



## Rocket Week to Kick Off With Flag-Raising Ceremony Sept. 6

By Paul Helgren

The University of Toledo President Sharon L. Gaber and Toledo Mayor Wade Kapszukiewicz will kick off the start of the second annual Rocket Week with an official proclamation and ceremonial raising of the UToledo athletics flag at a news conference Friday, Sept. 6, at 10 a.m. at One Government Center.

Rocket Week is a series of special events leading up to the home-opening football game of the Toledo Rockets. The Rockets will host Murray State Saturday, Sept. 14, at 7 p.m. at the Glass Bowl.

In addition to One Government Center, Rocket flags will be in place at other city buildings and parks. Along with promoting Rocket Week, Gaber and Kapszukiewicz will be asking businesses and fans to fly their Rocket flags during the week leading up to the first home game and all season long.

As part of Rocket Week, UToledo and

the city of Toledo also will recognize city employees during the game and during pregame festivities.

Some of the events during Rocket Week include the annual Backyard Barbecue Tuesday, Sept. 10, at noon and a pep rally at 12:30 p.m. on Centennial Mall, as well as downtown pep rallies Thursday and Friday, Sept. 12 and 13. The Thursday pep rally will take place at Levis Square at noon during Lunch at Levis. The pep rally Friday will continue a tradition in which the UToledo Rocket Marching Band performs at various establishments in the entertainment district that evening, marching through the downtown streets between each performance.

Another exciting event during Rocket Week will be the Battle of the Badges flag football game between the city of Toledo fire and police departments Wednesday, Sept. 11, in the Glass Bowl. Tickets are \$15



and include admission to the Rockets' home opener Sept. 14. Three dollars from every ticket sold will be donated to each organization's charity. The fire department is donating to Toledo Firefighters' Local 92 Charity, while the police department is contributing to the Toledo Police Patrolman's Association.

Throughout Rocket Week, and especially on Rocket Thursday, fans are encouraged to wear their Rocket gear or school colors midnight blue and gold

in support of UToledo. The University celebrates Rocket Thursday each week throughout the school year.

As a special promotion for the home opener, city of Toledo employees have the option of purchasing tickets for \$12 prior to game day by using the promo code TOLEDO. All others in the community may purchase tickets for \$19 from Friday, Sept. 6, through Friday, Sept. 13, (prior to game day) by using the promo code ROCKET.

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## Doodle Revolution Leader to Speak at Museum as Part of Honors College Distinguished Lecture Series

The University of Toledo is teaming up with the Toledo Museum of Art to bring author and visual literacy expert Sunni Brown to the Glass City as part of the Jesup Scott Honors College Distinguished Lecture Series.

Brown, author of "The Doodle Revolution," will give an interactive lecture Thursday, Sept. 12, at 6 p.m. in the Toledo Museum of Art Peristyle.

Brown is known for her large-scale, live content visualizations, and she is also the leader of the Doodle Revolution – a growing effort to debunk the myth that doodling is a distraction. Using common sense, experience and neuroscience, she

is proving that to doodle is to ignite your whole mind.

"This will be a fun, interactive event as Sunni engages with the audience," said Mike Deetsch, director of education and engagement at the Toledo Museum of Art. "Her work has an element of gamification and play that elevates her visual dialogue and will appeal to a wide audience."

The interactive lecture is geared to teachers, students and business professionals who work in teams.

"The Jesup Scott Honors College Distinguished Lecture Series brings innovative thinkers and doers to campus for all of the Toledo area to enjoy. Sunni



Brown

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## U.S. Department of Energy Awards UToledo \$750,000 to Improve Production of Hydrogen as Clean Fuel

By Christine Billau

From powering a car to a rocket, hydrogen holds promise as the clean-energy fuel of the future.

The University of Toledo is among 29 universities and organizations across the country to receive a total of \$40 million from the U.S. Department of Energy for new projects focused on using hydrogen as fuel.

The goal of the H2@Scale concept is to

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## On the River



Photos by Daniel Miller

President Sharon L. Gaber was one of the first to take a kayak on the Ottawa River last week. An official kayak launch and ribbon-cutting ceremony for the pedestrian bridge leading to Savage Arena took place Aug. 28. Wielding the scissors were, from left, Vice President for Student Affairs Phillip “Flapp” Cockrell, President Gaber and Senior Associate Vice President for Administration Jason Toth. The prefabricated steel truss features a redesigned plaza with a seating area at the north end overlooking the Ottawa River. Kayak rental is free with a membership to the Student Recreation Center.



## Kayaking 2019

- The Student Recreation Center provides kayaks, paddles, life vests and helmets.
- Availability: 10 a.m. to 6 p.m. seven days a week through Sunday, Oct. 6.
- Kayak rental is free for UToledo students and anyone with a membership to the Student Recreation Center; nonmembers can purchase a guest pass to kayak.
- A guest pass for someone 13 and older is \$10; kids younger than 13 are \$5.
- Participants must weigh more than 50 pounds.
- Two-hour maximum paddling time.
- For more information, call 419.530.3700 or visit the main office of the Student Recreation Center at 2800 E. Rocket Drive.



## So Cool



Photo by Daniel Miller

President Sharon L. Gaber posed for a photo with Cameron Lamb, left, and Arianna Muniz. The two sophomores in the College of Engineering were among many students who stopped by to meet the president — and to snag some free ice cream — on the first day of classes. Rain moved the annual Sundae on a Monday event inside the Thompson Student Union.

## Nice to Meet You



Photo by Randy Mascharka

President Sharon L. Gaber shook hands with a student while Vice President for Student Affairs Phillip “Flapp” Cockrell gave another a high-five at the New Student Convocation. The weather was perfect for the Aug. 25 welcome event in the Glass Bowl.

## Rocket Week

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For more information about Rocket Week or to order tickets, stop by the UT Athletic Ticket Office, located in the Sullivan Athletic Complex at Savage Arena, go to [utrockets.com](http://utrockets.com), or call 419.530.GOLD (4653). UToledo students are admitted free to home games with their Rocket ID; faculty and staff can buy tickets half price with ID.

## Rocket Week Events

### Sunday, Sept. 8

- 1 p.m. – Rocket Women's Soccer vs. Wright State at Paul Hotmer Field. Tickets are \$6 and \$4 for 18 and younger; UToledo employees can purchase tickets at half price; and UToledo students are admitted free with ID. Go to [utrockets.com](http://utrockets.com) or call 419.530.GOLD (4653).

### Tuesday, Sept. 10

- Noon – Backyard Barbecue on Centennial Mall.
- 12:30 p.m. – Pep Rally on Centennial Mall.

### Wednesday, Sept. 11

- 11 a.m. to 2 p.m. – Health Science Campus Picnic in the Four Seasons Bistro and outside the Health Education Building.
- 12:30 p.m. – Memorial Stair Climb in the Glass Bowl.

- 6:30 p.m. – Toledo Fire vs. Toledo Police Battle of the Badges Flag Football Game in the Glass Bowl. Tickets are \$15 and include admission to the Rockets' home opener Sept. 14.

### Thursday, Sept. 12

- Noon – Pep Rally at Lunch at Levis at Levis Square in downtown Toledo.

### Friday, Sept. 13

- 9 to 10:30 p.m. – Rocket Marching Band Pep Rally Parade in downtown entertainment district.

### Saturday, Sept. 14

- 7 p.m. – Toledo vs. Murray State in the Glass Bowl.

For more information, go to [utrockets.com/rocketweek](http://utrockets.com/rocketweek).

## What a Kick!



Photos by Daniel Miller

UToledo alumnus and donor Paul Hotmer cut the ribbon during a pregame ceremony Aug. 29 on the new soccer field named in his honor. Head Coach TJ Buchholz, right, held a soccer jersey that was given to Hotmer as Rocky, Rocky, Vice President and Athletic Director Mike O'Brien and President Sharon L. Gaber watched Hotmer do the honors. The Paul Hotmer Field is located inside the outdoor track west of Savage Arena. The inaugural match was the first time the Rockets played on Main Campus since 1996.



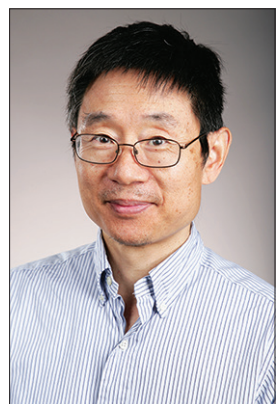
Forward Alex Troy battled for the ball during Toledo's game against the University of Illinois at Chicago. The Rockets fell to the Flames, 1-0, during a hard-fought match. More than 700 attended the game.

## U.S. Department of Energy

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enable affordable and reliable large-scale hydrogen generation, transport, storage and utilization in the United States and beyond.

NASA's mission to Mars hinges on the ability to split water – in the form of ice – to produce hydrogen on the moon as fuel to reach the Red Planet.



Yan

Hydrogen also could be used on Earth to keep the electrical grid operating to power homes and businesses in the face of extreme weather or cyberattacks. UToledo was awarded \$750,000 to improve water-splitting, the process of breaking apart the water molecule, separating hydrogen from oxygen. The hydrogen, which produces only water when consumed in a fuel cell, can then be used as a clean fuel.

The photovoltaics team, led by Dr. Yanfa Yan, UToledo professor of physics, and Dr. Zhaoning Song, research assistant professor in the UToledo Department of Physics and Astronomy, will develop low-cost photoelectrodes for more efficient photoelectrochemical water splitting using innovative material from their highly successful perovskite solar cells. Perovskites are compound materials with a special crystal structure formed through chemistry.

The perovskite cells can have high efficiency, collecting more of the sun's energy and transforming it into the electricity needed to split the water molecule and produce hydrogen.

"Perovskite absorbers have drawn extensive attention due to their demonstrated capability of fabricating solar cells with outstanding conversion efficiencies," Yan said. "We are excited about this opportunity and eager to

apply perovskite absorbers to advance the photoelectrochemical water-splitting technology."

Funded through the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy with contribution from DOE's Office of Nuclear Energy, the selected projects will advance hydrogen storage and infrastructure technologies and identify innovative concepts for hydrogen production and utilization, including electrical grid resiliency.

"The H2@Scale concept is a critical piece of the country's comprehensive energy strategy and an enabler of multiple industries in our economy," said U.S. Secretary of Energy Rick Perry. "As an energy carrier, hydrogen has the potential to unite our nation's domestic energy resources. These selections support the Department of Energy's mission and advances our commitment to enable economic growth and energy security through the development of more affordable hydrogen technologies."

"Toledo is at the forefront of the development of innovative technologies that move our country and our world further," said Congresswoman Marcy Kaptur. "I am pleased to see that The University of Toledo has been awarded this valuable \$750,000 grant from the Department of Energy to facilitate the University's important research into hydrogen as clean fuel and to cement our region as a clean energy, research and manufacturing hub."

The U.S. produces more than 10 million tons of hydrogen, nearly one-seventh of the global supply, primarily for oil refining and fertilizer production.

Hydrogen infrastructure includes more than 1,600 miles of hydrogen pipeline, a growing network of stations, and thousands of tons of storage in underground caverns.

Yan and Song are members of the UToledo Wright Center for Photovoltaics Innovation and Commercialization.

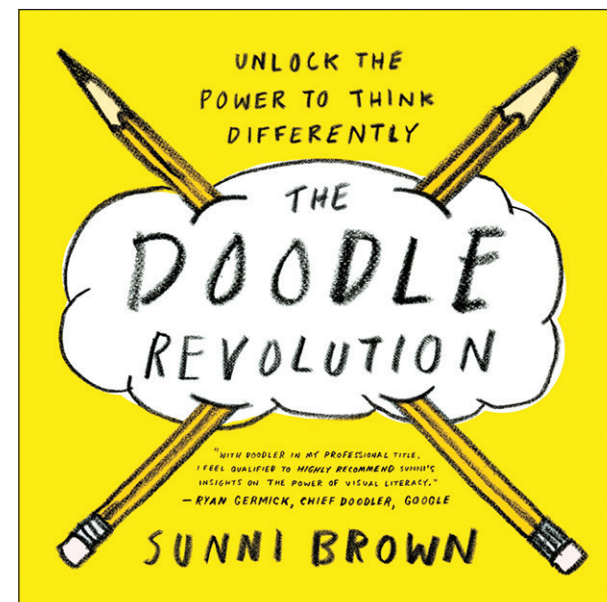
## Doodle Revolution

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Brown is an amazing speaker who will change the way you think about teamwork and brainstorming," said Dr. Heidi Appel, dean of the Jesup Scott Honors College.

"Her talk is part of the exciting collaboration between The University of Toledo and the Toledo Museum of Art to enhance the skills of visual literacy," Appel said. "Visual thinking fuels creativity and innovation, and knowing how to use, make and interpret visual images makes all of our students more successful."

After the free, public lecture, Brown will sign her books, which will be available for sale.



To register for the free, public event, go to [utoledo.edu/honorslecture](http://utoledo.edu/honorslecture).

## Water Watch



Photo by Daniel Miller

Toledo Blade reporter Tom Henry, left, watched as Dr. Tom Bridgeman, director of the UToledo Lake Erie Center and ecology professor, secured a water sample aboard the UToledo research vessel. The second annual HABs Grab Aug. 7 featured environmental scientists from the U.S. and Canada fanning out across western Lake Erie to collect water samples at nearly 200 locations in four hours in a united effort to create a high-resolution picture of this summer's harmful algal bloom.

# Scientists Discover Single Gene That Explains Songbird Migration

By Christine Billau

Ornithologists at The University of Toledo played a critical role in new collaborative research identifying a single gene that defines whether rare, tiny songbirds that reproduce in the Great Lakes region and Appalachian Mountains spend their winters in South America or Central America.

Dr. Henry Streby, assistant professor in the UToledo Department of Environmental Sciences, and Gunnar Kramer, Ph.D. candidate in environmental sciences and UToledo graduate dean's fellow, laid the groundwork for the genetics discovery published last week in the journal *Proceedings of the National Academy of Sciences*.

With collaborators at Cornell University, Penn State and the University of Colorado, the team's findings may have important conservation implications for the declining populations of golden-winged warblers.

Starting six years ago, the UToledo team led a massive collaborative field study: Across eastern North America, they caught golden-winged warblers on their breeding grounds, gathered blood samples, placed tiny geolocator technology on the birds, and completed long-distance, cutting-edge migration tracking analysis. Streby and Kramer then gave the samples and data to genetics researchers at Penn State and the Cornell Lab of Ornithology who performed whole genome resequencing.

"Only one gene tells the story of the final wintering destination, and it makes sense because it is affiliated with muscles and movement in humans," Streby said. "Migration is a very complex set of behavioral and physiological traits, and we know this one gene can't be responsible for all of it. But it's a critical first step that gives everyone in the field something to build on. This exciting ecology and evolutionary discovery proves the powerful potential of research collaboration."

Streby and Kramer already had answered the question of where these birds go: Golden-winged warblers from declining populations spend winters

in northern South America. Stable populations of the species spend winters in Central America.

Researchers at the collaborating universities then used the data and blood samples from the migrating birds to investigate genetic differences between birds that winter in Central America and those that winter in South America. The majority of these differences occurred in a small region on the bird's Z chromosome, a sex-determining chromosome like the X and Y chromosomes in humans. Only one gene, called VPS13A, was present in this region.

Although the gene does not yet have any known function in birds, in humans it is associated with the neurodegenerative disorder chorea-acanthocytosis, which affects movement.

"In this study, we found only one gene associated with the final wintering destination of golden-winged and blue-winged warblers," said Dr. David Toews, assistant professor of biology at Penn State and leader of the research team. "As we come to better understand the role of this gene in humans, we may also gain important insights to its role in migration in birds."

According to the researchers, the gene appears to be a target of natural selection in birds that winter in South America.

"Golden-winged warblers are rapidly declining in the Appalachian Mountains. Conservation efforts have focused on protecting the breeding grounds, which is important, but declines also appear strongly related to habitat alteration and destruction in the wintering grounds," Streby said.

"The global attention on the fires in the Amazon highlight the importance of these South American habitats, and these migratory birds illustrate an inextricable link between hemispheres," Toews said.

For Streby and Kramer at UToledo, collecting blood samples from the golden-winged warblers to be used for a later genetics' investigation was a side project to their study identifying the migratory

connectivity of the species. They also recorded the birds singing across their whole range and collected feather samples.

It's what Streby calls "while-you're-there science."

"It's important to conduct all of the useful science while you have the opportunity because you can't fund six different projects by six research teams to address six questions in the same study system," Streby said. "For the DNA samples, we knew we needed to find the right researcher who was looking for migration genes."



Photo by Daniel Miller

Kramer met Toews and Dr. Scott Taylor, assistant professor of ecology and evolutionary biology at the University of Colorado, at the 2016 North American Ornithological Conference in Washington, D.C.

"I quickly realized we had valuable genetic samples that they needed to do exciting complementary research, and we

**FEATHER FRIENDS:** Gunnar Kramer held a golden-winged warbler, which carried a geolocator. Researchers attached the tiny backpack to the bird in 2015 and recovered it in 2016. The data on the geolocator helped Kramer and Dr. Henry Streby, left, understand the warbler's migratory route and winter location.

were happy to share our science," Kramer said. "By working together, we now know what we suspected – there is a genetic component to migration. However, we're fascinated it appears to be just one gene that explains the major migration divide in the system."

The study was supported by the Natural Sciences and Engineering Research Council of Canada, the National Science Foundation, The University of Toledo, the Cornell Lab of Ornithology, the United States Geological Survey, the United States Fish and Wildlife Service, the University of Minnesota, and the University of Tennessee.

## Biodegradable Alternative to Replace Plastic Straws at University

By Alexis Razo

UToledo Dining Services is encouraging students, faculty and staff to sip smarter.

Beginning fall semester, plastic straws will be replaced with a biodegradable alternative. Made from 100% renewable resources, the straws are sturdy and certified compostable in commercial compost facilities.

The decision, kicked off by leaders in Student Government and UToledo Dining Services, was part of larger efforts to reduce plastic across all campuses.

“We are so excited to start the school year off right, with a change to reduce our environmental impact,” said Rebecca Sturges, president of Student Government.

The switch will save 700,000 straws from hitting local landfills and lakes or polluting the oceans each year.

The Sip Smarter campaign is

in addition to many improvements implemented throughout the University by UToledo’s Sustainability, Energy Efficiency and Design (SEED) Initiative. This program focuses on sustainability and energy efficiency, and is designed to ensure the University is operating in a manner that benefits the community. To learn more about SEED, visit [utoledo.edu/sustainability](http://utoledo.edu/sustainability).

“We share the University’s passion to protect and preserve our oceans and our natural resources,” said Cameron McAdams, resident district manager of UToledo Dining Services. “We are committed to reducing waste before it happens. By participating in the Sip Smarter campaign, you can help turn the tide on plastics in our oceans.”

Research from other universities that have participated in the Sip Smarter campaign state that 60% of their

consumers are concerned with overuse of plastic, and 80% of those want to reduce personal consumption of plastics.

Each year, 8 million tons of plastic leaks into the ocean, according to Plastic Oceans International. Universities joining the Sip Smarter movement have helped remove more than 100 million plastic straws a year, equating to more than 12,000 miles placed end to end, enough to wrap half way around the world.

“We are so excited: Going green is something our senate is extremely passionate about,” said Madison Lawson, vice president of Student Government. “We’re all making steps in the right direction to diminish the University’s environmental impact.”

In addition, UToledo Dining Services will launch a new UToledo stainless-steel straw, soon to be available for purchase in

the Thompson Student Union Food Court, Starbucks, Java City, Freshens, Bottle Rocket, Rocket Market, Steak ‘N Shake and Chick-fil-A.

Campus members are invited to try the new biodegradable straw while sipping a free lemonade Wednesday, Sept. 4, from 11 a.m. to 1 p.m. on Centennial Mall.

“We are excited to kick off our first sustainable straw event of the semester,” said Jamie Finlin, marketing director of UToledo Dining Services. “The first 100 customers to purchase a stainless-steel straw kit will receive a free reusable UToledo Mason jar to go with their lemonade.”

To learn more about UToledo Dining Services’ sustainability efforts on campus, go to [utoledo.campusdish.com/sustainability/whatwearedoing](http://utoledo.campusdish.com/sustainability/whatwearedoing).



### Popping In

Jacob Ferrell, left, talked with Garrett Frye of the UToledo Skate Club during the Student Involvement Fair and Part-Time Job Fair. Students packed Centennial Mall Aug. 28 to learn about employment opportunities and check out the hundreds of organizations on campus.

Photo by Daniel Miller

TOLEDO FOOTBALL

# PEP RALLY

TUESDAY, SEPTEMBER 10

12:30 P.M. // CENTENNIAL MALL  
FRONT STEPS OF THE STUDENT UNION



UTROCKETS.COM // 419.530.GOLD



## IN MEMORIAM

**Inez E. (McNutt) Gorsuch**, Maumee, a radiology technician who retired from MCO, died Aug. 20 at age 83.

**Marilyn Ritter**, Metamora, Ohio, a staff nurse and research nurse at MCO/MUO/UTMC from 1992 until her retirement in 2011, died May 21 at age 72. She was a union representative as well as a member of the executive board of the American Federation of State, County and Municipal Employees Local 2415. A memorial service for Ritter will be held Saturday, Sept. 21, at 2 p.m. at the Swanton Healthcare and Retirement Center, 214 Munson Road in Swanton, Ohio.

## UTOLEDO NEWS

UToledo News is published for faculty, staff and students by the Marketing and Communications Office weekly during the academic year and periodically during the summer. Copies are mailed to employees and placed in newsstands on the Main, Health Science, Scott Park and Toledo Museum of Art campuses. UToledo News strives to present accurate, fair and timely communication of interest to employees. Story ideas and comments from the UToledo community are welcome. Send information by campus mail to #190, Marketing and Communications Office, Vicki Kroll. Email: [vicki.kroll@utoledo.edu](mailto:vicki.kroll@utoledo.edu). Fax: 419.530.4618. Phone: 419.530.2248. Mailing address: Marketing and Communications Office, Mail Stop 190, The University of Toledo, Toledo, OH 43606-3390.

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2<sup>ND</sup> ANNUAL  
UNIVERSITY OF TOLEDO ARMY ROTC 5K

# RUN TO REMEMBER

WEDNESDAY,  
SEPT. 11, 2019



The University of Toledo Main Campus  
Health and Education Center Track  
Stadium Drive, Toledo, Ohio  
Park in Lots 1S, 5 or 6

#### Register at

[utoledo.edu/rotc/runtoremember.html](http://utoledo.edu/rotc/runtoremember.html)

or at the event table on Wednesday, Sept. 11

#### Free shirts to first 100 registered participants

\$5 donation recommended  
Funds benefit the National 9/11 Memorial & Museum

#### RUN/WALK INFORMATION

- Registration and T-shirt pickup begins at 7 a.m.
- Opening ceremony at 7:30 a.m.
- Run and walk begin at 7:40 a.m.
- Bell Tower chimes and moment of silence at 8:46 a.m.
- Closing ceremony

#### FUELING TOMORROWS

Contact SFC Brian Wagner for more information  
at [brian.wagner@utoledo.edu](mailto:brian.wagner@utoledo.edu) or 419.530.4697.



THE UNIVERSITY OF  
**TOLEDO**

Army ROTC