Student wins NASA fellowship to help hunt for Earth-like planet with future space telescope

By Christine Billau

The James Webb Space Telescope, successor to the 26-year-old Hubble, will be the largest and most powerful ever sent into orbit when it blasts off in fall 2018.

To prepare for Webb’s decade in space in search of a planet that could support life, NASA selected a University of Toledo PhD student studying small stars and the exoplanets closely orbiting them to join the team.

Kevin Hardegree-Ullman will contribute to choosing which planets the new space telescope will observe.

“There is going to be a lot of competition between astronomers for time on that telescope, which has an enormous gold-coated mirror and is much larger than Hubble,” Hardegree-Ullman said. “Before Webb launches, we will choose the best stretches of sky to look for another Earth-like planet. The best candidates are around low-mass stars that are less than half the size of the sun. Those are the stars that I have been focused on for years. This is an awesome opportunity.”

Because of his published work and experience collecting data about brown dwarfs using the Spitzer Space Telescope, Hardegree-Ullman won a NASA Graduate Fellowship that will pay for him to work with NASA scientists for six months.

In January, Hardegree-Ullman will head to the NASA Infrared Processing and Analysis Center for Infrared Astronomy at the California Institute of Technology in Pasadena to identify a handful of locations to target in our galaxy.

UT homepage updated to improve communication, user experience

By Meghan Cunningham

The new homepage for The University of Toledo embraces advances in technology to improve communication and appeal to a broader audience.

Launched Dec. 5, the updated utoledo.edu features bolder headlines and additional opportunities to share news, a new video feature, and “UT at a glance” facts.

“Technology is ever-changing, and we are pleased to continue to keep the UT homepage and website current in trends, best practices, compliance and features that are appealing to our key audiences,” said Kathleen Walsh, director of web development.

The University’s Office of Marketing and Communications and the Center for Creative Instruction collaborated for months researching, designing and building the updated version of the homepage. Research showed key audiences desired interesting facts about UT prominently displayed on the website and had an interest in accessing high-quality videos about the University, which coincides with UT’s efforts to increase the use of video to engage people and provide a prominent place to feature that work.

Prospective students will continue to be able to find their programs and easily connect with admission resources, which is a primary use of the University’s homepage. There is extensive work underway to revise all of the web pages describing UT’s majors, which will be easier to access with the homepage updates. Prospective students will benefit from those features in the new layout, as well as more easily learn interesting news and facts about the University they are looking to attend.

The responsive design works in all web browsers and adjusts to the user’s technology to be viewed on a computer monitor, tablet or phone.

UT chemist first to accurately predict structure of nano-sized silver

By Christine Billau

Scientists have studied silver for centuries.

However, silver nanoparticles that are too small for the naked eye to see — less than one-thousandth the width of a human hair — long remained a powerful germ-killing mystery.

In new research published in the journal Science Advances, a chemist at The University of Toledo and his collaborators at Georgia Tech proved for the first time they can predict the molecular structure of a tiny, complex metal particle that physicians might use to fight infections, detect cancer and possibly kill tumors.

The pioneering research opens the possibility for the design of metal and alloy nanoparticles, including silver, gold,
State certifies UTPD for adopting standards to strengthen community and police relations

By Christine Billau

The Ohio Department of Public Safety certified The University of Toledo Police Department for meeting new state standards for the use of deadly force, agency recruitment and hiring.

The standards are the first of their kind in the state developed by the Ohio Collaborative Community-Police Advisory Board last year to strengthen community and police relations.

The UT Police Department joins more than 120 other agencies throughout the state that have become certified.

The state has partnered with the Buckeye State Sheriffs’ Association and the Ohio Association of Chiefs of Police to help certify nearly 1,000 law enforcement agencies through a process to ensure they are in compliance with Ohio’s new standards.

“The Ohio Collaborative focused on police hiring practices and use of force, and we are pleased the University meets or exceeds the state standards,” UT Police Chief Jeff Newton said. “Building trust begins with assuring our community The University of Toledo Police Department is using best practices.”

For more information on the Ohio Collaborative Community-Police Advisory Board, the certification process, and a list of certified agencies, go to ocjs.ohio.gov/ohiocollaborative.

Major themes emerging in strategic planning process

By Barbara J. Owens

Using the input received from more than 700 people online and at discussion sessions throughout the University, the strategic planning committee has been meeting regularly to understand and organize the ideas and suggestions.

Once all of the ideas were sorted into categories, the committee created work groups to conduct brainstorming sessions on each topic. Dozens of individuals with specific areas of expertise or experience relating to each of the topic areas were invited to participate in the brainstorming sessions, where associated challenges and opportunities were discussed.

The topics of the work groups included the following: research; reputation and visibility; undergraduate student success; athletics; comprehensiveness; working at UT; graduate and professional education; community engagement; fiscal health; and fundraising.

“I am very pleased to see meaningful strategic direction and initiatives generated at the grassroots level through a bottom-up process,” said Dr. Andrew Hsu, provost and leader of the strategic planning initiative.

“We were also excited to see that there was overlap in the ideas generated in different groups, which indicates we are generally aligned as a community on the direction we should be taking our university.”

After sharing the input from the work groups, the planning committee has begun to narrow the focus a bit more. It will be working to identify major themes and associated initiatives in the coming months.

“I am very pleased at the progress we are making,” said President Sharon L. Gaber. “We recognize that this process requires a great deal of time from a lot of people who also have day jobs. We are so appreciative of all the work that has gone into this, and I am personally very excited to see how this will guide and shape The University of Toledo in the future.”

Rockin’ around Health Science Campus

Members of Music Therapy’s Docapella and Vocal Remedy recently recorded a song for the College of Medicine and Life Sciences’ holiday video. The a capella singing groups, which are made up of medical students, will present their free winter concert Friday, Dec. 9, at 5 p.m. in Health Education Building Room 110 on Health Science Campus.

Photo by James A. Molnar
platinum and copper, to create new medical therapies and treatment.

“If you want to design a drug for use inside the human body, knowing the structure and how it changes and interacts within the body is critically important,” Dr. Terry Bigioni, professor in the UT Department of Chemistry, said. “By knowing the positions of all the atoms that make up the silver nanoparticle, it’s possible for scientists to get much more sophisticated with how they use these for medical applications.”

Raw silver nanoparticles are already used for their antibacterial ability in a number of consumer products, including bandages, socks, underwear, athletic shirts, bedding, toys, refrigerators, cutting boards, throat spray, foam neck-support pillows, yoga mats, toothbrushes and soap.

“They’re crude chunks of silver in those antibacterial applications,” Bigioni said. “None are the same. Each particle is a random collection of silver atoms, but that works because you want the silver particles to dissolve and form silver ions. That is what kills the bacteria. Because they are used outside the body, it’s OK that their structures are random and unknown. The rules are very different, though, if you are going to use a silver nanoparticle as an antibiotic or cancer marker inside the human body.”

With the support of a $400,000 National Science Foundation grant, Bigioni’s team opened the door to sophisticated design of new, advanced therapies by better understanding how these molecules are put together after making a prediction last year and conducting experiments to confirm the accuracy. The scientists observed, predicted and measured the structural, electronic and spectral properties of the monolayer-protected silver nanoparticle.

The research titled “Confirmation of a de novo Structure Prediction for an Atomically Precise Monolayer Coated Silver Nanoparticle” will be used to develop a structure forecasting method for silver nanoparticles not possible to measure in order to help scientists advance the understanding of the health impacts of these molecules.

Metal nanoparticles also can be used in other applications, from catalytic converters to electronics to sensors, which the UT work should accelerate.

“Chemists are very good at understanding how the atoms in most materials are connected, but this is an entire class of molecules where we didn’t understand these basic rules,” Bigioni said. “It’s even further complicated because they are capped by sulfur-containing ligands.”

For example, chemists had been unable to predict simple things with gold and silver nanoparticles, such as which sizes will form and what their shapes, structures and properties will be.

“That is now beginning to change,” Bigioni said. “Our research using a combined theoretical and experimental approach opens up a new, fascinating chapter for chemists. This is a landmark moment because if you know the properties of the structure, you can figure out the properties in great detail, how it works, what its functions are, and what it’s good at. It becomes possible to explore using the nanoparticles in a much more sophisticated way.”

Graduate students Brian Conn and Aydar Attagulov helped Bigioni perform the work at UT supported by the National Science Foundation award.

The U.S. Air Force and the U.S. Department of Energy supported the work at Georgia Tech, which was led by Dr. Uzi Landman and performed by Drs. Bokwon Yoon and Robert Barnett.

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Presentation of UT’s master plan draft

Wednesday, Dec. 7

6 p.m.

Nitschke Hall SSOE Seminar Room

For more information, go to utoledo.edu/facilities/master-plan.

In memoriam

Ralph P. Wymer, Tiffin, who was a member of the Satellites Auxiliary, died Nov. 15 at age 82.
Record number of international students sit down for Thanksgiving meals with host families

It was a record year for the Center for International Studies and Programs’ fifth annual Thanksgiving host program. 30 families invited 80 students to their homes to celebrate the traditional American dinner.

“The results of the presidential election left many with feelings of anxiety,” said Dr. Sammy Spann, assistant provost for international studies and programs. “Even with the uncertainty in the air, we were able to triple the number of families and students participating in the program this year.”

In 2012, nine families hosted 12 international students. The program has continued growing each year.

“This gesture displays the great unity of our community, the appreciation of diversity, and willingness to open our hearts and homes to individuals of different cultures,” Spann said. “The Center for International Studies and Programs is committed to providing more events that help bridging cultures together.”

Xinren Yu, international program coordinator in the Confucius Institute, said more families asked to host students after the registration deadline, and he worked to accommodate as many requests as possible.

“It really shows that our community is very receptive and welcoming people from all cultures and backgrounds,” Yu said.

According to Yu, a lot of the students end up having closer relationships with their families after participating in the program.

“Students have the opportunity to have a real Thanksgiving experience and learn about American culture and the traditions,” Yu said. “It’s also a great time to make new friends and bond with an American family.”

Kate Abu-Abi, outreach and retention specialist in the College of Arts and Letters, hosted eight international students.

“In the world today, there are a lot of people who are being discriminated against, and I want our students to always feel that UT is their home away from home,” she said.

Abu-Abi said she had such a great time at Thanksgiving she plans to invite international students to celebrate other holidays.

“Everyone got a plate, and we pulled our chairs into the family room and sat in a big circle and talked about what we are thankful for,” she said. “We laughed, shared stories about family and friends, ate way too much, and had a blast.”

Cheryl Thomas, executive assistant in the Center for International Studies and Programs, and her husband, Dave, continued to open their home.

“My husband and I have been hosting international students for several years now. The cultural bonding, friendship and fun is what keeps us doing it year after year. Of course, my husband is a wonderful cook, too,” Thomas said. “We are very honored and thankful to have these students in our lives, so what better way than at Thanksgiving to share just what that means with them.”

Inmaculada Zanoguera, a graduate assistant from Spain, shared Thanksgiving dinner with the Thomas family.

“Good company, good vibes and good food — there is nothing like getting together in celebration of such a cheerful holiday to remind us how privileged we are to be here,” Zanoguera said. “I think I speak for all international students when I say that having a family selflessly open the doors of their home for us isn’t just a thoughtful invite, but a great honor for which we are deeply thankful. We sincerely appreciate all of the host families who participated in the program.”

“Getting to see all the happy and excited faces of students who have never experienced Thanksgiving makes this one of my favorite events all year,” said Tyler Mattson, graduate assistant in the Center for International Studies and Programs. “The students always leave stuffed to capacity and excited to have been a part of an American holiday.”

Donations being accepted for Student Food Pantry

By Meghan Cunningham

Add cereal, pudding cups, canned tuna fish and juice to your holiday shopping list to donate to the UT Student Food Pantry.

The food pantry, which was relocated earlier this year to the high-traffic area near the main entrance of the Student Union across from the Commuter Lounge, is accepting donations for a holiday food drive on location in room 2504 and in collection bins around campus.

“The ends of the semester can be a busy time for students and when you combine that with the activity of the holiday season, it can add to student stress. It is important to make every effort for hunger and worry about buying groceries to not be an added barrier for our students as they work to succeed on their homework and final exams,” said Dr. Phillip “Flapp” Cockrell, associate vice president for student affairs and dean of students.

The donation drive aims to help better stock the Student Food Pantry, which has extended its hours to be open from 8 a.m. to 5 p.m. Monday through Friday.

The pantry also now has a refrigerator to offer options that are not shelf-stable and is seeking a donation of a freezer.

Toiletries such as shampoo, soap, toothpaste, mouthwash and deodorant also can be donated to the pantry.

Contact the Student Food Pantry at 419.530.2171 or foodpantry@utoledo.edu for more information on how you can help.
Several holiday-themed concerts on tap

By Angela Riddel

The UT Department of Music will present several holiday-themed concerts this month.

Listed by date, events are:

- **Monday, Dec. 5** — The UT Concert Chorale will present Die Weihnachtsgeschichte (The Christmas Story) at 7 p.m. at Trinity Episcopal Church, 316 Adams St., Toledo. Die Weihnachtsgeschichte, op. 10, is one of Distler’s most beloved works. Based on a traditional German melody, Distler created a stunning a cappella telling of the Christmas story that epitomizes the subtle beauty of his music. Premiered in 1933, this work continues to be a favorite among choirs around the world. Admission: $10; $5 for students and seniors.

- **Sunday, Dec. 11** — The UT Concert Chorale will present the music of Distler at 3 p.m. in the Toledo Museum of Art Great Gallery. The group will perform selections from Distler’s Totentanz (Dance of the Dead) and Die Weihnachtsgeschichte (The Christmas Story), highlighting the best of its fall concert selections. Admission: Free.

Tickets for events can be found online at utoledo.tix.com or by calling the Center for Performing Arts Box Office at 419.530.ARTS (2787). The box office is open Mondays and Thursdays from 3 to 5 p.m., and Tuesdays, Wednesdays and Fridays from noon to 5 p.m.

Wanted: Works for 2017 Health Science Campus Artist Showcase

Friday, Jan. 13, at 5 p.m. is the deadline to apply for consideration to be included in the 2017 Health Science Campus Artist Showcase.

Mulford Library is accepting submissions from faculty, staff and students in the health sciences — nursing, medicine, pharmacy and the health professions — as well as UT Medical Center employees.

“Do you dabble in photography, painting, drawing, sculpture, jewelry making, quilting, multimedia, graphics, wood carving or other creative visual arts? Here’s a chance to share your talent,” said Jodi Jameson, assistant professor and nursing librarian at Mulford Library, who is a member of the artist showcase committee.

The 12th annual Health Science Campus Artist Showcase will be on display from Feb. 17 through April 7 on the fourth floor of Mulford Library.

To be considered for the show, digital images of artwork should be sent to hscartshow@utoledo.edu, along with a submission form that can be found with guidelines and more information at libguides.utoledo.edu/hscart.

Disability Studies Program to screen, discuss ‘A Christmas Carol’ Dec. 6

The UT Disability Studies Program will screen Charles Dickens’ classic “A Christmas Carol” Tuesday, Dec. 6, at 7:30 p.m. in Memorial Field House Room 2100.

Ebenezer Scrooge, played by George C. Scott, is a bitter, old miser who believes nothing good can come of Christmas if it does not make him any money. Visited by the ghost of his former business partner, Jacob Marley, on Christmas Eve, Scrooge is warned that if he does not change his unkind ways, he is doomed to a torturous afterlife in chains. Scrooge then is visited by three spirits that take him on an adventure to assure his repentance.

After the screening, film-goers are invited to stay for a discussion with faculty and students from the Disability Studies Program on representations of disability in film, literature and other media intended for young people.

For more information on the free, public event, contact the Disability Studies Program at 419.530.7244 or kathryn.shelley@rockets.utoledo.edu.
Ritter Planetarium showing annual holiday program for kids

By Christine Billau

Come hang out with Santa and Rudolph as they learn how to find their way home using constellations in The University of Toledo Ritter Planetarium’s annual presentation of “Santa’s Secret Star.”

The holiday program is shown on the full dome and targeted toward children 4 to 8 years of age.

After Santa finishes his Christmas deliveries, he and his reindeer become lost. Without a compass, he and Rudolph turn to the constellations for help, and the stars lead them to the North Star, which guides them home.

The original show was written in 1988 by Ritter Planetarium Associate Director Alexander Mak, and it has been updated for the planetarium’s new projection system.

“It’s one of our more popular shows during the year,” Mak said. “It’s educational, it’s entertaining, and it’s seasonally appropriate.”

Admission to the program is $7 for adults and $5 for children, senior citizens and UT community members. All children younger than 4 are free.

The program will be held Fridays at 7:30 p.m. and Saturdays at 1 p.m. through Dec. 17. Doors will open 30 minutes prior to the show.

After Friday night programs, guests are taken to one of two of the observatories for sky viewing, weather permitting.

Reach Out and Read partners with Barnes & Noble to collect books, promote education

By Carly Wiegand

Reach Out and Read, a grant-funded program of The University of Toledo Department of Pediatrics, is working with Barnes & Noble at the Shops at Fallen Timbers to help children in the classroom.

The community can help promote school readiness and family reading time by donating a book at the Barnes & Noble Fallen Timbers Holiday Book Drive at the store in Maumee Sunday, Dec. 11, with the voucher at right, or by shopping online at barnesandnoble.com Dec. 11-16 with the book fair ID 11985702 at checkout.

All book drive and book fair proceeds will benefit children and families in northwest Ohio.

“Our goal is to secure 10 percent of our books needed for the year; that is a total of 2,600 books,” Lori LeGendre, program director for Reach Out and Reach, said.

Reach Out and Read prepares America’s youngest children to succeed in school by partnering with doctors to prescribe books and encourage families to read together.

Doctors, nurse practitioners and other medical professionals incorporate Reach Out and Read’s evidence-based model into regular pediatric checkups by advising parents about the importance of reading aloud and giving developmentally appropriate books to children.

Locally, the program will reach 13,000 families with young children at 25 pediatric and family practice offices in northwest Ohio. The program distributes 26,000 new books yearly.

Nationally, Reach Out and Read programs are located in 5,800 hospitals, health centers and pediatric clinics in all 50 states. The program also serves 4.5 million children and families annually. More than 6.5 million new, developmentally appropriate books are given to children each year, and more than 12,000 doctors and nurses participate in Reach Out and Read.

Donations may be made to Reach Out and Read of Northwest Ohio at https://www.utfoundation.org/foundation/home/Give_Online.aspx.

For more information about the local initiative, visit facebook.com/RORNWO or reachoutandread.org, or contact LeGendre at lori.legendre@utoledo.edu or 419.383.4007.
Faculty, staff ‘Simply Give’ for many reasons

By Christine Wasserman

Both faculty and staff alike continue pledging their contributions to The University of Toledo Community Charitable Campaign, UTC3, which runs through Wednesday, Dec. 28. With nearly 220 nonprofit agencies benefitting from their gifts, there are many reasons why they’ve chosen to “Simply Give,” which is this year’s campaign theme.

“I simply give because I love being connected to the Toledo community,” said Dr. Richard Welsch, associate professor in the Department of Early Childhood, Physical and Special Education.

The reason for Kathleen Walsh, director of web development in University Marketing and Communications, is much more personal. “I received support from a handful of agencies while I was going through cancer treatment a few years ago, and my son has received help from three of the agencies that UTC3 supports. That still touches my heart today,” the mother of three confided, “and so I want to simply give back.”

“I give because of the Learning Club of Toledo. It provides after-school tutoring to inner-city students right here in Toledo,” offered Dr. Lori DeShetler, accreditation and assessment director in the Judith Herb College of Education. “It has such a positive impact on hundreds of students each year.”

Matthew Perry, associate director for residence life, simply gives “… because Equitas Health [formerly AIDS Resource Center Ohio] provides health-care services, resources and advocacy for all persons.”

UTC3 launched Nov. 9 and already has received pledges totaling $50,900 from the campus community. Donors may designate specific charities they’d like their gift to support, and all donations are tax-deductible.

“To keep things fresh this year, we’re asking people to ‘Simply Give’ whatever amount they can afford,” said Dr. Kaye M. Patten, senior vice president for student affairs and the 2016 UTC3 chair. “We don’t want someone to avoid participating because they can’t make a major contribution. Every single dollar counts.

“You may think that $5 or $10 isn’t worth pledging,” Patten continued, “but when these smaller gifts are combined with everyone else’s, the University can collectively make a huge impact on thousands of lives right here in northwest Ohio.”

Every person who “Simply Gives” to UTC3 by Dec. 28 will receive a complimentary long-sleeved UT T-shirt, as well as an invitation to a breakfast in early 2017.

To make a donation, watch for Patten’s weekly emails on Wednesdays and use the link provided to access your ePledge form. Visit utoledo.edu/utc3 for more details.

UTC3 SUPPORTS VARIETY OF CHARITIES: UT employees on Health Science Campus recently attended a fair to meet representatives from some of the 220 charitable organizations that benefit from the University’s Community Charitable Campaign.
The University of Toledo and ProMedica have joined together in an Academic Affiliation to enhance medical education and health care in our region. It’s the next generation of medicine.

THE FUTURE OF THIS ENTIRE REGION IS VERY POSITIVE.

“We'll have the opportunity to receive more research dollars so that we can provide healthcare services in a different way than we've done in the past.”

Billie Johnson
President & CEO, Area Office on Aging of NWO, Inc.

Find out more about The University of Toledo – ProMedica Academic Affiliation at: TheNextGenerationOfMedicine.com