

The Athletic Department's sports performance team at UAH comprises seven professionals tasked with ensuring the physiological well-being and successful performance of the 380 student athletes who make up UAH's NCAA 18 athletic teams.

"There's no one outside of the players and the coach who is as invested in the team as we are, because we are that close to the action in that we attend every practice and game," says Jeff Kinard, head athletic trainer at UAH and the director of sports medicine at SportsMED Orthopedic Surgery & Spine Center. "We are a cog in the wheel of a team's success, and because of that, there is a recognition that what we do is important. We're helping the athletes do their best and compete at their highest possible levels."

UAH's sports performance team is made up of athletic trainers and strength coaches who work both independently and in tandem with each other. The former includes assistant athletic trainers Jen Cole, Sean Venckus, Sara Breslin, and Cameron Street, while the latter includes head strength coach Tyler Shimizu and graduate assistant Matthew Aldred. Like Kinard, both Cole and Venckus are employed directly by SportsMED, who for the past 10 years has not only "donated" athletic trainers to UAH but also funded a preponderance of the supplies used by the sports performance team.

"Our athletic trainers' primary role is as health-care providers," says Kinard, who holds both an undergraduate degree in athletic training and a master's degree in public health. "They evaluate and manage injuries and illnesses, and they help maximize performance by working with the athletes on things like nutrition and time management."

Strength coaches, meanwhile, write and supervise the athletes' workouts, providing both motivation and accountability. It's when an athlete is injured, however, that the two work together. "The trainers will do things specifically to help the injured part," he says, "while the coaches will keep the whole athlete healthy until the injury heals."

It's a comprehensive approach that hasn't gone unnoticed by the athletes' coaches, who are quick to acknowledge the benefits. "Our sports performance professionals play a vital role in our athletic department, and I am so grateful for them and what they do for our athletes," says Dr. Cade Smith, Head Volleyball Coach. "They go above and beyond to make sure that our athletes achieve their maximum level of performance, and their expertise is invaluable."

As for those interested in going into the field, students must successfully complete a four-year program that has been certified by either the National Athletic Trainers' Association or the Collegiate Strength & Conditioning Coaches Association. Often, these programs include an internship component to give them hands-on experience before graduation. After that, says Kinard, they need to be ready and willing to travel – a lot. "It's a pro and a con, but if you're an adventurous spirit and like to see new places, it's a good choice for a career!"

UAH APPOINTS **LATERRICA SIMMONS**
Director of Compliance/Title IX Coordinator

"Through campus outreach and effective communication, I plan to serve as a central hub for faculty, staff, and students to be able to acquire information and obtain direction in regards to policies and procedures."

– Laterrica Simmons

Laterrica Simmons, an attorney with experience overseeing Title IX and equity investigations in a university setting, was named UAH's Director of Compliance/Title IX Coordinator earlier this spring.

Title IX addresses sexual harassment, gender based discrimination, and sexual violence. The 1972 law states: "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal assistance."

In addition to Title IX, regulatory issues under Simmons' purview include the Clery Act, research misconduct, the Institutional Review Board, animal testing, laboratory safety, child protection, the compliance and fraud hotline, and ethics compliance under state and federal law and Board of Trustees rules. She is also responsible for coordinating the efforts of those members of the UAH community who are responsible for carrying out Title IX investigations.

"Through campus outreach and effective communication, I plan to serve as a central hub for faculty, staff, and students to be able to acquire information and obtain direction in regards to policies and procedures," says Simmons. "I am equally as enthusiastic about my role because it allows me the opportunity to interact with students by facilitating innovative and engaging prevention-based training and initiatives."

Simmons came to UAH from the Missouri University of Science and Technology, where she served as Senior Compliance Manager. Prior to that, she served as Community Outreach Liaison with Earthjustice, a nonprofit environmental law firm located in Uniontown, AL.

Simmons earned a Bachelor of Science degree in operations management from The University of Alabama and her Juris Doctor degree from The University of Alabama School of Law. She is a member of the Alabama State Bar and holds a Level I Civil Rights Investigator Certification from the Association of Title IX Administrators.

TODAY'S STUDENTS, TOMORROW'S LEADERS

Brittany Eaton, a political science major, shadowed Harrison Diamond, the business relations officer for the City of Huntsville's Mayor's Office.

Civil engineering major Will Urdaneta (left) shadowed Graham Johnson (center) and Stephen Green (right), project managers at construction company Brasfield & Gorrie.

Communication arts major Jillian McMillian joined "Dan & Josie" for their 102.1 WDRM morning show.

UAH's second-annual Job Shadow Days, started by T.R.U.E. Chargers and hosted in partnership with Career Services and the UAH Alumni Association, enabled more than 100 students to explore a wide variety of professional career fields.

"We know that our students are bright and talented, and thankfully, our corporate partners know this too and continue to support our endeavors," says Candace Phillips, Senior Career Counselor at UAH's Career Services.

A shadow at iHeartMedia, communication arts major Jillian McMillian participated in the discussion that aired during "Dan & Josie WDRM Mornings," giving her valuable insight into what a future career in the field might entail. "I spoke with an account executive, sat in on a meeting, learned how music is programmed into the system, and received valuable advice that I can take through life," she says.

Will Urdaneta, a civil engineering major, shadowed Graham Johnson, a project manager at Brasfield & Gorrie, the construction company overseeing the development of HudsonAlpha's new building. "As a civil engineering student, I see a lot of design plans for buildings, roadways, and bridges," he says. "However, none that I had looked at were as complex as the ones I was shown. We explored the job site, and he introduced me to the financial side of his job. It was quite impressive."

Johnson, meanwhile, welcomed the opportunity to share his professional passion with Urdaneta and help to prepare him for what to expect as he embarks on his own career as an engineer. "Exposing students to a variety of construction processes allows them to experience what they may not see in a classroom setting," he says.

Political science major Brittany Eaton appreciated the behind-the scenes look she got into the Mayor's Office by shadowing Harrison Diamond, a business relations officer for the City of Huntsville. "It was a great networking tool and helped me look at Huntsville in a new way," she says. "The experience reassured me that my major is the right one for me."

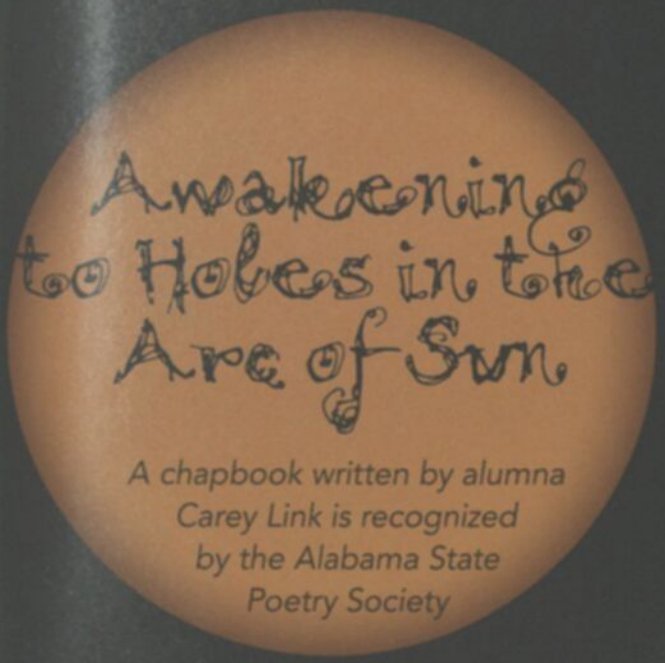
That's why Diamond says he suggests students like Brittany take full advantage of these experiences as they arise. "I think it's important for students to get real-world experience while they are in school, and shadowing is a great way to do that," he says. "Students often have an image of what they'd like to do, but they will never really know that's the right career for them until they are able to check it out."

Given the success of the past two years, plans are already in place to grow UAH's shadowing program going forward. "We hope to expand this project into a full month of opportunities – some only one day, others a full week – next spring," says Phillips.

On April 11, UAH's Office of University Advancement hosted nearly 200 scholarship donors and recipients at an appreciation reception held in the Student Services Building. The evening's speakers included UAH President Dr. Robert Altenkirch, System Studies and Simulation Inc. CEO Jan Smith, and UAH cybersecurity engineering undergraduate Kaitlyn Abernathy.

To learn more about establishing and endowing a scholarship at UAH, please visit ***uah.edu/giving****.*

ARTISTIC EXPRESSION



A chapbook written by alumna Carey Link is recognized by the Alabama State Poetry Society

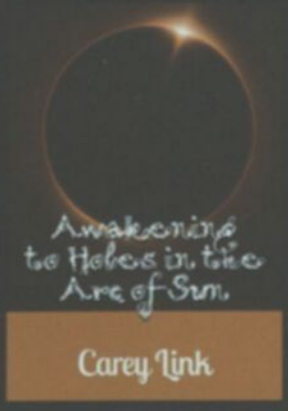
It was while earning her bachelor's degree in psychology that UAH alumna Carey Link began to embrace poetry as a means of self-expression. Her first book, in fact, took root during a poetry writing class with renowned poet Kelly Cherry; three years after graduating, Link published the collection What it Means to Climb a Tree.

Now her most recent chapbook, *Awakening to Holes in the Arc of Sun*, has been recognized by the Alabama State Poetry Society (ASPS), taking second place in their annual *Book of the Year* competition.

"We usually only recognize one first-place winner," says Jeanette Willard, an officer of the ASPS. "But the final judge pointed out that it was so very hard to make a judgment since the final two were so well written and so insightful. So for that reason, we recognized second place this year."

As a UAH student, Link – who was born with cerebral palsy and uses a wheelchair– blazed a trail for herself and others by leading the charge for equal access to buildings, services, and activities available to her able-bodied peers. "I think my presence at UAH helped create awareness about problems with accessibility at the university," she says. "There have been positive changes focused around access at UAH."

While she later worked as an equal employment opportunity specialist on Redstone Arsenal, Link has since focused on her writing career, publishing poems in *The Allegheny Review, The Birmingham Arts Journal, and The Birmingham Poetry Review*, among others. "My UAH educational experience has contributed to my success by instilling in me the importance of affective communication," she says.



ALUMNI

Left to right: Mallie Hale and Michele Farmer

TEAM EFFORT

As UAH's new senior director of Alumni Relations and executive director of the Alumni Association, Mallie Hale's number one priority is outreach. "I love building relationships, discovering people's passions, and finding portals to explore those interests," says the Tuscaloosa native. "I want the Alumni Relations Office to be seen as a welcoming front door to all those who call UAH their alma mater."

After graduating from Tuscaloosa Academy, Hale earned a bachelor's degree in psychology from Birmingham–Southern College (BSC). She later returned to school to earn a master's degree in applied sociology from The University of Alabama at Birmingham (UAB).

Prior to arriving at UAH, Hale served as an assistant director of Alumni Affairs at BSC before joining UAB's Department of Medicine as a major gifts officer. In that role, she cultivated relationships and built financial support to benefit the university's educational, research, and patient-care programs.

Hale is supported in her current position by assistant director Michele Farmer and administrative assistant Karen Brennan. "I am lucky to have such a dependable team to help me," she says, adding that the two will be instrumental in her plans to increase UAH's alumni engagement by building up chapter and affinity group programming and collaborating more closely with the university's stakeholders.

"We have a great opportunity to unite priorities by featuring faculty speakers at alumni events, co-hosting alumni nights with Charger Athletics, and bolstering our alumni recruiting and career-mentoring efforts," says Hale. She also hopes to expand the UAH alumni experience through social media and by building up Homecoming/Reunion involvement over time.

"Alumni are our allies, ambassadors, and advocates, and they want this university to succeed," she says. "So we are going to get creative, work strategically, and connect in ways that promote mutual success for alumni and UAH alike!"

Serving as Hale's right-hand woman is Michele Farmer, UAH's new assistant director of Alumni Relations. A UAH alumna, Farmer earned her bachelor's degree in marketing management while working for the Office of University Advancement. After graduation, she first joined Intergraph as an event specialist before becoming a marketing specialist for the HudsonAlpha Institute for Biotechnology. Farmer's communications and marketing background, event-planning experience, volunteer-management skills, and budget-management expertise are just a few of the many assets that she brings to the Alumni Relations team.

As a UAH alumnus/alumna, how can you **CHARGE ON**?

CONNECT...

with us! Update your information on our website so that we can stay in touch.

HIRE...

UAH alums. UAH alumni have access to Charger Path! Post and apply for jobs through this career management system.

ATTEND...

UAH events! Check out the online event calendar at UAH.EDU/EVENTS to see what's happening on campus.

RECRUIT...

new students. Do you know a high school student interested in attending UAH? Refer them online and at UAH.EDU/REFER they'll receive more information about the university!

GIVE...

back. Invest your time, talents, and treasures in your alma mater!

ENGAGE...

with UAH! Let us know how you'd like to get engaged with your UAH Alumni Association.

To connect with the UAH Alumni Association, contact 256.UAH.ALUM (824.2586) or **alumni@uah.edu**. Visit **uah.edu/alumni** for more information.

SAVE THE DATE!

UAH HOMECOMING

NOVEMBER 8-11, 2017

To view the schedule, visit **uah.edu/homecoming**.

Want to participate in this year's homecoming? Let us know at **alumni@uah.edu**!

UAH CHARGERS

#POTW

A huge crane sits on the new Charger Village construction site. http://on.uah.edu/2qt7ErV

▲ **SOFTBALL** recorded the program's 1,000th win while being nationally ranked for much of the season.

ATHLETICS

More than 100 academic awards were handed out to UAH student-athletes during the 2016-17 academic year.

MEN'S CROSS COUNTRY finished second at the GSC Championships and had four all-GSC performers.

WOMEN'S CROSS COUNTRY had a pair of all-GSC performers including the GSC Freshman of the Year.

WOMEN'S LACROSSE had a strong second season as it reached the GSC Invitational final once again.

MEN'S SOCCER featured three all-GSC selections en route to the team's fourth straight trip to the GSC tournament.

MEN'S BASKETBALL won the GSC tournament title for the third time in program history and reached the NCAA South Regional final for the fifth time in seven years, which is the second-highest mark in the country during that span.

WOMEN'S OUTDOOR TRACK & FIELD finished third at the GSC Championships and featured three individual champions.

MEN'S OUTDOOR TRACK & FIELD won the title at the GSC Championships and featured three of the four end-of-the-year individual award winners; the men's indoor team also featured two All-Americans.

HOCKEY had its best season in the WCHA yet, with nine conference wins including three road-series sweeps.

SOCIAL MEDIA

Check out our most popular social media posts from the last few months.

Once again, UAH tops the list of universities in Alabama for best return on investment! **http://on.uah.edu/2qto1ox**

Students awarded $13,000 in scholarships at 2017 Boeing New Business Challenge. **http://on.uah.edu/2pG3fPt**

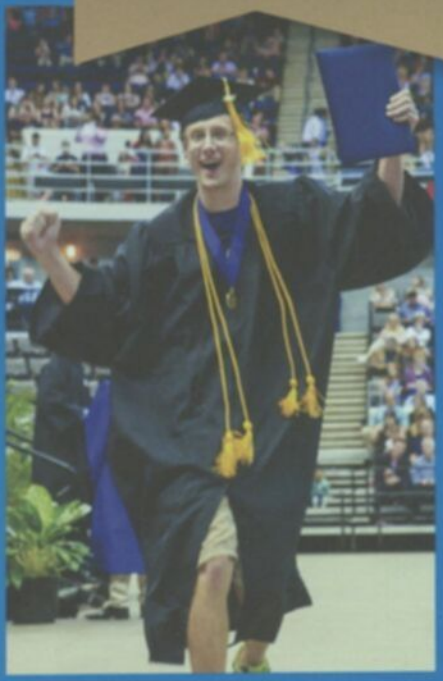
After nearly 30 years of service to UAH, Antonia Morgan retires. **http://on.uah.edu/2qsPC98**

UAH is once again #1 on PayScale's list of the Best Colleges in Alabama by Salary Potential! **http://on.uah.edu/2oYJO7s**

▲ Toyota USA Foundation helps inspire young women to pursue STEM fields with $150,000 grant to Tech Trek Alabama. **https://on.uah.edu/2pIBNTk**

facebook.com/UAHuntsville **@UAHuntsville**

The Class of 2017 celebrated UAH commencement on May 7, 2017



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TONEY AL 35773-6949

Recognized
by
U.S. News & World Report
as one of the
TOP FIFTY ONLINE GRADUATE NURSING PROGRAMS
in America

WELL-DESERVED RECOGNITION

UAH's College of Nursing was once again recognized by *U.S. News & World Report*, moving up 19 spots from last year to be named number 50 on their 2017 list of Best Online Master's in Nursing Programs.

"To be ranked among the top 50 online graduate programs in the nation by *U.S. News & World Report* is a well-deserved recognition," says Dr. Marsha Howell Adams, Dean of the College of Nursing. "It is validation to the students choosing to pursue a Master of Science in nursing online from UAH's College of Nursing that our programs, faculty, and student-support staff are well-respected and valued."

The distinction also speaks directly to the initiatives the College has undertaken over the past two years to increase enrollment and address the state's dearth of healthcare providers. These include enlarging its physical presence on the UAH campus with a $17 million renovation of the Nursing Building and expanding its academic offerings with the establishment of a Doctor of Nursing Practice program, which has both a post-master's to DNP and a post-baccalaureate to DNP pathway. In addition, the College enjoyed the successful launch of its Early Promotion into UAH Nursing Program this past fall and is currently finalizing the rollout of new online learning initiatives at the undergraduate and graduate levels.