

Star shines



Photo by Daniel Miller

"The odds were totally stacked against me, but guess what — the odds are stacked against everybody. So if you're waiting for a sign, this is it," Katie Holmes told more than 2,000 candidates for undergraduate degrees May 4 in the Glass Bowl. "You deserve joy — not in 10 years, but now. So try to be equal parts tough and gentle with yourself. Take things one step at a time. Work hard when no one is looking. And don't let anybody say you never called them back." The Toledo native who rose to fame as an actor, producer and director received an honorary doctor of humane letters degree. See more graduation photos on p. 2.

Breakthrough in new material to harness solar power could transform energy

By Christine Billau

The most affordable, efficient way to harness the cleanest, most abundant renewable energy source in the world is one step closer to reality.

The University of Toledo physicist pushing the performance of solar cells to levels never before reached made a significant breakthrough in the chemical formula and process to make the new material.

Working in collaboration with the U.S. Department of Energy's National Renewable Energy Lab and the University of Colorado, Dr. Yanfa Yan, UToledo professor of physics,

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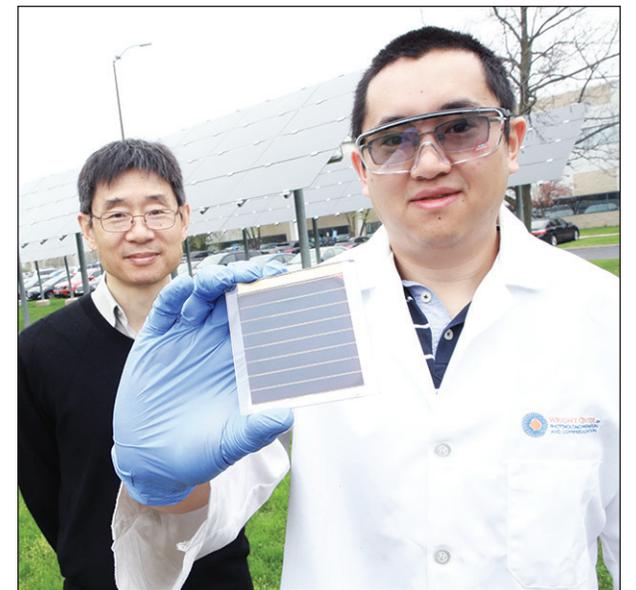


Photo by Daniel Miller

POWERING UP: Dr. Zhaoning Song holds a perovskite solar cell minimodule he developed with Dr. Yanfa Yan. The higher-efficiency, lower-cost solar cell technology could revolutionize energy generation around the globe.

UToledo scholar awarded Fulbright to Sudan for next academic year

By Christine Billau

Dr. Asma Abdel Halim's quarter century of research questioning the breach and progress of Muslim women's human rights is personal.

Her own life experience fuels her life's work to protect Muslim women worldwide for generations to come.

The next leg of her journey takes her back to her native Sudan, a place Abdel Halim describes as "a country that has always subjected women to a version of Islamic law that is fashioned according to the political mood of the government."

The prestigious Fulbright U.S. Scholar program selected The University of Toledo faculty member focused on women's rights under religious laws to travel to Sub-

Saharan Africa for the 2019-20 academic year as a Fulbright Scholar.

Abdel Halim, associate professor in the UToledo Department of Women's and Gender Studies, and director of the Center of the Muslim Woman, will study the history of gender effects on Sudanese law, produce ideas for reform, and teach a class on gender and the law at her alma mater, the University of Khartoum.

"As a Muslim woman joining other Muslim women in researching Islamic laws and critiquing centuries of patriarchal dominance, I find it necessary to explore women's history, rights and developments because I am determined to address

gendered laws and how to combat their effects," Abdel Halim said.

Since its inception in 1946, the Fulbright U.S. Scholar program within the U.S. Department of State has worked to improve intercultural relations and diplomacy through national fellowship. The program in Sudan was suspended in 1992 after the U.S. issued an embargo on relations with the country and was reinstated two years ago after President Trump lifted U.S. sanctions.

"As Dr. Asma Abdel Halim travels around the world sharing her knowledge, insight and experience, she helps raise awareness about problems and protections of women living under Muslim laws,"

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Abdel Halim

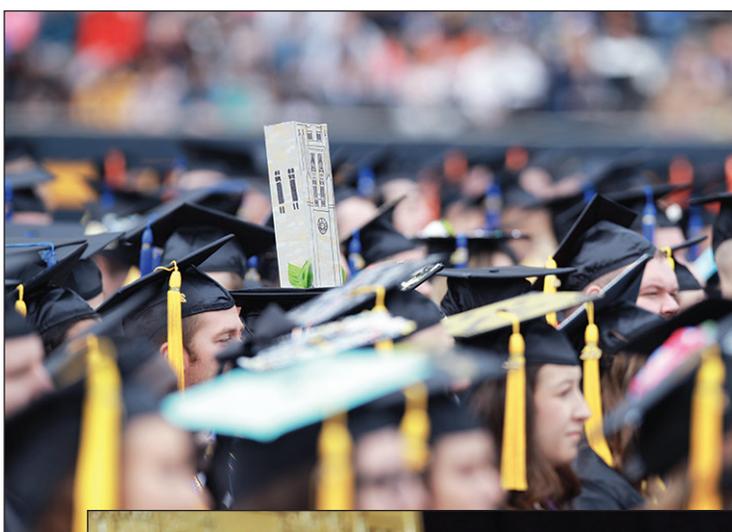
Time to celebrate



Susan Nguyen and her 4-year-old daughter, Adalee Nguyen, were all smiles during the undergraduate commencement ceremony May 4 in the Glass Bowl. Susan received a bachelor of science degree in paralegal studies.



Randy Thomas enthusiastically celebrated receiving a bachelor's degree in environmental sciences. An engaged student on campus, Thomas was a member of the Omega Psi Phi Fraternity Inc., served as a resident advisor, and was active in the Camp Adventure program.



Aiya Eighaffar topped her mortarboard with University Hall's iconic bell tower. Eighaffar is a member of Blue Key National Honor Society and a past president of Alpha Chi Omega.



Photos by Daniel Miller



Dr. Scott Parazynski, a pioneering explorer, inventor, astronaut and physician, delivered the address at the College of Medicine and Life Sciences' commencement ceremony May 10 in Savage Arena. "You have been given a great opportunity to serve the community in many ways, not only as healers, but also as leaders and mentors," he told the graduates. "I remember back to the many mentors who took time for me way back when, when the thought of becoming a doctor and an astronaut was so far off, it was almost laughable. And I'm sure you've had incredible role models here and also family members who've supported you getting to this point. Now it's going to be your turn." A total of 238 degrees were awarded, and Parazynski received an honorary doctorate of science.

President Sharon L. Gaber, right, and Katie Holmes paused on their walk to the stage during the University's May 4 undergraduate commencement ceremony in the Glass Bowl. Holmes returned to her hometown to address 2,078 candidates for degrees. The internationally recognized actor, producer, director and entrepreneur was awarded an honorary doctorate of humane letters.

UToledo public health expert awarded Fulbright grant to Taiwan

By Tyrel Linkhorn

A University of Toledo public health expert will spend six weeks in Taiwan this spring to help one of that country's top universities internationalize its public health curriculum.

Dr. Jiunn-Jye Sheu, a professor in the College of Health and Human Services' School of Population Health, received a Fulbright Specialist Award to advance global health initiatives.

The trip to National Taiwan Normal University in May will be his first as part of the Fulbright program.

"To become a Fulbright Specialist or Scholar really comes with enthusiasm. We have so many qualified, outstanding faculty at The University of Toledo, and I'm very proud and pleased to have been selected," Sheu said. "I think it's meaningful I'm able to make such a contribution to help people in Taiwan and the United States."

He will provide guidance to National Taiwan Normal University, which is working to revise and refine its public health curriculum to meet the same standards set by the accrediting body in the U.S.

Sheu, who earned his bachelor's degree at National Taiwan Normal University, also will help the school toward its goal of adding more English-instructed courses.

Taiwan has a robust health-care system, but as a fully developed country, residents face many of the same chronic health threats as the United States — heart disease,

diabetes, cancer and stroke are among the 10 leading causes of death.

"Good patient education can prevent unnecessary costs in health care," he said. "Unfortunately, patient education has not been mandated in Taiwan or the U.S. I want to investigate in collaboration with Taiwan scholars how they work patient education into the national health insurance system and how that is effective and efficient."

Much of Sheu's research work is focused on quantitative analysis of public health data, particularly on youth risk behaviors and the ways in which patients and health-care providers make choices that influence care.

Recently, using path modeling, he worked with Dr. Colleen Taylor, assistant professor in the College of Nursing, to investigate the factors that go into how nurses make decisions about administering pain medication in patients recovering from operations. The study was named the 2017 best research paper of the year by the journal *Orthopaedic Nursing*.

Sheu also collaborated on soon-to-be-published research into how pregnant women adhere to prenatal care

recommendations and the health protective behaviors of women who had gestational diabetes.

"These types of studies provide a better understanding about how people make their decisions and how people act

in terms of their health-related behaviors," he said. "We've always known their stated reasons, but without this technique, we don't know how those reasons interact with each other and which are direct and indirect influences."



Photo by Daniel Miller

HEALTH FRONT: Dr. Jiunn-Jye Sheu showed off his Fulbright Specialist Award. He leaves this week for National Taiwan Normal University, where he will help revise and refine its public health curriculum.

Fulbright

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Dr. Sharon Barnes, associate professor and chair in the UToledo Department of Women's and Gender Studies, said. "Her outstanding scholarship consistently brings great prestige to The University of Toledo. While we will miss her at home, we are proud the Fulbright program has recognized her forward-thinking work on international women's issues."

Abdel Halim, a faculty member at UToledo for 15 years, graduated from the Faculty of Law at the University of Khartoum with a bachelor's degree in 1980 and a master's degree in 1988.

"As a student there, I never encountered gender in any of the courses," Abdel Halim said. "My experience studying and teaching in the United States proved that gender as a tool of analysis is vital in studying law."

Abdel Halim, who earned her Ph.D. at Ohio University, said actions of extremists lead many to question the tenets of Islam and the religion's commitment to equality.

"Religious interpretations are being misused to strengthen conservative stances regarding the curbing of human rights," Abdel Halim said. "Old traditions of

favoring men because of their participation in war lead to the subjugation of women to the authority of male guardians."

Abdel Halim plans to write a book after accessing old Shari'a sources, such as treaties written by scholars centuries ago and still considered the main source of Islamic rules today. She also plans to delve into the era of Mahdiyya uprisings and older archives.

"The intersection of religion and gender seems to be working against women where legislation is concerned," Abdel Halim said. "Ideological traditions find safety

in regression to old traditions rather than in change. I plan to follow the historical events of the recent history of the Sudan and look closely to the history of women in the country and understand why developments in legislation go back and forth. I also will examine how the intersection of gender and religion seems to always end in the defeat of women's rights in favor of archaic religious norms."

Children can learn about Apollo 11 moon landing at Ritter Planetarium

By Christine Billau

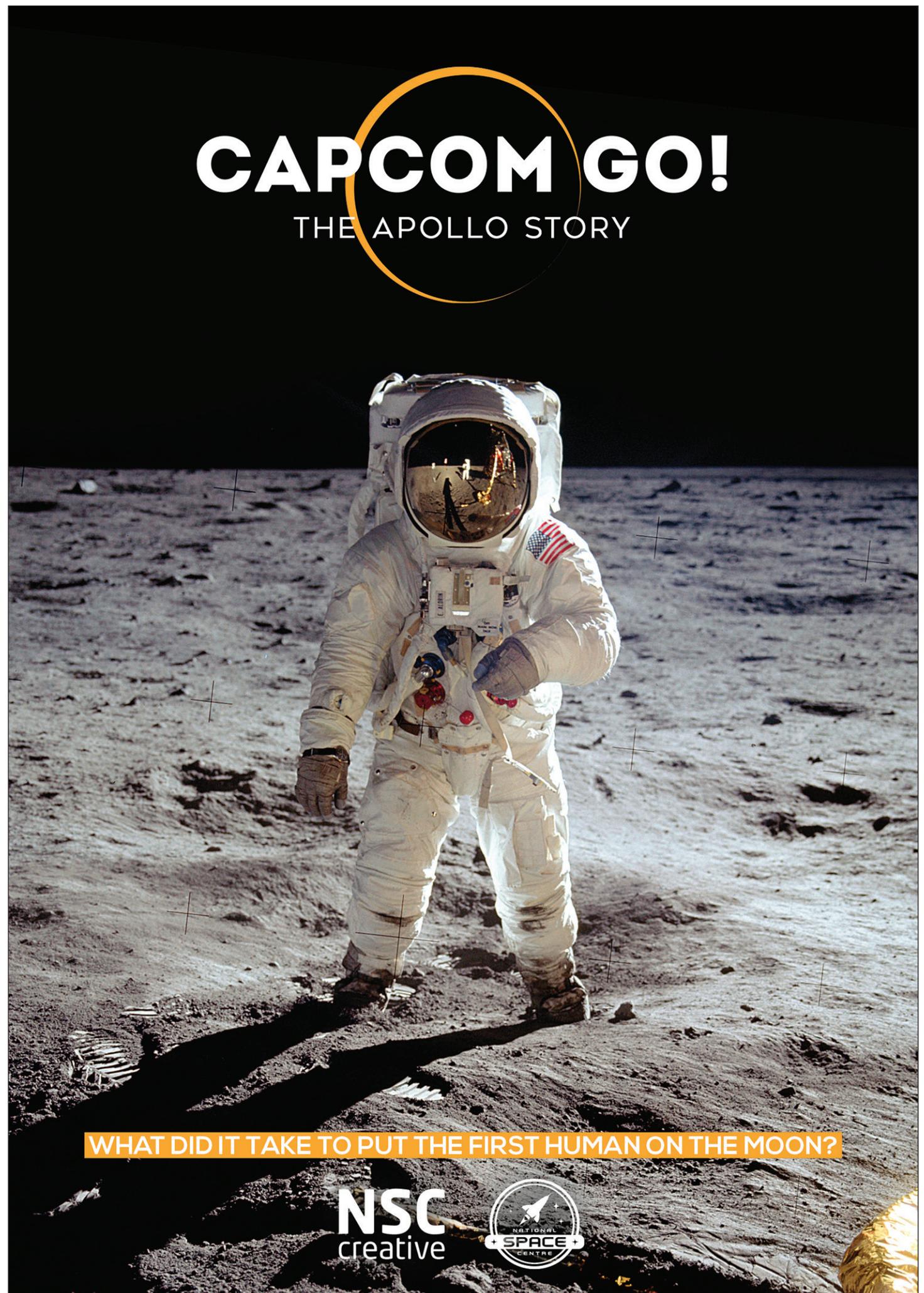
The University of Toledo Ritter Planetarium is showing a new program in honor of the 50th anniversary of the Apollo 11 moon landing.

“CAPCOM GO! The Apollo Story” is featured on Fridays at 8:30 p.m. through July 26.

The program is an immersive historical documentary in full dome that showcases the achievement of the Apollo program and what it took to put the first human on the moon and return him safely to Earth. It introduces a new generation to the immense challenges they overcame and will inspire them to become the explorers, designers, engineers, thinkers and dreamers of the future.

“This epic event on July 20, 1969, was a marvel of technology and human ingenuity,” Alex Mak, associate director of UToledo Ritter Planetarium, said. “This is an incredible opportunity for adults to relive the wonder, awe and excitement, but also for children to discover how we did it.”

Admission to the program is \$7 for adults and \$5 for children, senior citizens and UToledo community members. All children younger than 4 are free. Doors open 30 minutes prior to the show.



Families invited to Earth and Space Exploration Day at Ritter Planetarium May 18

By Christine Billau

A graduate student at The University of Toledo who aspires to someday teach at a planetarium went above and beyond to elevate an annual event aimed at inspiring and motivating children to engage with science.

From playing hide-and-seek moon using binoculars to creating a pocket solar system to scale to using a tub of water to explain rising sea levels and climate change, this year's Earth and Space Exploration Day at Ritter Planetarium will feature a new set of hands-on activities in astronomy and earth science using interactive demonstrations in collaboration with NASA and the National Informational STEM Education (NISE) Network.

Heidi Kuchta, who started working as an assistant at Ritter Planetarium five years ago as a freshman, applied for and secured one of 350 kits distributed nationwide.

"I love that families in our community will have something incredibly interesting to do and stuff to take home," Kuchta said. "With the support of the NISE Network and NASA, we are able to add a wonderful spark to our annual Astronomy Day by expanding and escalating the overall fun, learning experience for children."

Earth and Space Exploration Day will take place Saturday, May 18, from noon to 4 p.m. at Ritter Planetarium. The free, public event also will include planetarium shows running in full dome every hour starting at 12:30 p.m., as well as solar observing, weather permitting.

"From the beginning, Heidi has shown tremendous dedication to our outreach efforts," Alex Mak, associate director of Ritter Planetarium, said. "This workshop is just one example of her ability to expand upon our traditional educational mission."

Kuchta earned her bachelor's degree in physics and geology from UToledo last year and is pursuing her master's in an accelerated teaching program in the Judith Herb College of Education.

"A lot of planetariums are in schools, so I thought this innovative path would be a good way to combine education and what I love to do here," Kuchta said. "At a planetarium, we only have students for a short period of time. They'll learn here, but, more importantly, it will get them asking questions, expand their curiosity, and maybe nourish the dream of becoming the scientists who get people to Mars or become the first person to walk on Mars."

Kuchta's connection to the cosmos began as a baby, according to family legend.

"My mom took me to a planetarium at the Cleveland Museum of Natural History when I was a few months old because she was chaperoning a trip for one of my older siblings," Kuchta said.

Ritter Planetarium proved to be the deciding factor in choosing a college.

"During a campus tour, I was hooked when we walked through the planetarium and checked out the telescope," Kuchta said.

Kuchta helps put on planetarium shows that explain current celestial phenomena and leads tours from different groups of visitors ranging from residents of a senior center to a preschool class. She also helps create content.

"Heidi is creative, energetic, and always willing to find new ways to help people learn more about the universe," Mak said. "She has a bright future."



Photo by Daniel Miller

EDUCATIONAL MISSION: Heidi Kuchta received kits from NASA and the National Informational STEM Education Network that will be distributed during Earth and Space Exploration Day Saturday, May 18, at Ritter Planetarium.



LUNAR LEARNING: Children use binoculars and play hide-and-seek moon with a kit from NASA and the National Informational STEM Education Network.

Inexpensive agricultural waste product can remove microcystin from water, new UToledo research finds

By Tyrel Linkhorn

Scientists at The University of Toledo have discovered that rice husks can effectively remove microcystin from water, a finding that could have far-reaching implications for communities along the Great Lakes and across the developing world.

An abundant and inexpensive agricultural byproduct, rice husks have been investigated as a water purification solution in the past. However, this is the first time they have been shown to remove microcystin, the toxin released by harmful algal blooms.

The results of the study were recently published in the journal *Science of the Total Environment*.

“Delivering safe water is critical, and finding an economically viable solution to deliver safe water to people all over the world is going to be really important. The ability of this simple material to be powerful enough to address this issue is impressive,” said Dr. Jon Kirchhoff, Distinguished University Professor and chair of the Chemistry and Biochemistry Department.

The research, led by Kirchhoff and Dr. Dragan Isailovic, associate professor of chemistry in the College of Natural Sciences and Mathematics, used organic rice husks that were treated with hydrochloric acid and heated to 250 degrees Celsius.

The rice husks were then dispersed in a series of water samples collected from Lake Erie during the 2017 harmful algal bloom to measure how much of the toxin they could absorb.

Researchers found the rice husks removed more than 95 percent of microcystin MC-LR — the most common type found in Lake Erie — in concentrations of up to 596 parts per billion (ppb). Even in concentrations approaching 3,000 ppb, more than 70 percent of the MC-LR was removed, and other types of MCs were removed as well.

“We looked at the removal of microcystins from real environmental samples and the material has performed really well,” Isailovic said. “We are talking about extremely high concentrations of microcystins originating from cyanobacterial cells. Normally during summer, we have much, much lower concentrations in Lake Erie.”

The United States Environmental Protection Agency recommends a 10-day



Devasurendra

of 1.6 ppb of microcystin.

Beyond their effectiveness, rice husks have a number of other appealing attributes. They’re cheap — researchers paid \$14.50 for half a cubic foot, and buying in bulk would bring that price down significantly — and they’re able to be repurposed.

Heating microcystin-laden rice husks to 560 degrees Celsius destroys the toxins and produces silica particles, which can be used in other applications.



Palagama

blooms or cheap but effective filtration systems for the developing world.

“We could potentially use this readily available material to purify water before it even gets into Lake Erie,” Isailovic said. “There are engineering solutions that need to be done, but one of our dreams is to apply what we develop in our labs to provide safe drinking water.”

Other authors of the study were doctoral students Dr. Dilrukshika Palagama and Dr. Amila Devasurendra, who first proposed looking at rice husks as a way to remove microcystin and have since graduated from UToledo, and current doctoral student David Baliu-Rodriguez.

drinking water guideline that young children not drink water containing more than a total of 0.3 ppb of microcystin and school-age children and adults not drink water containing more than a total

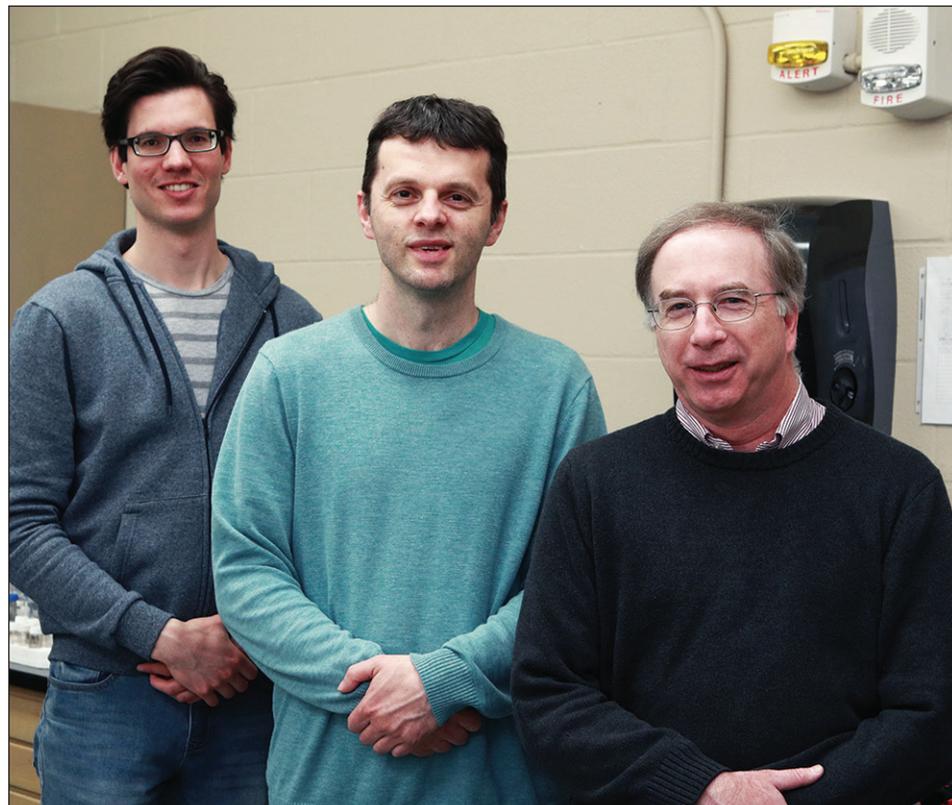


Photo by Daniel Miller

HUSKY RESEARCH: Dr. Jon Kirchhoff, right; Dr. Dragan Isailovic, center; and doctoral student David Baliu-Rodriguez have published a paper, along with UToledo graduates Dr. Amila Devasurendra and Dr. Dilrukshika Palagama, about using rice husks, below, to remove microcystin from water.



Creativity blossoms with University's Outdoor Sculpture Exhibition

By Vicki L. Kroll

A small flock of enigmatic birds intently gaze across Centennial Mall. A wayward sea turtle suns itself near the southwest corner of Bowman-Oddy Laboratories. And a wave rolls between UToledo Medical Center and Mulford Library.

"Birdzels" by Mark Chatterley, "Turtle" by Jonathan Bowling and "Blue Wave" by Mike Sohikian are three of the 10 new works installed for The University of Toledo's 14th annual Outdoor Sculpture Exhibition.

"For me, 'Birdzels' were meant to be fun. They are a cross between anime, emojis and Angry Birds — with a little Snoop Dog mixed in," Chatterley said and laughed. "They are made from high-fired clay with a crater glaze on the outside. I feel I am pushing the material to make it unrecognizable as clay."

Bowling's recycled reptile features a dredge scoop, railroad spikes, horseshoes and stove grates.

"Being able to make something from nothing is what I like to do," Bowling said. "It's economical, too."

Thanks to the President's Commission on Campus Design and Environment, new sculptures sprout up each spring.

"Big Blue X" by Brian Ferriby sits atop the hill west of University Hall, and Glenn Zweygardt's stainless steel work titled "New Mexico Passage" shines on the west side of the Student Recreation Center.

Bernie Dominique's geometric work "Four Square" can be found by the northeast

side of Wolfe Hall, and Beau Bilenki's engineering feat "Hole in One" is between Nitschke and Palmer halls.

A 250-pound fish flies near the University Parks Trail and Ottawa House with Michael Angelo Magnotta's "Above the Waves."

"My sculptures typically begin with a trip to the metal yard," Magnotta said. "From the shapes and textures I rescue, a conversation takes place — a visual conversation — that results in my sculptures."

Gregory Mendez's forceful "Kometes" is located north of Ritter Planetarium, and Kenneth M. Thompson's intricate "Laminated Stack, Triangle" sits on the east side of the Health and Human Services Building.

More than 180 artists submitted proposals to the Midwest Sculpture Initiative, and the President's Commission on Campus Design and Environment reviewed the entries and selected pieces for this year's exhibit.

Since the exhibition began, more than 130 sculptures have rotated through the display on UToledo campuses, and several have become part of the University's collection courtesy of campus benefactors, colleges and departments.

Those wishing to make a gift to support the exhibition are encouraged to contact the UT Foundation at 419.530.7730 or utfoundation@utoledo.edu.



"Above the Waves" by Michael Angelo Magnotta is located by the University Parks Trail and Ottawa House.



Mark Chatterley's "Birdzels" are perched on the west side of Centennial Mall.



"Turtle" by Jonathan Bowling sits near the southwest corner of Bowman-Oddy Laboratories.

Photos by Daniel Miller

Assistant provost receives Hymore Award

Dr. Julie Fischer-Kinney, assistant provost for student success and retention in the Office of the Provost, is the 2019 recipient of the Diane Hymore Exemplar of Excellence Award.

She received the honor named for the longtime executive secretary May 6 at the Outstanding Staff Awards in the Thomas and Elizabeth Brady Engineering Innovation Center.

The award is presented annually to an individual whose work defines the core values of the University in Hymore's spirit of support, encouragement and service.

"In the two decades Dr. Fischer-Kinney has dedicated to the University, her decisions have always been shaped with the student in mind," a nominator wrote. "She constantly seeks student feedback on various issues in order to ensure the best outcome for the student. This allows her to stay grounded and make sure decisions are best for the current generation of students."

Fischer-Kinney has worked at the University 21 years, starting as an academic program coordinator in the Chemical Engineering Department. She also has served as director of student services in the College of Nursing; director of New Student Orientation Programs; associate dean and interim dean of YouCollege; and director of success coaching.

"Dr. Fischer-Kinney is an outstanding supervisor, mentor and student advocate," a nominator wrote. "She tirelessly champions efforts that impact student success and

retention. Additionally, she has transformed the success coaching initiative from a raw idea into a powerful movement that is truly impacting student lives."

Another noted that in addition to her many responsibilities, Fischer-Kinney always takes the time to serve as a success coach for students each semester.

"Many students struggle to find their ambition, but Dr. Fischer-Kinney helps instill motivation to allow the student to discover their full academic potential," a nominator wrote.

"Regardless of how busy her schedule may be, Dr. Fischer-Kinney always makes time to be there for the student.

They value her as an advocate who will help them reflect on their college and life goals, and connect them to the resources and tools. Dr. JFK, as students call her, always carves out time to focus on the individual at hand.

"Success coaching and retention work can be challenging. Every day coaches hear

a variety of student concerns or chase after students with assorted academic, financial and personal issues bubbling up. Dr. JFK is committed to an open, candid and warm environment where we can embrace a team approach, lean on each other as needed, and grow from each other."

Fischer-Kinney received a bachelor's degree in business administration majoring in marketing, and master of education and doctoral degrees in higher education from the University.



Photo by Daniel Miller

RECOGNITION: Dr. Julie Fischer-Kinney received the Diane Hymore Exemplar of Excellence Award from Wendy Davis, associate vice president and chief human resources officer; left, and University President Sharon L. Gaber:



Lauded for service

Dr. Donald Wedding, associate professor of management, showed the special pin he received from Matt Schroeder, interim executive vice president for finance and administration, and President Sharon L. Gaber during the Service Awards last month. Wedding was honored for 50 years of service to the University. More than 650 employees were recognized for reaching milestone years of service in 2018.

Photo by Daniel Miller

Employees honored with Outstanding Staff Awards

Five employees took home the University's 2019 Outstanding Staff Awards.

More than 60 nominees were celebrated at a May 6 ceremony in the Thomas and Elizabeth Brady Engineering Innovation Center. The event was hosted by Human Resources on behalf of President Sharon L. Gaber.

Winners this year were:

Laura M. Brown, academic accommodation specialist, compliance, in the Department of Student Disability Services. She joined the University in 2014 as a secretary in the College of Business and Innovation, and is a graduate of UToledo with a bachelor of arts degree.

"Laura is the face of Student Disability Services at the University. She is extremely knowledgeable, compassionate and kind in a very busy and demanding environment," one nominator wrote. "She effortlessly manages the daily operations of the office while providing resources and guidance for new and continuing students, parents, faculty and staff. Navigating resources and academic accommodations can sometimes be complicated for students with disabilities, but Laura provides a consistent and friendly contact every step of the way." Another noted, "Laura is an efficient and talented employee who engages in process improvements and creating efficiencies. Her work is continuously done at a very high standard, and Laura is always willing

to share her knowledge with others on her team. Laura helps to represent the absolute best of the University."

Betsy Buschmann, medical assistant in the Gastroenterology Clinic in UToledo Medical Center. She has worked at the hospital since 2014.

"Betsy has a great passion for what she does and it shows in her work," a patient wrote. "She has always taken my calls, got answers for me in a timely manner, and had patience with me regardless of what the issue may have been or how many times I may have contacted her. She is always willing to help me, and I have seen her take the time to help others when needed. Not everyone enjoys going to the doctor, but her positive and friendly personality makes it much more rewarding when entering the clinic." Another wrote, "I always feel as if I am the only patient that is being seen because of the way that Betsy ensures that the flow of my visit goes smoothly." Another noted, "She is an inspiration to others."

Catherine Chengges, administrative coordinator in the Department of English Language and Literature in the College of Arts and Letters, and instructor in both the Jesup Scott Honors College and the College of Arts and Letters. She received her bachelor's and master's degrees from the University.

"Literally nothing in our department would work well without Cathy Chengges. She not only makes sure that we have humane teaching times, she also makes sure that we are teaching classes that reasonably complement one another," one nominator noted. Another wrote, "Cathy Chengges has been a steady, supporting presence in the English Department for many years. Her work in creating the extremely unwieldy course schedule for the English Department, semester after semester, is remarkable. She is a scheduling superhero. I hate to think that she will ever retire." "She is the most professional, competent, exceptional person on so many levels. She is my go-to person who I can ask just about anything, epitomizing what I feel defines the highest qualities of University spirit and character," another wrote.

Lisa Edwards, secretary in the Department of Art in the College of Arts and Letters. She joined the University in 2014.

"Lisa is the absolute heart of our department. She is always positive, helpful, organized and so on top of everything," one nominator wrote. "She works selflessly and passionately to make everyone's life better — especially for our students and prospective students. Her positive attitude is infectious and makes the whole department a better place." "Lisa's reliability is almost unfathomable until you get to work with her," another wrote.

"She is excellence performed every day; from urgent tasks that overtake the long-term projects she is always working on, to the consistency of keeping calendars for the entire department's goings on, she is always on top, sorting out issues, and stopping problems even before they are able to arise. Lisa is truly a role model for professionalism and excellence."

Sherri Kaspar, director of parking and transportation in Auxiliary Services. She joined the University in 2004 as event manager for the Toledo Police Department. A UToledo alumna, she received a master's degree in recreation administration in 2004.

"Ms. Kaspar inspires others to do excellent work and promotes the professional goals of those she works with. She takes positivity and applies it to every employee not to mention the many students whom she directs," one nominator wrote. "She consistently monitors her program, employees and volunteer retirees who work with her. After seeing her in action for five years, she is in a position where no one is consistently pleased with all aspects of parking simultaneously as the daily variable issues she deals with are never the same. Her commitment to excellence in her area is exemplary and deserves to be brought to the attention of the University community," one nominator wrote. "She runs a tight ship and cares for her employees, and we all care for her."



Photo by Daniel Miller

CAMPUS SPOTLIGHT: Receiving the University's 2019 Outstanding Staff Awards were, from left, Catherine Chengges, Sherri Kaspar, Betsy Buschmann, Laura M. Brown and Lisa Edwards.

UToledo researcher using drones to measure algal blooms to speak May 23 at National Museum of the Great Lakes

By Christine Billau

Determined to protect drinking water and avert another water crisis, a scientist at The University of Toledo deploys drones to snap a quick assessment of water quality during algal bloom season, no boat or satellite required.

Dr. Richard Becker, associate professor in the Department of Environmental Sciences, will give a presentation titled “Using Drones to Answer Questions in Environmental Science” Thursday, May 23, at 7 p.m. at the National Museum of the Great Lakes, located at 1701 Front St. in Toledo.

The researcher will discuss his use of low-flying unmanned aerial vehicles to monitor the health of Lake Erie.

The free, public event is the final presentation in the 2018-19 UToledo Lake Erie Center Lecture Series.

“As remote sensing technology advances, monitoring lakes using satellites, aircraft and drones

is becoming more effective,” Dr. Tom Bridgeman, professor of ecology and director of the UToledo Lake Erie Center, said. “Dr. Becker’s research in coupling remote sensing data with boat-based water monitoring has improved the accuracy of harmful algal bloom assessments. Also, his research to develop drones as inexpensive tools to measure algal blooms is helping to fill a gap left by more expensive methods.”

A shuttle will be available to transport visitors from UToledo’s Main Campus to the National Museum of the Great Lakes and back. The shuttle will depart at 6:15 p.m. from the south side of Bowman-Oddy Laboratories. Passengers must reserve a spot by Tuesday, May 21.

Email lakeeriecenter@utoledo.edu or call 419.530.8360 to make a reservation for the shuttle.

Celebrating generosity and scholarship



Photo by Mike Henningsen

UToledo President Sharon L. Gaber presented the Frank E. Horton Presidents Club Scholarships during the University’s 30th annual Donor Recognition Reception May 9. The 2019 recipients are, from left, Jared Repas, who is in the professional division of the Doctor of Pharmacy Program; Lydia Ratterree, a junior majoring in social work; and Kyle Cotner, a senior majoring in biology. Each year, the event honors the contributions and generosity of thousands of The University of Toledo’s alumni, friends and supporters.

Solar power

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envisioned the ultra-high efficiency material called a tandem perovskite solar cell will be ready to debut in full-sized solar panels in the consumer market in the near future.

Perovskites, compound materials with a special crystal structure formed through chemistry, would replace silicon, which — for now — remains the solar-cell material of choice for converting the sun’s light into electrical energy.

“We are producing higher-efficiency, lower-cost solar cells that show great promise to help solve the world energy crisis,” Yan said. “The meaningful work will help protect our planet for our children and future generations. We have a problem consuming most of the fossil energies right now, and our collaborative team is focused on refining our innovative way to clean up the mess.”

The new research paper, which is published in the journal *Science*, outlines how the photovoltaics team is fine-tuning a mix of lead and tin to advance the technology closer to its maximum efficiency. Efforts have currently brought the efficiency of the new solar cell to about 23 percent. In comparison, silicon solar panels on the market today have around an 18 percent efficiency rating.

Scientists used a chemical compound called guanidinium thiocyanate to dramatically improve the structural and optoelectronic properties of the lead-tin mixed perovskite films.

“Science is the top academic journal in the world, alongside *Nature*, which published other research by Dr. Yan only five months ago after he discovered a single material that produces white light, which could boost the efficiency and appeal of LED bulbs,” Dr. Sanjay Khare, professor and chair of the UToledo Department of Physics and Astronomy, said. “His significant sustainability work at The University of Toledo can help power the world using clean energy.”

About five years ago Yan’s team at UToledo identified the ideal properties of perovskites, and he has since focused his 20 years of experience on producing an all-perovskite tandem solar cell that brings together two different solar cells to increase the total electrical power generated by using two different parts of the sun’s spectrum.

Last month the U.S. Department of Energy awarded Yan a \$1.1 million grant to continue his research in collaboration with the National Renewable Energy Lab.

“This is the material we’ve been waiting for for a long time,” Yan said. “The solar industry is watching and waiting. Some have already started investing in this technology.”

Yan is an expert in theory of defect physics and electronic properties in semiconductors, materials synthesis and thin-film solar-cell fabrication.

“Our UToledo research is ongoing to make cheaper and more efficient solar cells that could rival and even outperform the prevailing silicon photovoltaic technology,” said Dr. Zhaoning Song, research assistant professor in the UToledo Department of Physics and Astronomy, and co-author on the study. “Our tandem solar cells with two layers of perovskites deliver high-power conversion efficiency and have the potential to bring down production costs of solar panels, which is an important advance in photovoltaics.”

While Yan’s team has improved the quality of the materials and the process to manufacture them at a low cost, more progress needs to be made.

“The material cost is low and the fabrication cost is low, but the lifetime of the material is still an unknown,” Song said. “We need to continue to increase efficiency and stability.”

“Also, lead is considered a toxic substance,” Yan said. “I am determined to work with the solar industry to ensure solar panels made of this material can be recycled so they don’t cause harm to the environment.”

UToledo students' winning biodesign projects to compete in New York

By Angela Riddell

Two groups of UToledo students will compete against more than 30 teams from around the world Thursday and Friday, June 20 and 21, at the Biodesign Challenge Summit at the Parsons School of Design and the Museum of Modern Art in New York City.

The two teams, PlastiGrow and btlix, won the chance to travel to the Big Apple at the UToledo competition last month at the Toledo Museum of Art Glass Pavilion.

Presented by The University of Toledo, the Biodesign Challenge offers art and design, bioengineering, and environmental sciences students the opportunity to envision future applications of biotechnology and biomaterials that address complex global challenges. Students are connected with community experts to develop innovative solutions through interdisciplinary research and iterative prototyping.

"Normally, our jurors award one team with the honor of competing in New York, but this year we have the opportunity to award not just one team — a team that will compete against all schools — but we are also putting up for consideration another team for a special prize, so we are happy to announce our two winning teams, btlix and PlastiGrow," Eric Zeigler, assistant professor of art, said.

The overall winner of the UToledo competition was btlix. This team developed a disinfectant spray for combatting antibiotic-resistant superbugs. The students on the btlix team are Tyler Saner, art; Sarah Mattei, environmental engineering and earth science; Courtney Kinzel, environmental engineering and earth science; Timothy Wolf, bioengineering; and Sherin Aburidi, bioengineering.

The UToledo team, PlastiGrow, is applying to compete in New York for the ORTA Sustainability in Textiles Prize. The team engineered a biodegradable plastic material that can be used in the creation of everyday products to greatly reduce the cost and energy spent on waste and recycling efforts. Team members are McKenzie Dunwald, art; Michael Socha, bioengineering; Colin Chalmers, art; and Ysabelle Yrad, environmental engineering and earth science.

For more information on the Biodesign Challenge, visit biodesignchallenge.org/summit-2019.



Btlix team members are, from left, Tyler Saner, Sarah Mattei, Courtney Kinzel, Timothy Wolf and Sherin Aburidi.



Students on the PlastiGrow team are, from left, McKenzie Dunwald, Michael Socha, Colin Chalmers and Ysabelle Yrad.

Latino Youth Summit set to inspire local students

By Bailey Sparks

About 500 area students are expected to attend the 17th annual Latino Youth Summit this week at The University of Toledo to gain a better understanding of the four-year college experience and discuss paths to success.

“We want students to leave campus knowing that they should be proud of their Latino heritage and culture, and that higher education is an option for them and that they are valued by UToledo,” said Aleiah Jones, coordinator in the Office of Multicultural Student Success and committee chair of the event. “We want them to learn about all of the opportunities that are available to them here so that one day they can become Rockets.”



Garcia-Fresco

The session for sixth- to eighth-graders will take place Tuesday,

May 14, from 9:30 a.m. to 1 p.m. High schoolers will visit campus Wednesday, May 15, from 9:30 a.m. to 1 p.m. Both will be held in the Thompson Student Union.

Students will discuss college preparation tips, career exploration and scholarship opportunities.

Dr. German Garcia-Fresco, neuroscientist, entrepreneur and author, will be the guest speaker at this year’s summit. He will talk to students about “10 Things I Didn’t Learn in School” at 10 a.m. both days in the Thompson Student Union Auditorium.

Garcia-Fresco is director of the Adaptive Neuroscience Research Institute in San Diego and founder of Doctor Fresco Academy, an online education course platform.

His research has led to advances in neurobiology, contributing to mechanisms involved in neurodegenerative diseases. Garcia-Fresco has focused on the behavioral aspects of brain functioning, specifically decision making, emotional control and creative enhancement. He is researching techniques to increase neuronal performance and developing health and educational brain programs for children and adults.

The recipient of the President’s Award for excellence in genetics and biochemistry is the author of “Train Your Brain for Success: How a Healthy Brain is the Key to Happiness and Success.” Published in 2018, the book shows how a healthy brain can help build what Garcia-Fresco calls the three pillars of life: health, relationships and wealth.

He studied chemistry and molecular biology at the State University of New York at Purchase and received bachelor of arts and master of science degrees, and continued his education at the University of North Carolina, where he received a doctorate in molecular neurobiology.

For more information on the Latino Youth Summit, contact Jones at aleiah.jones@utoledo.edu or 419.530.2261.

2019 Latino Youth Summit

Students in grade 6 - 12 are invited join us at the **2019 Latino Youth Summit** and gain a better understanding of the four-year college experience as we discuss paths to success:

- College preparation tips
- Career exploration
- Scholarship opportunities

GRADES 6-8

Tuesday, May 14

9:30 a.m. – 1 p.m

The University of Toledo Thompson Student Union
Main Campus

GRADES 9-12

Wednesday, May 15

9:30 a.m. – 1 p.m

The University of Toledo Thompson Student Union
Main Campus

Register today!

utoledo.edu/studentaffairs/omss

To learn more, please contact:
Office of Multicultural Student Success
419.530.2261
omss@utoledo.edu
@omssutoledo
@UT_OMSS

Presented by the Office of Diversity and Inclusion and the
Office of Multicultural Student Success



Performance evaluations due June 1 for non-union employees

As a reminder, by Friday, June 1, supervisors of non-union/Professional Staff Association employees should meet with each of their employees to discuss their performance during the past year.

Supervisors who manage AFSCME and/or CWA employees should continue to follow the agreed-upon schedules of union contracts.

A table of all performance evaluation deadlines is available on at utoledo.edu/depts/hr/evaluations.html along with employee performance and self-evaluation forms, other tools, and frequently asked questions.

“We truly appreciate our leadership team providing timely evaluations for each of their employees,” said Wendy Davis, associate vice president and chief human resources officer. “If you routinely log examples of exceptional performance and any areas needing improvement for each of your employees throughout the year, it

doesn’t require much time to complete the annual evaluation.

“Before their evaluation, each employee should complete the self-evaluation form available on Human Resources’ webpage, too, because that also enables their supervisor to provide an accurate evaluation and cite specific performance examples,” Davis added.

After reviewing the information on Human Resources’ webpage, supervisors who have any questions about completing performance evaluations may contact Terrie Kovacs, director for human resources, at terrie.kovacs@utoledo.edu or 419.530.1478.

“Through ongoing communication, including the performance evaluation discussion, we can better ensure our employees have ample opportunities to grow professionally and to serve all of our stakeholders in the best way possible,” Davis said.

Dining options, hours announced for summer

Faculty, staff and students are reminded they have several dining options throughout the summer at eateries conveniently located both on and near Main Campus.

For summer session one, these dining venues in Thompson Student Union are open Monday through Friday at the following times:

- Starbucks, 8 a.m. to 2 p.m.;
- Magic Wok and Subway, 11 a.m. to 3 p.m.; and
- Phoenicia Cuisine, 10 a.m. to 3 p.m., May 6 to May 12; and 10 a.m. to 5 p.m., May 13 to June 30.

A complete list of summer hours for on-campus dining venues is available at utoledo.edu/mealplans/hours.html.

Additionally, the University continues to offer on-campus catering services

for small and large events throughout the summer. For more information or to schedule catering, contact Ricardo Solis at solis-ricardo1@aramark.com or 419.530.8488.

“Our goal is to ensure our campus community and guests still have several dining options to meet their needs when on-campus eateries have reduced hours of operation during summer sessions,” said Bonnie Murphy, associate vice president for auxiliary services.

At Gateway, Brew coffee bar, Calle Tacos & Lounge, Jimmy John’s, Domino’s Pizza and Rice Blvd Restaurant offer diners additional food and beverage options, along with the Stubborn Brother Pizza Bar on Bancroft Street.

Main Campus Pharmacy switching to summer hours

The University of Toledo’s Main Campus Outpatient Pharmacy will begin its summer hours Monday, May 13.

The pharmacy will be open Monday through Friday from 7:30 a.m. to 5:30 p.m. and Saturday from 9 a.m. to 2 p.m.

Summer hours will remain in effect until Monday, Aug. 19, one week prior to the start of fall semester.

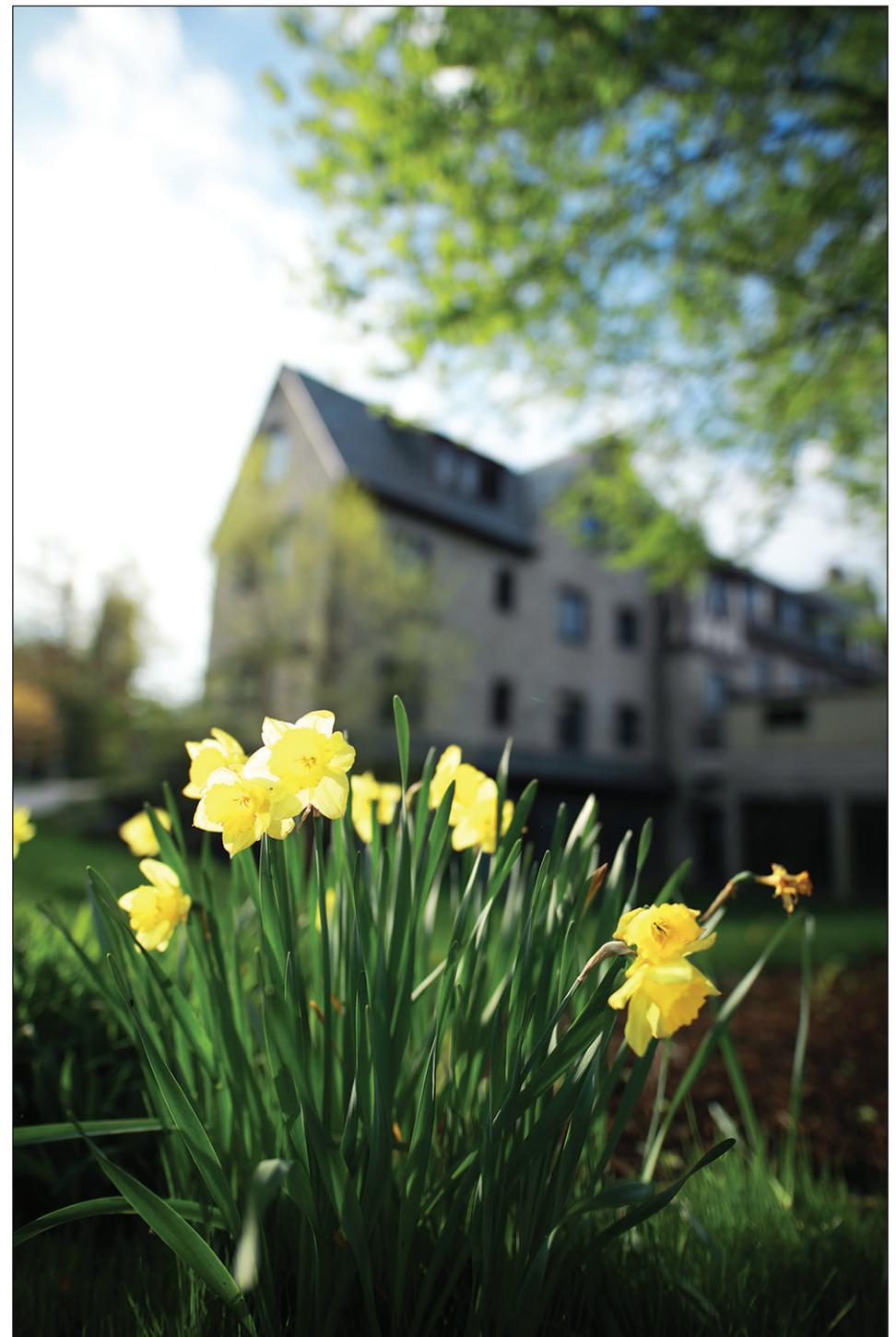
The pharmacy is located on the southwest side of Main Campus across from the Horton International House in the

University Health Center, where parking is available next to the building.

“Our services offered include personalized health care, immunization, affordable prices, and a wide array of over-the-counter products,” Dr. Valerie Householder, manager of the Main Campus Outpatient Pharmacy, said. “Our staff can conveniently transfer prescriptions from other outpatient pharmacies.”

For more information, call 419.530.3471.

Sunny blooms



This host of golden daffodils near Scott Hall was captured last week by University Photographer Daniel Miller.

Four Toledo teams lead MAC in academic scores

By Paul Helgren

The NCAA released its annual Academic Progress Rate (APR) figures May 8, and once again The University of Toledo received very impressive scores across the board.

For the four-year period from 2014-15 to 2017-18, all 16 Rocket varsity sports had at least a 957 score, well above the NCAA's cut point of 930, with women's golf, men's tennis and women's tennis leading the way with perfect 1,000 marks. Those three sports plus football (981) had either the highest APR score or were tied for the highest score in the Mid-American Conference.

Six other Rocket teams were within five APR points of the league leader: baseball, men's basketball, women's basketball, women's soccer, women's swimming and diving, and women's volleyball.

"These impressive APR numbers are a reflection of the terrific job our student-athletes are doing in the classroom," said UToledo Vice President and Athletic Director Mike O'Brien. "Strong APR numbers are a very good indicator that our student-athletes are on track to graduate, so it was no surprise when we saw 77 Rocket student-athletes receive their diplomas at spring commencement."

APR is a gauge of every team's academic performance at a given point in time. Points are awarded on a semester-by-semester basis for eligibility, retention and graduation of scholarship student-athletes. 1,000 is considered a perfect score. Sports that fail to reach the cut point (930) can be penalized with the loss of scholarships, practice restrictions and post-season bans.

The APR data released May 8 is a cumulative figure taken from the 2014-15, 2015-16, 2016-17 and 2017-18 school years.

The University of Toledo Academic Progress Rates

Toledo Four-Year APR#

Baseball — 986	Women's Golf — 1,000*
Men's Basketball — 979	Women's Soccer — 998
Men's Cross Country — 957	Softball — 972
Football — 981*	Women's Swimming — 996
Men's Golf — 985	Women's Tennis — 1,000*
Men's Tennis — 1,000*	Women's Track and Field — 976
Women's Basketball — 996	Women's Volleyball — 995
Women's Cross Country — 982	NCAA Cut Point — 930

#Four-year data from academic years 2014-15 through 2017-18

*Highest APR score or tied for highest score in the Mid-American Conference

Rockets to host evening with football coach May 29

By Paul Helgren

University of Toledo Head Football Coach Jason Candle and his staff will host a reception at the world-famous Inverness Club Wednesday, May 29, from 5:30 to 8:30 p.m.

Craft beer and wine tasting, hors d'oeuvres and a cash bar will be available for fans and supporters of the Rockets at the Toledo golf club, 4601 Dorr St.

There will be a live auction; items will include a trip for two to the game at Colorado State, a complete game-day

experience with the team for selected home games, and NFL packages and gifts.

Proceeds will benefit The University of Toledo Rocket Fuel Program.

Donation levels are \$1,000 for a table (seating for 10 and event recognition), \$200 for a couple, and \$125 for an individual. A portion of the ticket is tax-deductible.

Register at toledoalumni.org/events/events.aspx?eid=1209, or contact Andrew Terwilliger at andrew.terwilliger@utoledo.edu or 614.580.9978.

Toledo fans can order football tickets at Kentucky, Colorado State, Bowling Green

By Paul Helgren

Orders for away-game tickets for the 2019 University of Toledo football season are being taken at the Toledo Athletic Ticket Office, online or by phone.

Fans can purchase tickets for games at Kentucky Saturday, Aug. 31 (\$53); at Colorado State Saturday, Sept. 21 (\$38); and at Bowling Green Saturday, Oct. 12 (\$25).

Tickets will be mailed at a later date.

Tickets for the Rockets' remaining away games will go on sale at a later date.

To purchase season tickets, single-game tickets, or away-game tickets, stop by the Athletic Ticket Office, located in the Sullivan Athletic Complex in Savage Arena, go to utrockets.com or call 419.530.GOLD (4653).

Season tickets start at just \$70

University faculty and staff can buy tickets half off with ID, and UToledo students are admitted free with ID.

AN EVENING AT THE INVERNESS CLUB

Jason Candle, head football coach of the Toledo Rockets, and his staff invite you to attend the Evening At The Inverness Club to benefit the University of Toledo "Rocket Fuel" program.

<p>WHEN</p> <p>Wednesday MAY 29 5:30 - 8:30 P.M.</p>	<p>WHERE</p> <p>The Inverness Club 4601 Dorr Street Toledo OH, 43606</p>	<p>RSVP</p> <p>Andrew Terwilliger 614.580.9978 Andrew.terwilliger@utoledo.edu utrockets.com/eveningat inverness</p>
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UTROCKETS.COM **419.530.GOLD**



Riding high



Amelia Jacks, a senior majoring in environmental engineering and co-president of the UToledo equestrian team, placed second in the nation in her class at the Intercollegiate Horse Shows Association National Championships in Syracuse, N.Y. She competed in the Intermediate Equitation on the Flat, meaning she mounted an unfamiliar horse at the event. That horse — named Capital — was provided by the University of Findlay. More than 450 riders from colleges across the United States and Canada vied for honors at the championships.

Congrats!

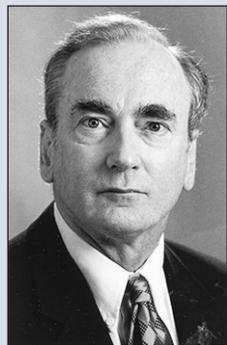


Photo by Daniel Miller

Jacob Helminski, son of Holly Helminski, administrative assistant in the Department of Pharmacology and Experimental Therapeutics, graduated magna cum laude with a bachelor's degree in business administration with a major in accounting and finance and a minor in information systems. He started his job as an accountant with First Solar in Perrysburg.

In memoriam

Stanley E. Adamski, Orange City, Fla., a former mathematics instructor, died March 20 at age 68.



Davis

Dr. David H. Davis, Toledo, professor of political science, died May 1 at age 77. He joined the faculty in 1989. He taught courses on public administration, environment, personnel, organizational behavior, management of nonprofit organizations, and public policy. In addition, Davis served as director of the Master of Public Administration Program from 1989 to 1992. He was the author of five books on environmental policy. He retired from the University in 2014.

Dr. Mary Louise Oakes, Toledo, who served as chair of the Catharine S. Eberly Center for Women Board for five years, died April 21 at age 82. An alumna of the University, she received bachelor's, master's and education specialist degrees from the College of Education in 1970, 1974 and 1975, respectively.

Eleanor H. "Ellie" Stahl, Maumee, a volunteer with the Satellites Auxiliary, died April 24 at age 92.

Joyce M. (Gehring) Wilson, Northwood, a clerk at the University from 1996 to 2000, died May 5 at age 70.

UTNEWS

UT News is published for faculty, staff and students by the University 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. UT News strives to present accurate, fair and timely communication of interest to employees. Story ideas and comments from the UT community are welcome. Send information by campus mail to #949, University Communications Office, Vicki Kroll. Email: vicki.kroll@utoledo.edu. Fax: 419.530.4618. Phone: 419.530.2248. Mailing address: University Communications Office, The University of Toledo, Toledo, OH 43606-3390.

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Got your plates? UToledo pride ready to roll with Rocket logo

The University of Toledo is proud to announce that drivers now have a choice of two UToledo specialized designs when ordering their Ohio license plates — a UToledo logo plate and a Rocket icon plate.

Any Ohio resident with a valid driver's license may order the UToledo collegiate plates for their vehicles by either stopping at any Ohio Bureau of Motor Vehicles agency or visiting oplates.com. In addition to annual license registration fees, UToledo specialized plates cost \$35, with \$25 directly supporting UToledo student scholarships.

"We're pleased to offer our alumni and other stakeholders an additional opportunity to show their Rocket pride wherever they go," UToledo President Sharon L. Gaber said. "Our goal is to get hundreds of UToledo collegiate plates on the road over the next few months to help fund student scholarships and raise awareness of the University."

"Along with wearing Rocket gear, flying a UToledo flag at home or

contributing to the University through the Foundation, purchasing UToledo specialty plates is another great way our students, faculty, staff, alumni, donors and our athletics fans can promote UToledo," Bonnie Murphy, associate vice president for auxiliaries, said.

"While the University logo plate has been available for several years, last fall we were able to quickly gather more than the 200 signatures required to petition the BMV to produce a newly designed Rocket plate, which we anticipate will be very popular among Rocket fans," Murphy said.

UToledo plates may be purchased through the BMV at any time throughout the year, and also may be used for vanity plates. Once purchased, it takes approximately three weeks for Ohio collegiate plates to be delivered via the U.S. Postal Service.

For more details about UToledo specialty plates, including all associated costs and other frequently asked questions, visit utoledo.edu/license-plates.



Photo by Daniel Miller

DRIVING SPIRIT: Dr. Michele Soliz, associate vice president for student success and inclusion, said she is proud to display UToledo specialized plates on her vehicle. More than 400 Ohio drivers currently use UToledo specialty plates on their vehicles.



Road warriors

Dr. Ricky Voigt, left, and Dr. Bobby Easterling recently completed a coast-to-coast cycling trip that raised more than \$16,000 for The University of Toledo Community Care Clinics. Voigt and Easterling, who graduated with medical degrees from the College of Medicine and Life Sciences May 10, began their trip in Santa Monica, Calif., and finished it in Rehoboth Beach, Del., covering 3,138 miles over 44 days. "Our journey from the Pacific to the Atlantic was both taxing and rewarding. We were blessed all along the way with incredible support from friends, family and total strangers who made our monumental goals obtainable," Voigt said. "Reaching the sandy shores of Delaware marked the end of our great adventure, but the memories and life lessons learned in perseverance, teamwork and determination will forever stay with us."