

Van Patten chosen to guide MTSU College of Basic and Applied Sciences on interim basis

Chemistry professor **Greg Van Patten** has been selected to be interim dean for the **College of Basic and Applied Sciences** at **Middle Tennessee State University** by Provost **Mark Byrnes**, who made the announcement July 1.

Van Patten, 51, spent nine years as chair of the **Department of Chemistry** and will now lead the college during the university's national search for a new permanent dean. From a list of nominees, Byrnes chose Van Patten to replace **Bud Fischer**, who championed the new **Science Building** that opened in 2014 and became Western Kentucky University's provost.



Dr. Greg Van Patten

"Greg has done a fine job leading a large and complicated department and has also chaired the (43-member) **Chairs Council**. I have great confidence in his ability to do this job," Byrnes said.

Along with chemistry, the college includes aerospace, agriculture, biology, computer science, concrete and construction management, engineering technology, geosciences, mathematical sciences, military science and physics and astronomy.

"I'm excited about it (the opportunity)," Van Patten said of the one-year appointment. "Now, I will have a wider focus. I'll be looking at different things and how all these fit together — for the rest of the university, community and state. In recent weeks, I've been adjusting my thinking that way."

"My goals for the coming year are really to maintain and continue our momentum started by Dean Fischer," Van Patten added. "I want to make sure our students continue to reach their goals with career placement or graduate and professional schools. I want to continue building our research output and I want to make sure people around the state — our state leaders, our alumni and friends, our teachers and counselors and prospective students — are all aware of the great things happening here at MTSU."

As Chemistry Department chair, Van Patten said he has "witnessed great accomplishments resulting from the hard work and dedication of our students, faculty and staff" from throughout the entire college. "It's all about student success — encouraging our students to aim high and then helping them reach those goals. ... We have a number of signature programs and we have been working vigorously on student success."

Van Patten said Fischer has "done a fabulous job over the past nine years, positioning us as a college and building enrollment, building buildings and building research output at a time when other universities have had a difficult time.

"Under Dean Fischer we have significantly improved our research grant activity. We've grown into the biggest college within the university, and he's responsible for it. We've worked hard on undergraduate admissions recruiting, development (fundraising) and alumni relations. I hope I can continue to keep moving (the college) in that direction."

MTSU will begin its national search for a permanent dean this fall. Van Patten said he plans to apply.



Interim MTSU College of Basic and Applied Sciences Dean Greg Van Patten, left, visits with university President Sidney A. McPhee in the Science Building recently. The college is home to 11 departments. (MTSU photo by Randy Weiler)



Dr. Bud Fischer

What's Happening in CBAS?



Named interim dean for the MTSU College of Basic and Applied Sciences by Provost Mark Byrnes, Greg Van Patten began a one-year appointment July 1. MTSU's largest college, Basic and Applied Sciences features aerospace, concrete, mechatronics engineering, eleven departments altogether. He is shown announcing Department of Chemistry student awards in the Science Building Liz and Creighton Rhea Atrium in April. (MTSU file photo by Andy Heidt)

Related to the transition:

Andrienne Friedli, longtime professor and administrator, became interim Chemistry Department chair.

Ken Currie, chair and professor of Industrial & Management Systems Engineering at West Virginia University, was selected as the chair in Engineering Technology, effective Aug. 1, 2021. He replaces Vishwas Bedekar, who served as interim chair and will return to the classroom. Engineering technology features mechatronics engineering and other programs.

— Randy Weiler (Randy.Weiler@mtsu.edu)



Dr. Andrienne Friedli



Dr. Ken Currey

MTSU names aviation veteran new chair of Aerospace Department

Middle Tennessee State University has named experienced aviation professor **Chaminda S. Prelis** as the new chair of its nationally recognized **Department of Aerospace**.

Prelis comes to MTSU from the University of Dubuque in Dubuque, Iowa, where he was most recently the director of aviation programs after also having served as the program's head of academics as well as an assistant and associate professor during his 12 years there. Prelis took the reins of the MTSU program effective Aug. 1.

"MTSU clearly has one of the top aerospace programs in the nation, so maintaining its high quality is essential," said MTSU President **Sidney A. McPhee**. "Bringing on someone of Dr. Prelis' caliber and experience will help us continue to produce the highly trained pilots and other aviation professionals who are providing the workforce of the present and future."

Prelis earned his master's and bachelor's degrees in aviation from the University of North Dakota and also holds a commercial pilot certificate from the **Federal Aviation Administration**. He has a doctorate in business administration from Northcentral University in San Diego, California.

"Our Aerospace program has a lot of moving parts — both literally and figuratively — and is home to the most undergraduate majors of any department," MTSU Provost **Mark Byrnes** said. "We worked hard to hire the best leader we could, and I am very pleased that Chaminda will be joining us in that role."



What's Happening in CBAS?

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Professionally, Prelis worked in various management roles for Northwest Airlines and Delta Air Lines before joining the faculty at the University of Dubuque. He comes to a signature MTSU program that boasts 20 full-time faculty members, 100-plus flight instructors and more than 1,000 majors, placing it among the largest of the nation's collegiate aviation programs.

"I am excited by the opportunity to work with an exceptionally talented team of individuals within the Aerospace Department," Prelis said. "Moreover, I look forward to meeting the students, supporting their goals, and preparing them for future challenges."

Preelis takes over for MTSU aerospace professor and former chair **Wendy Beckman**, who is returning to teaching full time after shepherding the the program through a dynamic period of growth, from upgrades to its fleet housed at Murfreesboro Airport to additions of state-of-the-art flight simulators to renovations of instructional space.

"Wendy has been an excellent chair, leading the department through a time of tremendous growth and adroitly handling a variety of complex issues that came her way," Byrnes said.

MTSU's Aerospace program offers six concentrations: **aviation management, aerospace technology, flight dispatch, maintenance management, professional pilot, and unmanned aircraft systems operations**. A master's degree in **aeronautical science**, with concentrations in aviation education, aviation management, and aviation safety and security management is also offered.

In addition to the above concentrations, the Aerospace Department offers an **Air Traffic Control** add-on program, which allows graduates to be recommended to the FAA for air traffic controller training and hiring.

— Jimmy Hart (Jimmy.Hart@mtsu.edu)



Dr. Chaminda Prelis



Dr. Mark Byrnes

Job Outlook

Overall employment of airline and commercial pilots is projected to grow 13 percent from 2020 to 2030, faster than the average for all occupations. About **14,500 openings** for airline and commercial pilots are projected each year, on average, over the decade.

Sep 8, 2021

MTSU student enjoys 'amazing' Virgin Galactic summer internship

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Mike Harris has a brief face-to-face meeting with billionaire Virgin Galactic founder Richard Branson as he was heading to a car that would drive him to the spaceship Unity July 11. (Submitted photo)

Middle Tennessee State University aerospace professional pilot major **Mike Harris** can claim he had a near-out of this world experience during his summer break from classes.

His "vacation" was more like work, though he was honored to serve an internship with Virgin Galactic — the American spaceflight company founded by **Richard Branson**.

Harris, 19, has been a part of flight operations and personally witnessed the July launch of Branson and his space mates and was photographed with two billionaires — Branson and **Elon Musk** — at Spaceport America. The FAA-licensed spaceport is located on 18,000 acres of State Trust Land in the Jornada del Muerto desert basin 20 miles southeast of Truth or Consequences, New Mexico, and 45 miles north of Las Cruces.

Harris was there July 11-15, and watched the July 11 launch, received a private tour and flew the simulator used for the launch, climbing to 50,000 feet, the distance where spaceship Unity "detaches from the mother ship and its rocket boosters are activated, taking Unity to 260,000 feet (50 miles), which they consider space," he said.

Harris remains in the midst of a 12-week internship, much of which has been performed remotely from his home in Americus, Georgia, because of COVID-19 precautions. He will return to Spaceport Sunday, Aug. 8, for another extended visit.

"I couldn't turn down Virgin Galactic," he said. "It has been pretty amazing, especially those four days. I work with the pilots and others to help resolve any hands-on concerns," said Harris, who added the experience wasn't daunting, but that it and past experiences have made him feel very confident.

"Programs such as the Civil Air Patrol, SMASH Morehouse Academy and others have prepared me to work in teamwork environments," he added. "I feel right in my element."

What's Happening in CBAS?

Harris said for the short time he was around Branson, "it was amazing energy. Being able to see someone off for such a historic moment brought good times like no other."

He applied for the scholarship to serve the internship. "Once in the final round, they called and wanted to know if I wanted to intern," he said. "I told them, 'Of course.' After I said I was interested, we moved forward from there."

As for his future after graduating from MTSU, he is deciding between flying cargo or charter airplanes — but this space-related experience may take him down a different avenue.

Social media post

"Best internship ever," Harris, who carries a 3.3 GPA, wrote in a July 12 Facebook post. "So grateful for [Virgin Galactic!](#) Once in a lifetime opportunity to stand amongst billionaires like Elon Musk and Richard Branson to witness such a historical moment firsthand. In addition to watching my mentor be the one to pilot the ship into space. Also, it's my 19th birthday! Looking forward to topping all that I've accomplished in these past 12 months over the next 12 months."

- Randy Weiler, MTSU News & Media



Mike Harris, right, visits with pilot and mentor Michael "Sooch" Masucci in front of the Extra 300 plane at Spaceport America in the New Mexico desert. (Submitted photo)



MTSU junior Mike Harris of Americus, Ga., stands in front of Unity, the Virgin Galactic spaceship that launched 50 miles into space July 11. The aerospace professional pilot major calls his internship a once in a lifetime opportunity. He will spend one more week at Spaceport America in the New Mexico desert. (Submitted photo)

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Show-stealing 747 jet, flown by MTSU alumnus, highlight of university's 2021 EAA Airventure visit

OSHKOSH, Wisc. — It was hard to miss the plane that **MTSU Aerospace** graduate **Mike Starnes** brought to **EAA AirVenture**. That's because Starnes, 54, a captain for **United Parcel Service**, brought a brand-new **Boeing 747-8F** to the world's largest aviation celebration. It is more than 63 feet tall and more than 250 feet long.

The long-range jet, with only about 30 flight hours on it before Starnes flew it from Louisville, Kentucky, to Oshkosh, turned a lot of heads at the Wisconsin air show. It is so new that it has yet to haul any cargo for UPS.

Starnes, a 1989 graduate of MTSU's professional pilot program, hosted MTSU President **Sidney A. McPhee** and members of the MTSU Aerospace team at EAA for a tour of the jet's cockpit and massive cargo hold.

"We are so incredibly proud that one of our own, a graduate of MTSU's Aerospace program, is behind the controls of this amazing aircraft," McPhee said, sitting in Starnes' cockpit seat.

McPhee's visit with Starnes was the highlight of a busy week for MTSU at the premier aviation industry event. The president also met with the CEO of the university's primary supplier of training aircraft, as well as recruiters for regional airlines and aviation officials from The Bahamas.

The UPS 747 was the centerpiece of the Boeing Plaza at EAA, an impressive showcase representing the company's civilian and military aircraft. Starnes credited his alma mater for helping him climb to the rank of captain for UPS.

"MTSU's program is fantastic... and it is so much better than it has ever been," he said. "There are MTSU graduates flying for UPS, other airlines — and they are literally captains in the airlines."

McPhee agreed, pointing out that "so many of our alumni are at EAA AirVenture — wearing True Blue and proudly pointing out how their aviation career began at our university."



What's Happening in CBAS?

Inclement weather Wednesday afternoon in Oshkosh prompted EAA to close early, which meant MTSU's midweek alumni barbecue at its booth was canceled. But alumni continued to drop by the MTSU booth on the next days to show support and appreciation for the university's presence at EAA.

Starnes, who lives in Murfreesboro, Tennessee, but flies for UPS out of Anchorage, Alaska, is not the only MTSU alum in his family. His wife, **Valeska**, also a pilot, graduated from Aerospace in 1991 and son Phillip graduated from the program last May. Daughter Madison graduated from UT-Knoxville in 2018. "Our love for MTSU runs deep," Valeska Starnes said.

He also met with representatives from two regional airlines, Republic and Endeavor, about opportunities for MTSU Aerospace graduates, while also meeting officials with the Bahamas aviation ministry about educational partnerships.

Also at EAA, Provost **Mark Byrnes** and **Greg Van Patten**, interim dean of the **College of Basic and Applied Sciences**, met with officials with the Oshkosh Corp. on behalf of MTSU's School of Concrete and Construction Management. The corporation, which makes concrete trucks and other heavy equipment, had a presence at EAA.

MTSU wrapped up its time at EAA AirVenture on Sunday, Aug. 1.



MTSU President Sidney A. McPhee, left, chats with Mike Starnes, a captain with United Parcel Service and an aerospace alumnus, in the cockpit of a brand-new UPS 747 that Starnes flew to the EAA AirVenture 2021 air show held July 26-Aug. 1 in Oshkosh, Wisc. Middle Tennessee State University's Aerospace Department staffed a booth on the grounds of the air show. (MTSU photo by Andrew Oppmann)

— Andrew Oppmann (Andrew.Oppmann@mtsu.edu)



MTSU President Sidney A. McPhee, fourth from left, and to his right, Mike Starnes, a captain with United Parcel Service and an aerospace alumnus, pose with MTSU staff and students in front of the brand-new UPS 747 that Starnes flew to the EAA AirVenture 2021 air show held July 26-Aug. 1 in Oshkosh, Wisc. (MTSU photo by Andrew Oppmann)

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Ginny Zarras, right, human resources director for Endeavor Air, which flies as the Delta Connection, presents MTSU President Sidney A. McPhee with a token of appreciation for connecting the airline with outstanding MTSU graduates. (MTSU photo by Andrew Oppmann)



Diamond Aircraft CEO Scott McFadzean, left, shows MTSU President Sidney A. McPhee an advanced DA-50 aircraft in front of company's booth on the grounds of the EAA AirVenture 2021, which runs July 26-Aug. 1 in Oshkosh, Wisc. Diamond Aircraft is the fleet supplier for the university, which also set up booth promoting its Aerospace Department. (MTSU photo by Andrew Oppmann)



MTSU Provost Mark Byrnes, fourth from left, and Greg Van Patten, interim dean of the College of Basic and Applied Sciences, third from right, meet with officials from the Oshkosh Corp. at the EAA AirVenture air show in Oshkosh, Wisc., on behalf of MTSU's School of Concrete and Construction Management. The corporation, which makes concrete trucks and other heavy equipment, had a presence at the air show, held July 26-Aug. 1. (MTSU photo by Andrew Oppmann)



Greg Van Patten, left, interim dean of the MTSU College of Basic and Applied Sciences, meets with officials with the Oshkosh Corp. on behalf of MTSU's School of Concrete and Construction Management on the grounds of the EAA AirVenture 2021, which runs July 26-Aug. 1 in Oshkosh, Wisc. The corporation, which makes concrete trucks and other heavy equipment, had a presence at EAA. (MTSU photo by Andrew Oppmann)

MTSU, Civil Air Patrol renew partnership at EAA Airventure in Wisconsin

OSHKOSH, Wis. — Middle Tennessee State University celebrated its return to **EAA AirVenture**, the world's largest aviation celebration, Monday, July 26, by renewing its partnership for a third time with **Civil Air Patrol**, the volunteer civilian auxiliary of the **U.S. Air Force**.

MTSU President **Sidney A. McPhee** and Maj. Gen. **Mark Smith**, CAP's national commander and chief executive officer, signed the three-year extension just hours after the **Experimental Aircraft Association's** signature annual event roared back after a one-year COVID-19 hiatus.

The **69th AirVenture**, expected to draw more than 600,000 visitors over its seven-day run, also attracts premier aerospace organizations from industry, education and public service. Its tower controls the movement of about 10,000 aircraft, making it the world's busiest for the week.

"It's wonderful that MTSU and CAP are here to celebrate the return of EAA AirVenture and the renewal of our partnership," McPhee said. "Doing this at this international event underscores the importance of our work in aerospace, both as individual organizations and as partners."

The MTSU **College of Basic and Applied Sciences** and its **Department of Aerospace** launched the partnership in 2014 with a priority goal of providing cadets ages 12 to 18 in the CAP's **Tennessee Wing** with opportunities to interact with faculty and explore the Murfreesboro campus.

It was renewed again in 2017 and was set to be extended again in 2020. However, pandemic precautions by both MTSU and CAP pushed it back a year.

Smith, whose tenure as the CAP's 24th national commander concludes Aug. 26, said he was honored to extend the MTSU partnership before his term expires.

MTSU has been a valued friend, sponsor and partner in so many of Civil Air Patrol's activities and priorities, not only in Tennessee Wing but also



Middle Tennessee State University President Sidney A. McPhee, left, and Maj. Gen. Mark Smith, the Civil Air Patrol's national commander and chief executive officer, inspect one of the university's Diamond Aircraft Monday, July 26, on the grounds of the EAA AirVenture 2021 in Oshkosh, Wis. MTSU and the CAP signed a three-year extension of their partnership just hours after the Experimental Aircraft Association's signature annual event returned after a one-year COVID-19 hiatus. (U.S. Air Force Auxiliary photo by Lt. Col. Robert Bowden)



on a national level," said Smith, who in 2019 became the first CAP national commander to visit the MTSU campus.

MTSU hosted the **Tennessee Wing Cadet Encampment** in 2016, 2017 and 2018 and welcomed the 2019 encampment's leadership cadre to campus. The university lured the **CAP Cadet Engineering Technology Academy**, a national enrichment effort, from Auburn University in 2017, 2018 and 2019, and MTSU has sponsored CAP's national conference since 2016.

Smith presented McPhee with a plaque recognizing the university as the Tennessee Wing's top aerospace education partner in 2020. COVID-19 precautions prevented CAP from presenting the honor in person last year.

In related developments:

- **Daniel Nofziger**, an MTSU aerospace flight instructor, was honored earlier this year by the CAP's Murfreesboro Composite Squadron as its Aerospace Education Officer of the Year. Nofziger, who served more than 20 years in the Coast Guard, is a captain in the Civil Air Patrol.
- MTSU alumnus and CAP Col. **Barry Melton** of Cleveland, Tennessee, former commander of the auxiliary's Southeast Region, was included in the [university's 2021-22 class of distinguished alumni](#).

"This array of mutual honors demonstrates our strong ties and connections," Smith said.

- Andrew Oppmann



Maj. Gen. Mark Smith, left, Civil Air Patrol's national commander and chief executive officer, presents Middle Tennessee State University President Sidney A. McPhee with a plaque Monday, July 26, recognizing the university as the CAP Tennessee Wing's top aerospace education partner in 2020. COVID-19 precautions prevented the CAP from presenting the honor in person last year. MTSU and Civil Air Patrol renewed their partnership Monday at EAA AirVenture 2021 in Oshkosh, Wis., just hours after the Experimental Aircraft Association's signature annual event roared back after a one-year COVID-19 hiatus. (U.S. Air Force Auxiliary photo by Lt. Col. Robert Bowden)

MTSU students, flight instructors 'impressed' with Great Tennessee Air Show sneak preview

Middle Tennessee State University **Aerospace Department** students on Friday got a sneak peek of what's in store for the **Great Tennessee Air Show**, spending time on the tarmac with aviators and aircraft with the **U.S. Navy's EA-18G Growler Legacy Team**.

Friday's preview also allowed MTSU President **Sidney A. McPhee** to invite area cadets with **Civil Air Patrol**, the volunteer civilian auxiliary of the **U.S. Air Force**, to join and spend time with former and current aerospace students and the Navy pilots.

"We are proud to affiliate our world-class MTSU Aerospace program with one of the nation's premier air shows," McPhee said. "In addition to shining a spotlight on our flight school, it allows us to have opportunities like today when we can spend time with these amazing aviators."

Navy-flown EA-18G Growlers, a **Navy F-18 Super Hornet** and the **T-45 Goshawk** were just some of the jets soaring across the skies on the warm spring day. Other planes performed aerobatic loops with trails of smoke.

MTSU senior aerospace pro pilot major and flight instructor **Nick Phillips** of Memphis, Tennessee, found the practice and being well out onto the tarmac "exhilarating ... something you don't normally get to do.

"It was great to hear about the Navy pilots' experiences and compare them to my experiences, and see the different aviation routes you can take," Phillips said.

Among the CAP cadets was incoming MTSU freshman **Emerson Garfield**, 18, of Murfreesboro. She serves as cadet commander of **CAP's Murfreesboro Composite Squadron** and will attend MTSU on an **Air Force ROTC** scholarship.

Garfield, who recently reached the rank of cadet captain, said viewing the practice "was an amazing experience, to watch. I asked the pilots a lot of questions and they answered all of them."

Pilots practiced their runs for the main event — the annual two-day show — that drew thousands of spectators Saturday and Sunday, June 5-6, in a resumption of the Great Tennessee event cancelled in 2020 because of COVID-19.

For aerospace associate professor **Nate Callender**, who represented his department along with a number of flight instructors from its **Flight Operations Center** at Murfreesboro Airport, the air show experience proves "military aviation is another path for stu-



U.S. Navy Lt. Thomas Demonbreun, a Murfreesboro native with family ties to MTSU, explains various aspects of the EA-18G Growler he flies in air shows and helps train future pilots. His Navy VAQ-129 Squadron is participating in the Great Tennessee Air Show at Smyrna, Tenn., June 5-6. (MTSU photo by J. Intintoli)

What's Happening in CBAS?

dents to consider. They come in thinking 'airline,' but this would be another route to pursue."

McPhee said MTSU's partnership with the air show also affords an opportunity for the university to include another aerospace partner, Civil Air Patrol, in Friday's interaction with the Navy flight team.

"Strategic partnerships like we have with the Air Show and Civil Air Patrol are true win-win opportunities for all involved," he said.

MTSU's sponsorship of the Navy Growler

MTSU is the presenting sponsor of the **Navy Growler Legacy Team**. The team, based at NAS Whidbey Island, Washington, conducts legacy flights, along with a non-aerobatic demonstration, at air shows across the nation.

At air shows, the team's two Growlers shred the sky while demonstrating the awesome capabilities of the EA-18G before being joined in close formation with a classic Navy aircraft from the Vietnam War era, the North American T-28 Trojan, for a moving three-ship salute to the history and tradition of Naval Aviation.

Team pilot Lt. Thomas Demonbreun is a Murfreesboro native and 2008 Siegel High School graduate. His family still lives in Murfreesboro, with a sister, Anna Morgan, now an alumna, and younger brother, Judd Demonbreun, still an MTSU student, studying criminal justice.

— Randy Weiler (Randy.Weiler@mtsu.edu)



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U.S. Navy planes practice a routine on Friday, June 4, in anticipation of the Great Tennessee Air Show in Smyrna, Tenn., Saturday and Sunday, June 5-6. MTSU is a premier sponsor of the EA-18G Growler. (MTSU photo by J. Intintoli)



U.S. Navy Lt. Jeff Reider, left, a pilot of the EA-18G Growler, discusses various aspects of the plane to MTSU President Sidney A. McPhee, incoming MTSU freshman criminal justice major Emerson Garfield and two other members of the Civil Air Patrol Murfreesboro Composite Squadron TN 162 Friday, June 4, during practice for the Great Tennessee Air Show in Smyrna, Tenn. Thousands of spectators will watch the show June 5-6. (MTSU photo by J. Intintoli)



MTSU was the presenting sponsor at the 2021 Great Tennessee Air Show in Smyrna, Tenn., June 5-6. On hand for the Friday, June 4, practice and visit with U.S. Navy pilots were MTSU flight instructors Nakanya Rodrupeid, left, and Dillon Beckwith, aerospace associate professor Nate Callender and flight instructors Lauren Franks and Nick Phillips. (MTSU photo by J. Intintoli)

MTSU alumna Phillips makes history: first female named assistant distiller at Jack Daniel

Lexie Phillips has felt the influences ... from her large family, several dozen of whom have worked at Jack Daniel Distillery; from colleagues who work with her in the large Stillhouse in Lynchburg, Tennessee; and from **Middle Tennessee State University**, where she earned an **agribusiness** degree from the **School of Agriculture**.

The impacts, inspirations and encouragements have touched Phillips, who was named the first female assistant distiller by the company earlier this spring. She supports the overall quality and innovation of Jack Daniel's from "grain to glass" and serves as brand ambassador.

Jack Daniel's, the famous Tennessee whiskey, has been around since the 1860s and is considered the world's top-selling whiskey.

"I am so thankful for all the influences throughout my life that have brought me to where I am today," said Phillips (Class of 2011), who is from Estill Springs, Tennessee. "From my mom (**Mary Amacher**) to the guys at the Stillhouse, they have helped me grow into the strong woman I am.

"MTSU was one of my influences that taught me hard work and curiosity can lead you to amazing places in life."

Phillips' "hard work and curiosity" find her working alongside Master Distiller **Chris Fletcher** "to ensure quality throughout the process from start to finish and it will be my job to preserve and share this process just as the distillers have before me," she said.

She was one of 26 whiskey-makers developing a new product, Tennessee Rye, the first time in 150 years they used a different grain bill.

Phillips' quality time at MTSU

Phillips transferred from Motlow State Community College to MTSU.

Professor **Tony Johnston**, who became director of the MTSU **Fermentation Science** program when it began in 2017, "gave me more knowledge on fermentation that really piqued my interest" she said.

Johnston recalls Phillips "keeping in contact with me after graduating and starting the application process (with Jack Daniel's) in 2014. I provided a letter of recommendation. I couldn't be prouder of her."

She landed the job, working in quality control, distillery operations and lead operator. "I worked hard and never lost my curiosity; that's how I made it to where I am now," she said.

- Randy Weiler, news & media



For alumna Lexie Phillips (Class of 2011) of Estill Springs, Tenn., "MTSU was one of my influences that taught me hard work and curiosity can lead you to amazing places in life." In the spring, a promotion at Jack Daniel's in Lynchburg, Tenn., made her the first female assistant distiller in company history. (Submitted by Jack Daniel Distillery)



MTSU alumna Lexie Phillips of Estill Springs, Tenn., was promoted to assistant distiller — the first time a female has been elevated to that position with the company. She credits professor and MTSU Fermentation Science Director Tony Johnston with providing knowledge that piqued her interest in that field. (Submitted by Jack Daniel Distillery)

'MTSU On the Record' research brightens henhouses with colored chicken feed

The impact of changing the color of a chicken's feed was the topic of discussion on a recent edition of the "MTSU On the Record" radio program.

Host **Gina Logue**'s interview with **Kevin Downs**, an associate professor of **poultry science** in the **School of Agriculture**, first aired July 27 on **WMOT-FM Roots Radio 89.5** and www.wmot.org.

With former graduate student **Joseph Gulizia**, Downs conducted two trials to determine the effect of feed color on broiler performance over a 21-day period.

Their research is based on the established knowledge that chickens have well-developed vision. The animals can see all sections of the visible light spectrum as well as some ultraviolet light.



One trial included a complete starter diet with a control group of regular feed and groups of feed dyed red, green and blue. Another trial included a control group of regular feed and groups of feed dyed orange, yellow and purple.

While most of the broiler performance was not influenced by feed color, the blue and purple feed colors seemed to have a positive influence on food conversion and body weight gain more than other colors. Red appeared to be the chickens' least favorite feed color.

"In addition to just playing around with color a little bit, we also wanted to see if there was something maybe different in a more modern broiler than what we saw in previous data back in the '70s," Downs said.

The study was published in May 2021 in the academic journal "Animals".

- Gina Logue, MTSU News & Media Relations

Western championship wraps up outstanding MTSU equestrian season

A first-place finish at the 2021 YEDA Western Collegiate Celebration, hosted by the Youth Equestrian Development Association recently in Cleveland, Tennessee, completed an outstanding year for the **MTSU equestrian team**.

The team, coached by **Ariel Herrin Higgins** and undefeated during the regular season, took 12 riders to the competition. Eleven earned awards.

In the 16-team field, MTSU finished ahead of two West Texas A&M squads, fourth-place St. Mary-of-the-Woods (Indiana) College, fifth-place Berry College from Rome, Georgia, and sixth-place Adrian (Michigan) College.

MTSU usually competes in Intercollegiate Horse Shows Association regional and nationals, but IHSA canceled its events because of COVID-19 for the second consecutive year. The team followed local COVID protocols for the outdoor competition in Cleveland.

"Our success came with extreme focus and determination," Herrin Higgins said. "We had a lot of moving parts and they handled it with ease. Mental preparation has been a big part of our plan this year, as well as embracing opportunities."

"Every single person had to be on top of their game in order to prepare our 14 horses, prepare themselves and also bring their best in the arena. I am truly impressed by the efforts shown at this competition."

Herrin Higgins said MTSU "had some advantage because we were able to compete this year with a full season of competition. Many schools were not able to have a regular season, but were able to compete as travel restrictions were lifted."

MTSU won competitions last fall in events hosted by the University of Tennessee and Murray State University.

Top individuals at the Cleveland competition included:

- **Taylor Meek**, a junior from Murfreesboro, who was champion Qualified Open Reining; champion Team Open Horsemanship; reserve champion (runner-up) Qualified Open Horsemanship; reserve champion Individual Open Horsemanship and reserve champion Individual Open Reining.
- **Lindsay Gilleland**, a senior from Powder Springs, Georgia, who was champion Qualified Open Horsemanship; reserve champion Qualified Open Reining; reserve champion Team Open Reining; and third place Individual Open Horsemanship.
- **JoBeth Scarlett**, a sophomore from New Market, Tennessee, who was champion Team Level II Horsemanship; champion Individual Level II Ranch Riding; reserve champion Qualified Level I Horsemanship and third place Individual Level II Horsemanship.
- **Zee Petree**, a junior from Knoxville, Tennessee, who was champion Qualified Level II Horsemanship; fourth place Team Level II Ranch Riding; and fourth place Individual Ranch Riding.

Other successful MTSU riders included sophomore **Kiersten Carlisle** of Dallas, Georgia, who was third in Qualified Rookie Horsemanship and fifth in Team Level I Horsemanship; freshman **Jessie Kauffman** of Woodbury, Tennessee, who was reserve champion Individual Beginner Horsemanship; sophomore **Austin Aguilera** of Mt. Juliet, Tennessee, who was reserve champion Qualified Beginner Horsemanship;

Sophomore **Cory Elks** of Union City, Tennessee, who was fourth in Individual Rookie Horsemanship; freshman **Louann Braunwalder** of Lascassas, Tennessee, who was fourth in Team Rookie Horsemanship; junior **Jordan Dillenbeck** of Murfreesboro, who was fourth in Individual Level II Horsemanship; and senior **Nikki Dyer** of Memphis, Tennessee, who was reserve champion Individual Level I Horsemanship.

The 12th rider, **Shannon Kennedy**, a junior from Memphis, experienced "a great ride" in Individual Rookie Horsemanship, Herrin Higgins said.

With only two seniors graduating, the coach looks forward to the 2021-22 season.

"We have many returning riders and we are excited to meet all the new members that will join us



MTSU equestrian team members showcase some of the ribbons they earned while winning the 2021 YEDA Western Collegiate Celebration, hosted by the Youth Equestrian Development Association recently in Cleveland, Tenn. Eleven riders earned individual awards and most of the team returns for the 2021-22 season. (Submitted photo by Dawn Nieman)

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*Ariel Herrin
Higgins*

in the fall as we continue on our quest to earn a national championship," she said, adding they expect to return to competing for IHSA regional and national berths.

- Randy Weiler
(Randy.Weiler@mtsu.edu)



Junior Taylor Meek led the Blue Raider riders by winning two individual championships and three reserve champion (runner-up) finishes during the recent YEDA Western Collegiate Celebration, hosted by the Youth Equestrian Development Association recently in Cleveland, Tenn. (Submitted photo by Dawn Nieman)



MTSU sophomore rider JoBeth Scarlett of New Market, Tenn., rode her horse to two individual championships, one reserve title and a third-place finish at the YEDA Western Collegiate Celebration, hosted by the Youth Equestrian Development Association recently in Cleveland, Tenn. (Submitted photo by Dawn Nieman)

MTSU's Hoffman named 'Outstanding Educator'; Horse Science students, alumni shine at virtual symposium

Past and present **Middle Tennessee State University Horse Science** students continue to excel in their academic research.

The recent 2021 Equine Science Society Symposium, held virtually because of COVID-19 precautions, featured research presentations by MTSU master's students **Luke Brock**, **Kaylee Layton**, **Courtney Smith** and **Kailey Vande Kamp**.

Layton earned two second-place awards and Horse Science Director **Rhonda Hoffman** received the society's 2021 **Outstanding Educator Award**.

"We're really happy to report success in our master's of horse science graduate program," Hoffman said, adding the students were among dozens of graduate and 157 presenters altogether at the bi-annual meeting of scientists, equine scientists, veterinarians, feed manufacturers and other horse enthusiasts representing 18 nations.

Horse Science alumni presenting from other schools included **Delaney Rostad**, who earned her bachelor's at MTSU and is now in the master's program at the University of Tennessee-Knoxville; **Eri-**



Kailey Vande Kamp, left, of Hendersonville, Tenn., Courtney Smith of Murfreesboro, MTSU Horse Science Director Rhonda Hoffman, Kaylee Layton of Huntsville, Utah, Luke Brock of Franklin, Tenn., and MTSU graduate program Director Holly Spooner are shown with Hola, one of the horses utilized in the program. Layton earned two second-place honors and Vande Kamp, Smith and Brock presented during the virtual 2021 Equine Science Society Symposium. (MTSU photo by Randy Weiler)



Horse Science Program

MIDDLE TENNESSEE STATE UNIVERSITY

What's Happening in CBAS?

ca Macon, who earned her master's at MTSU and is in the University of Kentucky doctoral program; and **Chloe Wires**, who earned her master's at MTSU and is in the Purdue University doctoral program.

Layton, who is from Huntsville, Utah, earned accolades for second place in the **Teaching & Extension** graduate competition and second overall in the **Journal of Equine Veterinary Science Graduate Publication Award**.

"It was an honor and I'm really grateful to have received both awards," Layton said. "It was such a great opportunity to be able to present my research and the fact that it was an international symposium made it an awesome experience. It's really cool to see all the research being done worldwide to benefit the horse industry."

Layton also expressed her gratitude "for the faculty here in the MTSU Horse Science program. They were so influential and helpful through my research."

Hoffman said Layton's showing "is even more significant because master's and Ph.D. students were not separated for any of the competitions, so she competed against students with more experience."

Horse Science is one of a number of programs in the **School of Agriculture** in the **College of Basic and Applied Sciences**.

National Outstanding Educator

The Equine Science Society's Outstanding Educator honor for Hoffman — one of six major awards the organization presented — recognizes an individual who has demonstrated excellence in the area of equine education, either to students or persons in the horse industry, the organization said in its website announcement.

"I can't put into words how much this means to get that award," said Hoffman, a member of the Equine Science Society since 1993. "I've been nominated before, but never received it and so this was a really special year."

School of Agriculture Director **Jessica Carter** nominated Hoffman.

Hoffman recently teamed with **Warren Evans**, **Jessica Petersen** and **Dale Van Vleck** to co-author a revised edition of "The Horse," a textbook relating scientific principles to practical applications for experienced horse owners, students, extension agents and horse enthusiasts.



MTSU Horse Science Director Rhonda Hoffman holds the 2021 Equine Science Society Outstanding Educator Award she received recently. "I can't put into words how much this means to get that award," said Hoffman, a member of the organization since 1993. School of Agriculture Director Jessica Carter nominated her for the honor. (MTSU photo by Randy Weiler)

AGRICULTURE

Dr. Rhonda Hoffman was also awarded the CBAS Dean's Teaching Excellence Award for 2020-21

MTSU White & Chocolate Milk is now available at these locations:

- PHILLIPS BOOKSTORE (STUDENT UNION BUILDING)
- ARAMARK PODS
- DWIGHT'S MINI-MART (KUC 200)
- PHARMACY (REC CENTER)
- HATTIE JANE'S CREAMERY (ON THE SQUARE)
- CITY CAFE RESTAURANT (113 E MAIN ST)
- RUTHERFORD FARMERS COOP (985 MIDDLE TN BLVD)
- WOODBURY FARMERS COOP (400 McMINNVILLE HWY, WOODBURY)
- LASCASSAS FEED STORE (7684 BARLOW LANE, LASCASSAS)
- TWO FAT MEN CATERING (1331 W MAIN, LEBANON)



With a \$6,500 stipend, MTSU researcher, student tackle Stones River Watershed diversity using next-gen sequencing techniques

MTSU [biology](#) researcher and an [Honors College](#) student already are off and running on a mission to collect DNA from water in the expansive Stones River Watershed.

Research assistant professor **Cole Easson** and rising senior **Jacqueline Williams** not only have charted their strategy, but ventured recently — with map, collection bottles and other equipment — to Walter Hill Dam and many of the 10 locations where they will check water quality during the fall and winter.

They will map aquatic diversity using next-generation sequencing techniques relative to land use in the surface waters in the river.

The [Stones River Watershed Association](#) and a campus committee chose the Easson-Williams proposal that included a \$6,500 stipend. Outgoing MTSU [College of Basic and Applied Sciences](#) former Dean **Bud Fischer** informed them of the selection, saying he “looks forward to seeing the results from this research.”

Old Fort Parkway, Barfield Park, Nice’s Mill, Readyville Mill, Fall Creek and Stewarts Creek are among the river locations they will investigate.

“In addition to sampling the diversity in the stream with the water filtration, we want to monitor the water chemistry and Jaci’s going to map land use in the watershed and see if that correlates with diversity,” said Easson, an MTSU faculty member since 2018 who has ongoing coral reef research in the Florida Keys.

“Does the water chemistry and the land use sync up with what we see in diversity?” he added. “... We’re sampling across the watershed to get a nice view of these parameters at different spots.”

An Honors Transfer Fellow from Dyersburg State Community College, Williams, 22, of Drummonds, Tennessee, near Brighton, said “what we’re doing is really cool. I am an **organismal biology** and **ecology** student. This combines both really nicely because we are doing a biodiversity survey and it’s in the watershed, which gives us experience in the field and in the lab.”

Williams will write her Honors thesis about the project and must present the research at College of Basic and Applied Sciences’ **Scholars Day**, the Tennessee Academy of Science or another similar event.



With the Walter Hill Dam in Murfreesboro as the backdrop, research assistant professor Cole Easson, left, and rising senior Jacqueline Williams of Drummonds, Tenn., chart their strategy in the Stones River Watershed research project. They will collect DNA from 10 area locations, checking water quality during the fall and winter. (MTSU photo by Andy Heidt)

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MTSU biology professor Cole Easson, left, and senior Jacqueline Williams, check the reading on a special pump that will provide data from their Stones River Watershed project that officially began in July and ends next spring when Williams writes her Honors College thesis and presents at one or more conferences. They will map aquatic diversity using next-generation sequencing techniques relative to land use in the surface waters in the river. (MTSU photo by Andy Heidt)

Cynthia Allen, environmental specialist in MTSU [Environmental Health and Safety](#), said this is Stones River Watershed Association’s first research stipend to benefit the MTSU campus and “has pledged to contribute \$6,500 annually toward research at MTSU as funding allows from member donations.”

“The association is an all-volunteer organization, so donations go directly to local efforts which also supports the protection efforts that benefit streams and aquatic wildlife in our local stormwater jurisdictions,” Allen said.

- Randy Weiler, MTSU News & Media



Jacqueline Williams, left, holds one end of the tape and professor Cole Easson the other as they measure a portion of the Stones River recently. The Stones River Watershed Association and a campus committee chose the Easson-Williams proposal that includes a \$6,500 stipend. (MTSU photo by Andy Heidt)

MTSU Chemistry professor serves as 'catalyst' to land 2 federal research grants

Keying Ding, associate professor of chemistry, has been involved in research since her time in graduate school at the University of Rochester in Rochester, New York, in 2004.

"I have always loved doing research in chemistry," Ding said. "I was a graduate research assistant in graduate school in Rochester and a post-doc research associate at the University of Minnesota."

Upon starting her MTSU faculty position in 2013, Ding immediately began applying for grants to fund her research. She has previously earned two **National Science Foundation** grants and participated in another.

This fall, Ding successfully secured two more highly competitive federal grants for her research: one from the NSF and the other from the **American Chemical Society Petroleum Research Fund**.

For both projects, Ding's chemical research centers around sustainability through developing new earth-abundant metal catalysts — substances that increase the rate of a chemical reaction without undergoing permanent change — to better facilitate "green" or eco-friendly chemistry applications.

The NSF grant provides \$172,182 of funding and extends for three years. The ACS Petroleum Research Fund grant provides \$70,000 of funding and also lasts for three years.

The university's Chemistry Department highlights the more technical aspects of the research [here](#).

Grants help chemistry students get into research 'element'

In her past research projects, Ding has advised several undergraduate and graduate students, including Ph.D. students. She plans to do the same with her upcoming work.

"Students are essential for the success of these projects," Ding said. "Both projects will offer compelling research experience for students in inorganic chemistry, organic chemistry and catalysis."

"The broader impacts of these research and educational activities will ultimately lead to a more diverse and educated workforce in chemical science."

Katelynn Farmer, a graduate chemistry student, is one of the students on Ding's research team who will be supported by the NSF grant.

After Farmer read a synopsis of Ding's research on the Chemistry Department's faculty page eight months ago, she reached out.

"Her research in catalysis seemed like the perfect fit for me," Farmer said.

They have been working together ever since.

Compared to Farmer's undergraduate research experience at another university, she found Ding's approach refreshing.

"I was accustomed to a hands-off mentor in my undergraduate research, but Dr. Ding likes to be more involved in the early development of our projects," Farmer said. "Our time with Dr. Ding begins with a steep learning curve, and I appreciate how much I've grown as an independent researcher thanks to her care and confidence in me."

Farmer said MTSU has many opportunities for graduate and undergraduate students to get involved with professors and their research. She advised most to start looking for opportunities where she did: visiting MTSU faculty webpages and perusing research posters on the walls and windows of the Science Building.

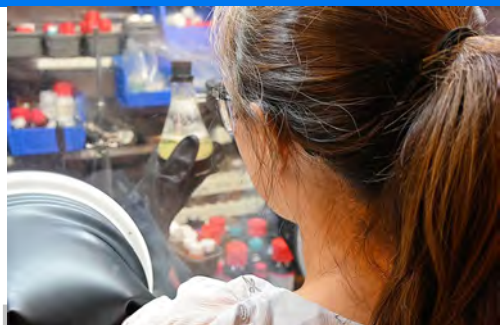
"Students can (then) usually email or speak to a professor in person about their research," she said. "Researchers love to talk about their projects ... so students generally have an easy time making appointments to discuss research opportunities."

Ding advised that faculty starting out with research pursue small projects, recruit student help and practice writing grant proposals.

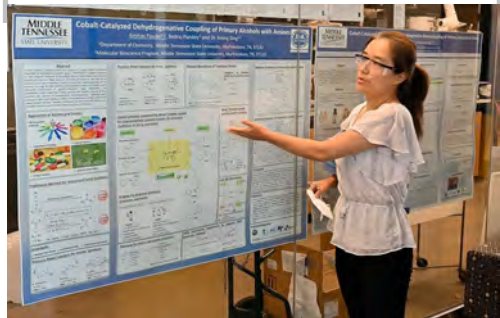
She also highlighted the importance of the university's **Office of Research and Sponsored Programs**, or ORSP, as a resource for both faculty and students interested in research.

"(The ORSP) provides several grant workshops and faculty collaboration seminars," Ding said. "I got help from them on start-up funds, awards, grants and my lab equipment purchase. Their support is essential for my success."

- Stephanie Barrette, MTSU News Media



Dr. Keying Ding, Middle Tennessee State University associate chemistry professor, experiments in MTSU's Science Building on Aug. 10, 2021, to develop new metal catalysts for her two research projects that recently won federal grants from NSF and the ACS Petroleum Research Fund. (MTSU photo by Stephanie Barrette)



During a conversation in MTSU's Science Building on Aug. 10, 2021, Dr. Keying Ding, Middle Tennessee State University associate chemistry professor, explains her research that recently landed an ACS Petroleum Research Fund grant and centers on sustainability. (MTSU photo by Stephanie Barrette)



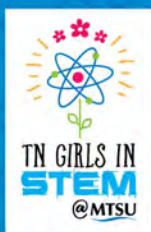
Dr. Ding, right, observes Katelynn Farmer, MTSU graduate chemistry student, as Farmer works on one of Ding's research projects that recently received a federal grant. (MTSU photo by Stephanie Barrette)



Science Olympiad is nationwide competition. Students compete in 23 events that include earth science, biology, chemistry, physics, and engineering. Science Olympiad is designed to increase a student's interest in STEM fields and provide recognition for outstanding achievement in team events. Students compete in Science Olympiad with the top teams advancing from Regional to State to National levels.

Tennessee Science Olympiad plans to host a virtual regional tournament on February 19, 2022 and an in-person state tournament on April 23, 2022. If conditions change later this year and Covid cases recede it may be possible to host in-person regional tournaments, however, at this time enough of our tournament institutions are restricting access to their campus and/or restricting student travel, that it seems unreasonable to host in-person tournaments at this time.

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TENNESSEE GIRLS in STEM

For grades 5-12

25TH ANNIVERSARY CONFERENCE

April 9, 2022 • 8 a.m.–3 p.m.

Registration deadline is March 20, 2022

Go to mtsu.edu/tgis to register now! (Volunteers needed too!)

Participants will be required to wear masks.

Sponsored by the MTSU College of Basic and Applied Sciences and the Women In STEM Center

Tennessee Girls in STEM is open to all without a preference or restriction based on sex.



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Presentations/ Publications/ Accomplishments

550 papers were submitted to the conference and 110 were accepted as full papers. The conference gives out five Best Student Paper Awards and just one Bourbakis-Ramamoorthy Best Paper Award.

David Ludwig (a former B.S. and M.S. and now COMS Ph.D. student), Lucas Remedios (a former B.S. student, now Ph.D. student at Vanderbilt), and myself had a paper accepted at the IEEE 33rd International Conference on Tools with Artificial Intelligence last month. Just an hour ago it was announced that our paper won the Bourbakis-Ramamoorthy Best Paper Award at the conference!

Ludwig, D., Remedios, L., and Phillips, J. L. (in press). A neurobiologically-inspired deep learning framework for autonomous context learning. In Proceedings of the IEEE 33rd International Conference on Tools with Artificial Intelligence (ICTAI 2021).

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Watch for more details regarding the upcoming *Hack MT 2022!*



HACK MT will take place virtually (all remotely using Zoom/Discord and other technologies) on January 28 - 30, 2022. A website will be available soon with information regarding registration and participation. Contact Dr. Joshua Phillips at Joshua.Phillips@mtsu.edu for information or go to the following link:

<https://www.eventbrite.com/e/hackmt-2022-tickets-208620608857>

MTSU celebrates concrete, construction building progress with topping-out ceremony

Workers with Hoar Construction continue making tremendous progress on the \$40.1 million **MTSU School of Concrete and Construction Management Building** on the southwest side of campus.

University and construction officials converged on the site Tuesday, Sept. 14, for a topping-out ceremony to celebrate the daily progression being made by construction workers by signing the final beam and watching it lifted by crane to the top of the structure.

The 54,000-square-foot building is expected to be completed in 15 months, in time for Fall 2022 classes. The facility features classrooms, faculty and staff offices and laboratory space for **Concrete Industry Management** — one of the most exclusive programs in the nation — and **Construction Management**, both of which provide interns and ready-to-work graduates awaiting potentially lucrative careers.

“The disruptive effects of the past year and a half have been no match for determination of the incredible team responsible for the headway made on this state-of-the-art facility for one of our most sought-after and in-demand academic programs,” university President **Sidney A. McPhee** said to those gathered at the site, referencing the worldwide COVID-19 pandemic.

Kelly Strong, **School of Concrete and Construction** director and professor, told the audience “how this is a complicated, iconic building with four different structural systems and many, many different types of concrete.

“The entire building has been designed and built to serve as a learning lab for the next generation of construction professionals. The project leadership teams have worked hard to overcome many challenges in the supply chain to keep us on budget, on schedule, with high quality and a safe work site. We appreciate their commitment to provide a showcase building for our faculty, staff and students.”



MTSU President Sidney A. McPhee, left, and MTSU Board of Trustees members J.B. Baker, left, Darrell Freeman, Steve Smith and Pete Delay sign the ceremonial final beam to be placed at the top of the School of Concrete and Construction Management building Tuesday, Sept. 14, in the Bragg Parking lot adjacent to the construction site. The 54,000-square-foot, \$40.1 million facility is scheduled to open in fall 2022. (MTSU photo by J. Intintoli)



With the building in the background, MTSU President Sidney A. McPhee welcomes the crowd, praises those involved with the construction and supporters of the new School of Concrete and Construction Management building during the topping-out ceremony Tuesday, Sept. 14, near the construction site. Work is ahead of schedule and is set to be completed in time for fall 2022 classes. (MTSU photo by J. Intintoli)

Strong offered a special thanks “to the approximately 200 skilled trade workers who have worked on this project since March, with zero lost time accidents on the job site.”

McPhee and Strong offered shout-outs to architects Orcutt Winslow, Hoar Construction and **Jamie Brewer** and **Bill Waits** from the MTSU **Campus Planning** staff.

The president also recognized the **Concrete Industry Management National Steering Committee**, **CIM Patrons**, generous donors, alumni and many regional employers “who have all invested in our mission of educating students in world-class academics and best practices in concrete and construction,” he said.

About 30 CIM Patrons, a local, grassroots advisory group giving time, talent and money, and dozens of others provided funding for the building.

“These organizations, individuals and many others have held a clear vision for what our students and faculty need to be best in class in this field,” McPhee added. “As a result of this strong support, this university boasts a compelling story of preparing students to fulfill workforce needs, as well as a keen ability to project and plan for future trends.”

Chris Potter, Hoar Construction project executive, called it “a very unique building that’s required a lot of coordination between us, the

university design team and trade contractors. It's going to be a really great learning facility for this program moving forward."

Potter, who said MTSU Construction Management student **Michael Urban** interned during the summer, said "safety is the number one priority. Being on a college campus, student safety is always a big concern, inside the fence and out."

The new building is among the \$1.3 billion in capital construction projects at MTSU in the past 20 years.

Strong provided a history regarding topping-out ceremonies, which are "a construction industry tradition where we celebrate the placement of the final beam on a building, dating back to ancient Scandanavia," he said.

Combined, there are 325 majors and more than 1,500 graduates in both programs.

Randy Weiler, MTSU News & Media



MTSU students sign the ceremonial final beam to be placed at the top of the School of Concrete and Construction Management building Tuesday, Sept. 14, in the Bragg Parking lot adjacent to the construction site. The 54,000-square-foot building is expected to be completed in 15 months, in time for Fall 2022 classes. The facility features classrooms, faculty and staff offices and laboratory space for Concrete Industry Management and Construction Management, both of which provide interns and ready-to-work graduates awaiting potentially lucrative careers. (MTSU photo by J. Intintoli)

'MTSU on the Record' flies over construction sites to check stormwater runoff

The use of **drones** to inspect construction sites for stormwater runoff prevention practices was the subject on the "MTSU On the Record" radio program.

Host **Gina Logue's** interview with **Blake Whitman**, an assistant professor in the **School of Concrete and Construction Management**, aired **Tuesday, July 20**, and **on Sunday, July 25**, on **WMOT-FM Roots Radio 89.5**.

Whitman is the co-author of a study in which 18 unmanned aerial systems flights were conducted between March and October 2019 by remote pilots certified by the **Federal Aviation Administration**. Each flight reached an altitude of about 200 feet, and the flights captured more than 700 images of a site where construction was in progress.

While the drones were not intended as replacements for human on-site, ground-level inspections, Whitman and his colleagues found them to be tools for improving the inspections through the collection of more specific and accurate data.

"It's been used in the past mainly to count cars at intersections," Whitman said. "We took this particular algorithm and said, 'Let's apply it to pictures that we take of construction sites.' We make these giant mosaics. Essentially, we take a lot of little pictures, tie them all together and make this giant picture."

The study was published in April 2021 in the academic journal "Sensors".

- Gina Logue



MTSU, industry celebrate 25 years of concrete success — and Brown leaves with awards

MURFREESBORO, Tenn. — Heather Brown, the longtime professor and former director of the of the MTSU School of Concrete and Construction Management, was recognized by her peers and industry leaders at a special event Tuesday, Oct. 26, at the Embassy Suites Hotel Nashville SE Murfreesboro.

Brown, who was the face of the MTSU program for 20 years before leaving this year to become vice president of quality control and quality assurance with Indianapolis, Indiana-based Irving Materials Inc., received the Champion Award from the Concrete Industry Management National Steering Committee during the special 25th Anniversary of the organization.

The former MTSU CIM leader, who is a member of the Tennessee Concrete Association Lifetime Hall of Fame, also received an award from the MTSU CIM Patrons, a group of concrete professionals serving the university program and students through financial, marketing and mentoring assistance in a nonprofit capacity.

MTSU hosted the anniversary celebration, bringing together more than 100 industry leaders from around the country, guests and the other CIM universities — Texas State, New Jersey Institute of Technology, California State University-Chico and the newest member, South Dakota State University, which joined in September.

In pre-recorded video remarks, MTSU President Sidney A. McPhee, who also attended the special occasion, called the CIM program “an incredible partnership between the university and the industry, and as one of the flagship institutions that started this 25 years ago, we are pleased to see the incredible results and the production of some outstanding employees for the industry.”

“On behalf of all of us at MTSU, I want to thank all of our partners for the great support you all have given us over the years. We are considered a top program because of your generosity and look forward to many, many more years of associations and partnerships with the industry,” added McPhee, who acknowledged the faculty, staff, partners, CIM Patrons and National Steering Committee under Gene Martineu’s leadership, and later personally welcomed guests.

Kelly Strong, who became the MTSU Concrete and Construction Management director in August 2020, praised the national organization.

“The success of the faculty, staff and students in the Concrete Industry Management undergraduate and graduate programs at MTSU would not have been possible without the consistent support of the Concrete Industry Management National Steering Committee and their patrons over the last 20 years.

“Their support has included hiring our students for full-time and internship positions, funding research programs, generous student scholarships, travel and industry networking events for students, faculty and staff, and most recently generous donations that allowed us to break ground on the iconic new School of Concrete and Construction Building set to open in Fall 2022.”

One of the recognized attendees was alumnus Chris Davenport (Class of 2000) of Murfreesboro — the very first CIM graduate and owner of Southern Concrete Machinery.



Former MTSU professor and School of Concrete and Construction Management Director Heather Brown holds the Concrete Industry Management National Steering Committee Champion Award she received Tuesday, Oct. 26, during the 25th Anniversary for CIM. Brown, who joined IMI as a vice president of quality control and quality assurance, received other awards and praise for her outstanding career at MTSU. She remains an adjunct faculty in the CIM Executive MBA program. (MTSU photo by Andy Heidt)



More than 100 people from around the country attended the 25th Anniversary for Concrete Industry Management, held Tuesday, Oct. 26, at Embassy Suites Hotel Nashville SE Murfreesboro. MTSU was the first university to join CIM in 1996 and continues to produce graduates for the industry. (MTSU photo by Andy Heidt)

History of CIM at MTSU

In 1995, concrete industry leaders “recognized a need for a program to develop skills specifically suited for the concrete and construction industry,” said Jon Huddleston, clinical associate professor charged with guiding the program.

Those leaders included Ward Poston, Bob Elliott and the late Jim Speakman and Woody Crawley, who had the backing of then-MTSU College of Basic and Applied Sciences Dean Earl Keese. Austin Chaney became the first MTSU CIM chair. A scholarship is named for Keese.

MTSU began its program with two students in 1996 — and the popularity spread to other schools nationwide during the next decade.

The National Steering Committee held its first CIM auction in 2006 at the prestigious World of Concrete in Las Vegas, Nevada, an event McPhee later attended.

MTSU’s program expanded through an Executive MBA degree in 2012, with the first graduates in 2014. In 2020, there were nearly 475 MTSU students pursuing CIM degrees.

MTSU broke ground this year on a \$40.1 million, 54,000-square-foot building with a scheduled opening set for August 2022. It features classrooms, faculty and staff offices and laboratory space.

Impact of CIM

More than 1,300 students have graduated from the MTSU concrete program.

CIM Patrons and supporting companies have donated more than \$5 million to MTSU’s program since 1996, said Huddleston. Golf tournaments, trap shoots and other grassroots efforts have helped raise funds

million to MTSU’s program since 1996, said Huddleston. Golf tournaments, trap shoots and other grassroots efforts have helped raise funds

The CIM National Steering Committee

This committee is a national-level, broad-based industry coalition, dedicated to a collaborative process in partnership with CIM institutions and local industry patrons groups. Its mission is to develop, support promote and sustain a network of higher learning educational institutions with programs producing graduates with degrees in CIM.

Organization Executive Director Gene Martineu of Jacksonville, Florida, and Chairman Mike Schneider, vice president/chief people officer with Baker Concrete Construction Inc. in Hamilton, Ohio, were among the leadership at the celebration. Schneider served as master of ceremonies. Martineu founded U.S. Concrete, retiring in 2007.

Awards

More than 25 awards were presented — 16 by the CIM National Steering Committee and 10 by the MTSU CIM Patrons. McPhee received one of the awards and shared how Posten made of point of stopping by to see him on the then-new president's first day on the job in 2001.

- Randy Weiler, MTSU News & Media



Southern Concrete Machinery owner Chris Davenport of Murfreesboro became the first Concrete Industry Management program graduate in 2000. He told the audience attending CIM's 25th Anniversary about his success story. The event was held Tuesday, Oct. 26, at Embassy Suites Hotel Nashville SE Murfreesboro. (MTSU photo by Andy Heidt)



Rendering of the School of Concrete and Construction Building, scheduled to be completed by August 2022



MTSU officials celebrated the groundbreaking ceremony for the 54,000-square-foot, \$40.1 million School of Concrete and Construction Management Building on the southeast side of campus in early April. Ceremonial shoveling of dirt participants included, from left, Pete DeLay, trustee; Tom Boyd, trustee; J.B. Baker, trustee; Mary Martin, faculty trustee; Heather Brown, former professor and director of the School of Concrete Industry Management; MTSU President Sidney A. McPhee; Stephen Smith, Board of Trustees chairman; Darrell Freeman, trustee vice chairman; Kelly Strong, director, MTSU School of Concrete and Construction Management; Daniel Bugee, CIM (Concrete Industry Management) Patrons president; Pam Wright, trustee; Delanie McDonald, student trustee; and Christine Karbowski Vanek, trustee. The building is scheduled to open in August 2022. (MTSU file photo by J. Intintoli)

Strong presents to Institute

Dr. Kelly Strong, Professor and Director of the School of Concrete and Construction Management in the College of Basic and Applied Sciences at Middle Tennessee State University presented the results of his research on Improving the Performance of Emergency Escape Ramps Along the Interstate 70 Mountain Corridor in Colorado to the **Institute for Transportation Engineers Student Chapter at the University of Nevada Las Vegas**. Dr. Strong was invited to UNLV by Dr. Shashi Nambisan, Director of the Transportation Research Center and Professor of Civil Engineering at UNLV.

- Kelly Strong, CCM Chair



**MIDDLE TENNESSEE
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School of Concrete and Construction Management



Engineering Technology

MTSU on WGNS: New engineering technology chair

Dr. **Ken Currie**, professor and new chair of the Department of Engineering Technology, who discussed his new role and plans for the department. Currie assumed his new role Aug. 1. Prior to that, he was the chair of the Industrial & Management Systems Engineering Department at West Virginia University between 2014-21 and before that was director of the Center for Manufacturing Research at Tennessee Tech.

MTSU has a new Advanced Engineering & Technology Building in the works, so Currie also hopes to build a collaboration with local industries and the community at large to open up an Innovation Maker Space. This space will help local innovators and K-12 students opportunities to make minimally viable prototypes to spur economic development.



Dr. Ken Currie, chair of Engineering Technology Department, prepares to go on air for the Monday, September 20, WGNS "Action Line" program with host Scott Walker (MTSU photo by Jimmy Hart)

MTSU Undergrads contribute to published research as part of Geoscience of Caves course.

MTSU geosciences professor **Mark Abolins** recalls that moving from his native California to Tennessee centered around caves.

"It makes the most sense if I came to Tennessee to involve students in cave studies," said Abolins, an instructor of the Geoscience of Caves and Field Methods in Geology courses. "There are more caves in Tennessee than in any other American state!"

And MTSU specifically is serendipitously located in cave-rich territory. Rutherford County is home to 129 known caves, including the most well-known and impressive system: Snail Shell Cave in Rockvale, Tennessee, 14 miles from the MTSU campus. It is also at the heart of a preserve administered by the nonprofit Southeastern Cave Conservancy.

"This fall I'll take students to Mammoth Cave (in Kentucky) as part of MT Engage Week, and I hope to take students to a Swiss cave next year as part of an MTSU Education Abroad Experience," he said.

The Geoscience of Caves course also gave undergraduate students access to another important university experience: research.

Students helped with data entry on a project that digitally assessed and mapped the geologic folds — rock structures made by flat rock deformed by stress and pressure — at Snail Shell Cave. National Science Foundation and Faculty Research and Creative Activity Committee grants funded the project.

In spring 2021, the "International Journal of Speleology", published the research, a first for MTSU. Speleology is the scientific study or exploration of caves. Albert Ogden, emeritus geosciences professor, contributed to the research and co-authored the paper.

New opportunities for students

Michelle Moore, a senior geoscience major, had never worked on a research project before her experience in the geosciences course.

"I had no idea the course would involve research," Moore said. "When he (Abolins) sent the email about it during the semester, I was pleasantly surprised."

A Hohenwald, Tennessee, native, Moore did not enroll in the course with a particular interest in caves, either. She took the class "because I needed an elective, and I wanted something completely online, not remote, during the pandemic. Geoscience of Caves seemed interesting."

Now, Moore's interest in both caves and research has been piqued. "Geosciences of Caves (has) definitely made me want to pursue caves in my future," she said. "(And) I absolutely want to participate in more research. Working on different research projects would just make me feel like all the knowledge that I'm learning throughout the years at MTSU would be put to use."

The online course is offered to sophomores, juniors and seniors and will be available again in spring 2022.

Moore explained that Abolins assigned each student with a different section of a cave field survey notebook (journal) from the 1970s and 1980s to work with.

"We used information on our (journal) pages to help transcribe numbers, directions and sidenotes," she said. "After that, we used a Google Doc to plug in our information to help map out the directions of the caves we were assigned. Once all information was approved, it allowed a virtual map of the cave system to be created."

Since students used and entered data collected by hand, Abolins explained that they learned about the challenges of illegible handwritten entries, the importance of quality assurance and control, the nature of survey data and built basic computer literacy.



Mark Abolins, Middle Tennessee State University geosciences professor, talks about Snail Shell Cave while hiking inside the cave system in Rockvale, Tenn., on July 23, 2021. (MTSU photo by Andy Heidt)



Collaborative research by Middle Tennessee State University faculty and students on the Snail Shell Cave system in Rockvale, Tenn., is now public after it was published in the "International Journal of Speleology" in spring 2021. (MTSU photo by Andy Heidt)

What's Happening in CBAS?

Moore added, "I definitely think that I have a better understanding of different aspects of these types of projects, especially since it was a group effort and not a solo project. Being able to work with a group and communicate properly are always good skills to keep practicing."

She highly recommends the course to other students.

"I still talk about it even if people don't ask me my opinion. Being exposed to the different areas in geoscience is what college is all about," she said.

To learn more about undergraduate research opportunities, visit the website and follow the Undergraduate Research Center on Facebook.

— Stephanie Barrette (Stephanie.Barrette@mtsu.edu)



Middle Tennessee State University students from the Field Methods in Geology course visited Snail Shell Cave in Rockvale, Tenn., on Feb. 23, 2020. Standing from left are Jason Sipes, Patrick Owen, Jacob Barber, Raymond Williams, Brandon Watts, Morgan Kaloshi, Rosalie Gunger, Robbie Hillis and Kennedy Wallace. (Photo courtesy of Mark Abolins)



Mark Abolins, Middle Tennessee State University geosciences professor, and Michelle Moore, MTSU undergraduate geosciences student, stand near the sinkhole above Snail Shell Cave in Rockvale, Tenn., on July 23, 2021.



Mark Abolins, Middle Tennessee State University geosciences professor, left, and Mark Olivera, MTSU undergraduate student, right, conducted research inside of Snail Shell Cave in Rockvale, Tenn., in July 2018. (Photo courtesy of Josh Upham)

GEOSCIENCES

MTSU on WGNS

Dr. Mark Abolins, geosciences professor, who discussed, on WGNS with Bart Walker how he worked with MTSU undergraduates to contribute to published research as part of his Geoscience of Caves course. Abolins is an instructor of the Geoscience of Caves and Field Methods in Geology courses.

Students helped with data entry on a project that digitally assessed and mapped the geologic folds — rock structures made by flat rock deformed by stress and pressure — at Snail Shell Cave. National Science Foundation and Faculty Research and Creative Activity Committee grants funded the project.

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(See article on page 21)

- Jimmy Hart



Oaklands Mansion and MTSU search for evidence of the enslaved in Murfreesboro

Follow the link to a recent DNJ article written by Nancy DeGennaro

www.dnj.com/story/news/2021/10/25/mtsu-radar-search-for-enslaved-murfreesboro-evidence/8523700002/

MTSU Hosted 2021 BGS: Geomorphology in the Anthropocene

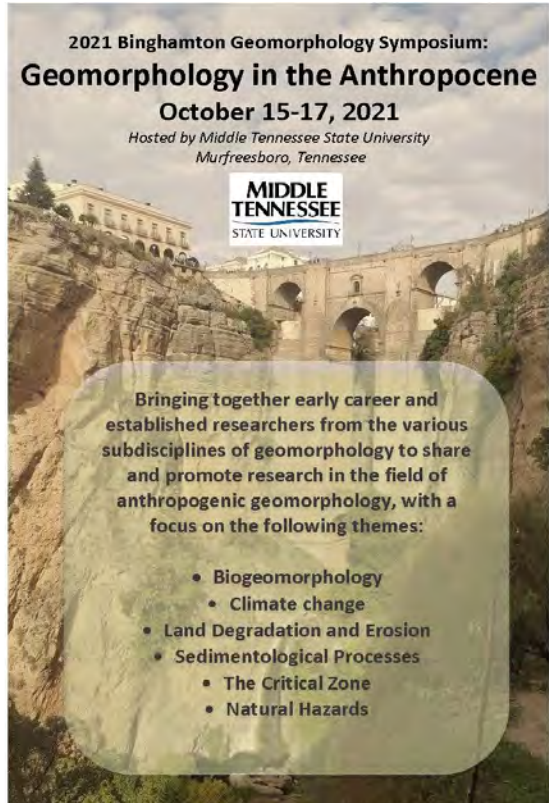
This year's BGS brought together early career and established researchers from subdisciplines of geomorphology to share and promote further research in the field of anthropogenic geomorphology. This year's BGS was also different from previous years. Given the current state of the world, and in order to ensure the health and safety of all attendees, the BGS planning committee implemented in-person COVID-19 safety precautions. Additionally, we were aware that some might have been travel restricted or otherwise unable to attend this year's BGS. Therefore, we offered a virtual asynchronous poster session and broadcasting plenary talks for our virtual attendees.

Six main themes*:

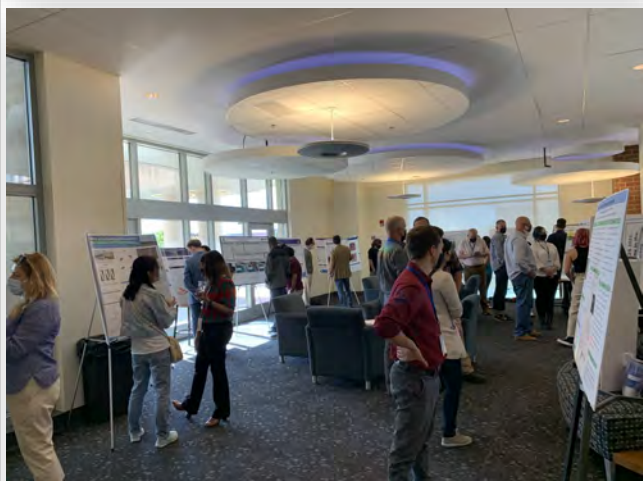
- Biogeomorphology in the Anthropocene
- Climate Change in the Anthropocene
- Land degradation and erosion in the Anthropocene
- Sedimentological Processes in the Anthropocene
- The Critical Zone in the Anthropocene
- Natural Hazards in the Anthropocene

*Poster presentations covering any aspect of geomorphology were welcome.

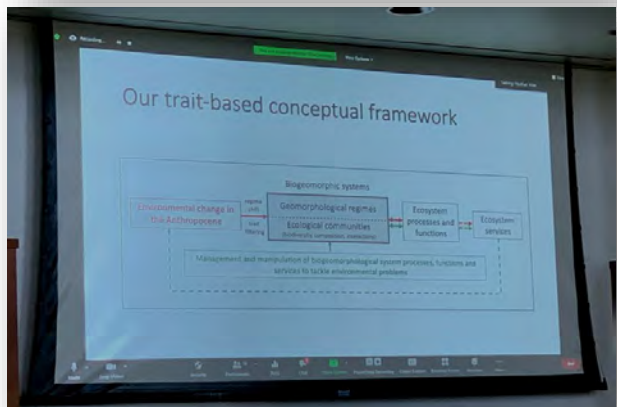
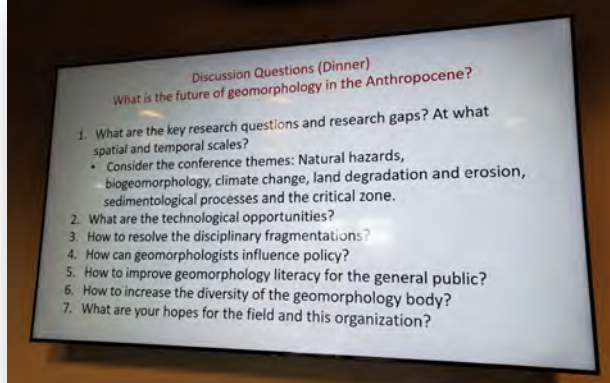
Each theme had an introductory perspective talk and provided a perspective of how the BGS has advanced the research frontier, followed by several presentations that focused on the present and future state of research related to the BGS themes.



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Geomorphology Symposium, continued



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Study Abroad Opportunity

MTSU Signature Program: Geoscience of Switzerland and Alpine Italy

Spend two weeks in Switzerland and Italy and earn credit for an MTSU geosciences course!

Learn about:

Natural Science. Switzerland is a miniature of the Earth System. Notable features include a former convergent tectonic plate boundary, glaciers, caves, giant landslides, oceanic rocks, major fossil sites, and the headwaters of the Rhine River. There are pronounced topographic controls on temperature, precipitation, and wind. Students can experience all parts of a mountain range.

Sustainability. Zurich, Switzerland is also known for sustainability. Students will spend time in Zurich while visiting sites in that city and in Lucerne. In Zurich, 82% of energy comes from renewable sources and 43% of waste is recycled. While staying in Zurich, students will almost exclusively travel by public transportation.

Culture. Switzerland is a crossroads for German, French, and Italian culture, and home to the unique Romansh people. This program is taught in English but would be an excellent experience for students who are interested in practicing German, French, or Italian language at the same time.

Course. This program is excellent for students studying Geology, Environmental Science, Physical Geography, and Earth Science.

All students are encouraged to apply. There are two ways for students outside Geosciences to obtain credit toward their degrees:

1. Obtain permission from their major or minor advisor/mentor to substitute Geol 3401 for an elective or required course in their program.
2. Use Geol 3401 to fulfill 4 hours of the General Education Science Requirement by obtaining approval from the Geosciences Chair to substitute Geol 3401 for Geol 1030/1031 Introduction to Earth Science Lecture/Lab.

Site tours include:

- ETH focusTerra
- University of Zurich Paleontological Museum
- Lucerne Gletschergarten (*Journey to the center of time with this glacier garden experience!*)
- Holloch Cave
- Spend a day hiking in the Swiss Alps
- Explore the Swiss National Museum
- Sample traditional cuisine and visit garden restaurants
- Explore locally-sourced foods at markets and restaurants to learn more about sustainability, vegetarianism, veganism, nose-to-tail dining, and more
- Hiking and visit to Matterhorn Glacier Paradise
- Visit open spaces in Zurich like Platzspitz Garden and the Zurichhorn Park
- Learn about Swiss fossils and Swiss culture and history
- Free time to explore in Switzerland
- A free day in Milan, Italy with recommendations of sites to see
- Extensive travel on public transportation

Program Dates - May 16 - 30, 2022



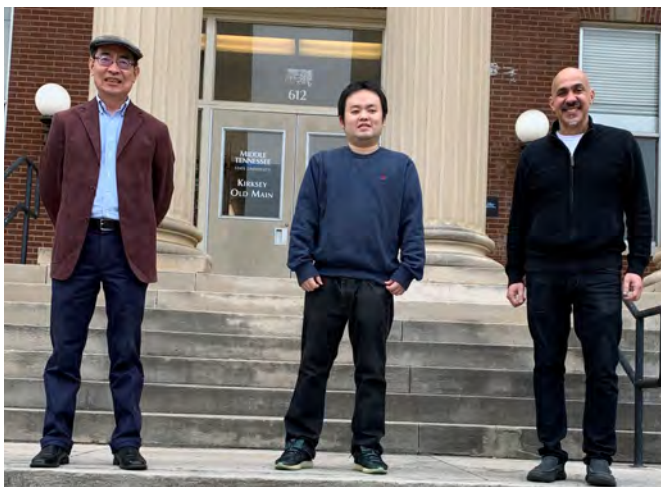
NEWS FROM ACTUARIAL SCIENCES

contributed by Dr. Don Hong

1. Following the good news that MTSU Actuarial Science Program received [the 2020 CAS University Award](#), recognizing the innovative and exemplary ways it is preparing students for a career in the property and casualty insurance industry, the program also received a research grant of \$15,000 for a project entitled "NLP and other AI Techniques for Applications in Actuarial Science."
2. Ningbo University (NBU) and Guangxi University (GXU) are two partner schools in China that MTSU receives transfer students regularly each year. In F2021, 11 students from NBU enrolled MTSU on campus for BS-Actuarial Science studies and 7 students from GXU joined MTSU in the "3+1+1" program to study actuarial science. In a group of 4 students who transferred from GXU in 2019 and graduated in August 2021, two of them have passed two or more actuarial exams before graduation with an MSPS degree. Among the 19 students who transferred from NBU in 2019 and graduated with a BS degree in Actuarial Science in December of 2020 or May 2021, 10 students passed two or more actuarial exams before graduation. 17 of them will continue MS studies at graduate schools including Boston, Columbia, Georgetown, Johns Hopkins, Ohio State, Rice, UCSD, U Conn, UIUC, Waterloo, and MTSU. We are also pleased to know that 11 new applications have been received from NBU for S2022 admission.
3. Congratulations to Alex Dalrymple (MSPS, May 2021) who just joined Aetna in Nashville as an Actuarial Analyst starting September 2021. Alex served as a Co-President of the Actuarial Math Student Association during his study in the MSPS program at MTSU.
4. Congratulations to Dr. Lu Xiong who achieved ASA designation in June 2021, a professional certificate as an Associate of the Society of Actuaries.
5. Congratulations to Drs. Vajira Manathunga and Lu Xiong who received the Open Educational Resources (OER) grant for developing OER in Actuarial Science at MTSU.
6. Dr. Vajira Manathunga has posted a new article on Data Science in Actuarial Science recently: <https://www.mtsu.edu/datascience/blog/post/47/the-interplay-between-data-sciences-and-actuarial-sciences>
7. Dr. Don Hong and colleagues from Temple University, York University in Canada, and Ningbo University in China are editing a special issue on Data-Driven Modeling and Models for Predictive Analytics for the journal of "Frontiers in Applied Mathematics and Statistics". Here is the link for more information: <https://www.frontiersin.org/research-topics/28207/on-data-driven-modeling-and-models-for-predictive-analytics>

News from the 2021 Casualty Actuarial Society (CAS) Annual Meeting (Nov 7-10, 2021):

Two MTSU graduates received diploma/certificate as
CAS new associate member in 2020: Andrew J Kiel, (BS in Mathematics 2005, MTSU)
CAS new associate member in 2021: Donaldson M Peay, (MSPS in Actuarial Science 2017, MTSU)



Left to right: Don Hong, Shuzhe XU, and Sal Barbosa. COMS Ph.D. Student, Mr. Shuzhe Xu successfully passed his dissertation defense on November 1, 2021. His dissertation entitled "APPLICATIONS OF MODERN NLP TECHNIQUES FOR PREDICTIVE MODELING IN ACTUARIAL SCIENCE" were co-supervised by Dr. Don Hong (MATH) and Dr. Sal Barbosa (CS). (submitted photo)

Publications

Suk Seo—

- "Fault-tolerant detectors for distinguishing sets in cubic graphs," Discrete Applied Mathematics Volume 293 (2021) pp. 25-33. (It is funded by the MTSU NIA grant.) – single author
- "Optimal Error-Detecting Open-Locating-Dominating Set on the Infinite Triangular Grid," Discussiones Mathematicae Graph Theory. (2021) – coauthored with a student



Mathematical Sciences

MTSU cadets receive Army commissions as second lieutenants

U.S. Army Lt. Col. **Carrick McCarthy** recently administered the Army Oath to five graduating **MTSU senior cadets**, who were commissioned as second lieutenants and soon begin new careers in various branches of the Army and National Guard.

"So, as you leave this program and this campus, please remember my final words," said McCarthy, chair of the [Military Science Department](#). "We trust you. We trust you to win our nation's wars, to be leaders of character and competence and consequence. We trust you to leave our profession better than you found it."

McCarthy spoke during the outdoor ceremony at the MTSU Veterans Memorial outside the Tom H. Jackson Building. The commissioning ceremony is a tradition for the ROTC program, which has seen the student cadets prepare for service to their country.

Those commissioned Tuesday, Aug. 17, as second lieutenants included:

- **Tanner Campbell** of Smyrna, Tennessee. He earned a bachelor's degree in exercise science and will be reserve duty with the Tennessee Army National Guard's armor branch.
- **Daniel Diaz-McFarland** of Lynchburg, Tennessee. He earned a bachelor's in business administration (commerce) and will be active duty with the engineer branch.
- **Kylee Harrison** of Rockvale, Tennessee. She earned a bachelor's in fine arts (graphic design) and will be reserve duty with the military police branch of the Tennessee Army National Guard.
- **Nathan Jones** of Acworth, Georgia. He earned a bachelor's in aerospace (professional pilot) and will be reserve duty with the military police branch of the Tennessee Army National Guard.
- **James Wright** of Old Fort, Tennessee. He earned a bachelor's in aerospace and will be reserve duty with the U.S. Army Reserves.

In addition to the oath of office, the ceremonies included a welcome from McCarthy, invocation, national anthem, pinning of rank by parents, first salute and remarks from McCarthy.

- Randy Weiler,
MTSU News and Media

U.S. Army second lieutenant bars that later would be pinned on newly commissioned officers by family members sit on a table inside the Tom H. Jackson Building. MTSU's military science department recently held a its summer commissioning ceremony at the MTSU Veterans Memorial. (MTSU photo by Cat Curtis Murphy)



U.S. Army Lt. Col. Carrick McCarthy, far left, administers the Army oath as these former cadets were commissioned as second lieutenants during a recent outdoor ceremony at the Veterans Memorial outside the Tom H. Jackson Building on campus. They include James Wright, left, of Old Fort, Tenn., Daniel Diaz-McFarland of Lynchburg, Tenn., Kylee Harrison of Rockvale, Tenn., Nathan Jones of Acworth, Ga., Fabrice Uwimana and Tanner Campbell of Smyrna, Tenn. They graduated Aug. 7 from MTSU. (MTSU photo by Cat Curtis Murphy)



Joined by family and friends, MTSU ROTC cadets stand at attention for the playing of the national anthem during the recent commissioning ceremony at the Veterans Memorial outside the Tom H. Jackson Building on campus. The cadets were commissioned as U.S. Army second lieutenants, and graduated Aug. 7 from the university. (MTSU photo by Cat Curtis Murphy)



ROTC Cadets presented full scholarships



ARMY ROTC

Two incoming MTSU freshmen and new ROTC cadets — Dillion Fancher and Ethan Hawks — are presented full Army Reserve Minuteman Scholarships during the Freedom Friday concert on Friday, Aug. 6, 2021, at the Big Machine Music City Grand Prix in Nashville, Tenn. The scholarships allow the students to attend MTSU and, upon graduation, be commissioned as second lieutenants in the Army Reserve. At far left is Army Reserve Ambassador Andrew Oppmann, an MTSU vice president who nominated the two cadets, and at far right is Army Lt. Col. Carrick McCarthy, MTSU's professor of military science. (MTSU photo by James Cessna)

Also Friday, two incoming freshmen and new cadets — **Dillion Fancher** and **Ethan Hawks** — were awarded full **Army Reserve Minuteman Scholarships** to attend MTSU and, upon graduation, be commissioned as second lieutenants in the Army Reserve.

Joining McPhee and Huber in presenting the scholarships was Army Lt. Col. **Carrick McCarthy**, MTSU's professor of military science, and Army Reserve Ambassador **Andrew Oppmann**, an MTSU vice president, who nominated Fancher and Hawks for the Minuteman Scholarships.

Hawks, 18, of Mt. Juliet, Tennessee, is a May 2021 graduate of Smyrna High School. He will be entering MTSU as a freshman this fall and plans to study criminal justice administration.

"A military officer is a lifelong dream, plus being in college," Hawks said. "This (scholarship opportunity) is setting my dreams up almost perfectly. ... The day I learned I received it was a very, very good day. My grandfather (Marvin Mitchell of Greensboro, North Carolina) told me stories about being in the Navy. It made me want to follow in his footsteps. But instead of the Navy, I'm going into the Army."

Fancher, 19, of Jackson, Tennessee, is a May 2020 graduate of Madison Academic Magnet School. He will be entering MTSU this fall to study horse science. He has already enlisted in the Army Reserve and is a member of the 449th Military Police Company out of Nashville, where he is a medic, but eventually wants to pursue being a chaplain or assistant chaplain.

"This has definitely been very gratifying," Fancher said. "It's a nice feeling for all of the hard work. This is a great opportunity. I'm excited to work within the (ROTC) program and get involved with MTSU. ... This has kind of been a long process, but it has always been the goal, coming back out of the Army (and starting college)."



— Andrew Oppmann (Andrew.Oppmann@mtsu.edu)
— Randy Weiler contributing (Randy.Weiler@mtsu.edu)

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MTSU cadets remember the fallen with 9/11 student driven project

Many of them weren't even born; others were too small to understand the magnitude of what happened in the United States on Sept. 11, 2001.

In the solitude of a chilly, early Friday morning, dozens of **MTSU ROTC** cadets — joined by student veterans, **Student Government Association** representatives and others — spent two hours placing nearly 3,000 small U.S. flags near the **Veterans Memorial**, with cadets also running steps in **Floyd Stadium** to remember first responders who died and reading 2,977 victims' names, commemorating the 20th anniversary of 9/11.



Dr. Hilary Miller



Lt. Col. Carrick McCarthy

The nation will pause at various times on Saturday, Sept. 11, and much of the entire weekend to reflect on the lives lost and heroism displayed during a series of four coordinated terrorist suicide attacks by the extremist group al-Qaida on U.S. landmarks 20 years ago.

Charlie and Hazel Daniels Veterans and Military Family Center Director **Hilary Miller** conceived the idea for the flags, reading of names and more. U.S. Army Lt. Col. **Carrick McCarthy**, the head of the **Military Science Department**, chose Army veteran and senior cadet Michael Maynard to work with Miller to carry out the plan and meet the objective.

"When Dr. Miller told me her idea, I thought it would be important for our cadets' development into Army officers that they be a part of this temporary memorial," McCarthy said.

"As we get further and further away from the events of that day, it is harder to appropriately convey the impact to our younger generation, those who have no memory of how the world changed," he added.

A cadet and veteran's perspective

Maynard, 25, who lives in Pleasant View, Tennessee, with his young

What's Happening in CBAS?

family (wife Taylor and 9-month-old son Oliver), was 5 when 9/11 occurred. "The only part I remember was sitting in our living room seeing the two towers and seeing the smoke," he said.

Working with Miller, McCarthy, Sgt. 1st Class **James Plack**, Maj. **Benjamin Sweeney** and his fellow cadets, Maynard said what happened Friday "meant a lot. Tradition is very important in the United States Army. Remembering the fallen is a priority.

"We were teaching those (younger) cadets the experience of a tragedy and to never forget those who paid the ultimate price. On the stair climb, we were constantly asking each other, 'Did you give your all because others did?' ... This was a fuel to restart a fire for the cadets — an event to keep you motivated through hard times in the military."

A business commerce major minoring in ROTC and aiming to become an Army officer, Maynard said cadets "can make it a better memorial next year. It can be more of an invite for students and more of a community event. This should symbolize what has happened and the fact that through tragedy or adversity, we can persevere together as a whole."

A lieutenant colonel's perspective

McCarthy and his faculty "have a very talented group of cadets that make up our cadet leadership," he said. When we briefed them the intent for this morning's activities, they immediately ran with the concept and did all of the detailed planning necessary to make the event a success," he added. "Always seeking a challenge, they even proposed the idea to run the steps of Floyd Stadium as a way to honor the first responders we lost that day. I'm certain that the sacrifice and effort shown by our first responders that day was not lost on our cadets. Myself and the rest of the cadre are extremely proud of their efforts."

On Sept. 11, 2001, McCarthy was a senior cadet at West Point in New York. He was in a class when an instructor entered and told them to turn on the television.

"We watched in horror as the second plane crashed into the tower and the towers later fell," he said. "Everything about my future changed that day. The Army profession immediately became real to us that morning.

"I'll never be able to replicate the feeling I had that Tuesday morning into our cadets. However, my hope is that as they were hammering in the flags, climbing stairs and listening to the names of the victims the Army profession that we teach them about in the classroom will become a little more real."

— Randy Weiler (Randy.Weiler@mtsu.edu)



MTSU senior ROTC cadet Michael Maynard of Pleasant View, Tenn., and nearly 60 cadets, student veterans, SGA officers and others place nearly 3,000 small U.S. flags in the ground to commemorate the 20th anniversary of 9/11 on Friday, Sept. 10, near the Veterans Memorial outside the Tom H. Jackson Building on campus. (MTSU photo by Andy Heidt)



MTSU ROTC cadets Ethan Hawks and Aiyanna Gallant plant U.S. flags in a grassy area outside the Veterans Memorial and Tom H. Jackson Building at 6 a.m. Friday, Sept. 10, to help commemorate the 20th anniversary of 9/11. Sixty cadets, student veterans, SGA members and military science faculty took part at this location and in Floyd Stadium. Nearly 3,000 flags and 2,977 names of victims who died in the Sept. 11, 2001, attack on U.S. soil during a series of four coordinated terrorist suicide attacks by the extremist group al-Qaida on U.S. landmarks. (MTSU photo by Andy Heidt)



Led by MTSU ROTC cadet flag bearer Joshua Muller, cadet Michael Maynard, Military Science Department leader Carrick McCarthy, Maj. Ben Sweeney and the other cadets and faculty run the steps in Floyd Stadium Friday, Sept. 10, in remembrance of fallen 9/11 first responders who died Sept. 11, 2001. Maynard led the cadet corps in a series of early-morning activities to commemorate the 20th anniversary of the tragedy. (MTSU photo by Andy Heidt)

Noted MTSU researcher changing students' attitude toward GenEd STEM classes

Encouraging comments from MTSU students in Hanna Terletska's recent general education astronomy laboratory classes made her realize she's definitely in the right profession.

The assistant professor in the [Department of Physics and Astronomy](#) received rave reviews for her teaching style and work ethic — and ensuring about 120 mostly non-science majors each semester are on a successful path in a potentially tough STEM (science, technology, engineering and math) subject they must pass in order to graduate.

In her fourth year at MTSU, Terletska already has a number of honors to her credit and is considered a rising star in her field. In the spring, she was nominated for the University General Education Teaching Award for her edifying and enriching efforts in her astronomy lab classes.

"This is a very competitive award, especially considering the number of talented and dedicated educators we have at the university," Terletska said of the potential recognition. The overall winner will be announced at the annual Fall Faculty Meeting in August. "I am honored and grateful for being nominated."

It was confirmation she more than makes the grade with her students, but is equally adept with research.

Terletska brought MTSU \$630,000 through two National Science Foundation-funded projects, including the nearly \$500,000 Early Career Development (CAREER) NSF grant she received in 2020 — a highly coveted honor primarily earmarked for junior faculty at schools like Harvard.

The astronomy lab is among the few science classes students take to fulfill science requirements for their college degree.

"It isn't uncommon for students to be a little anxious about taking the astronomy lab class, don't see the relevance of the class to their education or future profession and even have the fear of the math or science activities that might require skills that push them beyond their confidence zone," Terletska said.

"One of the biggest challenges for us as educators is to break through such barriers of students who are taking the class by finding the relevance and enjoyment in the class, igniting students' interest and curiosity," added Terletska, who tweaked her teaching method while adapting to remote learning because of COVID-19 protocols implemented as the pandemic spread across the nation.

"Astronomy labs generally don't receive a lot of positive feedback," Physics and Astronomy Chair Ron Henderson said. "Since Hanna's been teaching, there have been unsolicited comments many, many times. From a chair's perspective, students are enjoying that class more than normal."

Terletska found teaching the general education course "challenging" after arriving at MTSU in 2017.

"Now, I enjoy every class meeting," she said. "I just love doing it. It is interesting and fun. The happiest part is to read every week that students enjoyed the lab, learned something interesting they did not know and that they are looking forward to the next class. It is truly rewarding that my work and dedication has an impact in students' attitudes to the class and science overall."

On the first day of class every semester, Terletska tells her students that her goal for the class "is for them to love astronomy for the rest of their lives."

Students' comments range from "this lab was super fun and (I) can't wait to learn more about astronomy next week!" to "I appreciate this class because it has opened up a lot of curiosity about the things we have learned over time."

Taking pride in educating students

For Terletska, teaching and research go together.

"In addition to being a hard-core researcher, I really love teaching," she said. "There's a common stereotype that research-active faculty are not dedicated in teaching. I want to assure you that is not the case here. I like interacting with students, seeing them grow by learning."

"I like to share with them the beauty of science, understanding how things work through the eyes of science and how science actually plays a very important role in our everyday lives and quality of life."

Terletska said teachers and education "played a life-changing role in my life. I was a first-generation college student, and only because of the dedicated teachers I had in my high school and then in college, I became a scientist myself and now an MTSU professor."

"Because of it, I also came to the United States from Ukraine to pursue my educational and research dreams and goals. Science was always an interesting topic for me and I was good at it, but also out of many interesting sciences, physics was the most interesting and fun, and I am sure it is because of the full dedication of teachers and professors I was fortunate to have."



Hanna Terletska, Physics & Astronomy faculty, in front of Wisser-Patten Science Hall.

Following several semesters of remote learning, Terletska and her Physics and Astronomy colleagues welcome the return of primarily in-person classes this fall.

"I missed interacting with students a lot," she said. "Also, we can resume some of the class activities — such as the night sky observations at the MTSU observatory — that are a valuable experience for students to have."

Randy Weiler (Randy.Weiler@mtsu.edu)



National Science Foundation's early career award opens up even more opportunities for Hanna Terletska and her students

Before Hanna Terletska became a Physics faculty member at MTSU in 2017, her son had celebrated his birthday in a different state each year because of several short-term postdoctoral positions.

"When we moved here, there was a full solar eclipse on his August birthday. We thought, 'Ah, this is a sign. We will stay here,' " she said. "Indeed, his last three birthdays were in the same state."

Terletska, considered a rising star in her field by peers, has seen even greater signs since then that MTSU was the right place at the right time. In 2020, she landed a nearly \$500,000 Early Career Development (CAREER) grant from the National Science Foundation—a highly respected award that usually goes only to junior faculty at places like Harvard.

It was a first for MTSU, as Terletska and the College of Education's Ryan Seth Jones became the University's first two professors to earn the five-year federal grants. A few months later, Terletska was invited to share her research with almost 60 of the world's leading physics scholars at the virtual Localisation 2020 conference, held in honor of Nobel Prize winner Philip W. "Phil" Anderson.

"Winning the NSF Early Career award is a milestone achievement that will advance Hanna's research and open new doors for her students," said Bud Fischer, outgoing dean of the College of Basic and Applied Sciences. "Dedicated, innovative educators like Dr. Terletska who actively engage students in the discovery process are a large part of what makes our college and University so special."

Here are excerpts from Terletska's comments about winning the award, her research, and more:

Could you describe the quantum materials research you're conducting using the grant money?

My research is in computational study of quantum materials. The discovery of new materials is a cornerstone of human civilization and development. We now live in the era of quantum materials, which offer tremendous opportunities for fundamental research and advances in new-generation technologies. The potential benefits of 21st century technologies built on quantum mate-

rials are staggering. This includes quantum computers, highly efficient solar cells, and room-temperature superconductors that would generate, transmit, and store electricity with almost no loss. Hence, conquering the behavior of quantum materials can bolster economies, advance the quality of life, and address the unprecedented growth in global energy needs.

We call these materials “quantum” to highlight the exotic properties emerging in these materials coming purely from quantum physics effects. The magic comes from millions of thousands of interacting electrons, which at the atomic and subatomic scales start to also have wavelike properties. At this level, quantum physics really kicks in, and electrons start to exhibit quantum effects like tunneling, interference, entanglement, and topological order. Research in this field requires complex many-body numerical algorithms and access to powerful supercomputers. I use NSF-funded XSEDE supercomputing resources as well as access to the world’s most powerful computers at Oak Ridge National Laboratory (ORNL).

The discovery of new materials is a cornerstone of human civilization and development.

The breadth of transformative opportunities that quantum materials offer has ignited a worldwide race to control and exploit quantum matter and its integration in technology platforms. Governments all over the globe and large multinational companies have launched significant quantum material research initiatives and have invested heavily in related technologies and education. In 2018, the U.S. government signed a Quantum Initiative Act, making quantum material research a national priority. Over the last decade, numerous quantum research centers have emerged all across the United States, including the Appalachian Quantum Initiative in eastern Tennessee. Research in this field has brought together experts from across many disciplines, including physics, chemistry, engineering, material science, and computer science.



Terletska (seated) with classmates at her university in Ukraine.

How has the grant award changed or helped your research?

The NSF-funded research opens up a lot of opportunities not just to my research group, but also for my students and for MTSU. It provides resources that allow me to stay fully research-focused and active, as well as get invitations for talks at other universities and national/international conferences. Quantum research is at high demand now, and this award helps me a lot with continuing inter-institutional and international collaborations. Nowadays, I collaborate with scholars from the University of Michigan, Florida State University, Louisiana State University, Carnegie Mellon University, Oak Ridge National Lab, Augsburg University in Germany, and India. Having such an NSF-funded opportunity is particularly important for new faculty who are trying to establish their research groups and gain recognition in the field and the community, in addition to being educators at their universities.

our students: Ph.D. and undergraduate students have the opportunity to be trained and conduct cutting-edge research in the field. I am particularly excited for my students, as the timing for their research is right. Our future is quantum, with a lot of exciting opportunities in academia and industry now and in the future. There is already a strong demand for a quantum workforce.

After receiving the award, I got more opportunities to work closer with the NSF. I am grateful that the NSF really strives to be inclusive and diverse in the way they fund faculty research. Funding researchers like me not only assists with our personal research, but also is a big investment in research-growing universities like MTSU. MTSU has unique opportunities: We live in one of the nation’s fastest-growing counties, and being in close proximity to Nashville helps attract a lot of talented students. The wider spectrum of educational and research opportunities we can offer our students will provide a better education for them and develop a diversity of skills they will need for future jobs—which will help attract more talent here.

Our future is quantum, with a lot of exciting opportunities in academia and industry.

Were you surprised to receive this prestigious award?

To be honest, when the NSF called, I was shocked—I think we all were a little shocked. I even thought they would call me back in few days saying, “Sorry, we made a mistake.” It is very rare to earn such an award from the first try—usually it takes three tries to get it, if ever. Also, judging from the list of winners and the fact that MTSU has never received such an award before, I thought the level of award is more for the very top R1 (Tier 1 research) universities. This award is truly a great honor and a huge responsibility on my side and for MTSU. We are working very hard to use this opportunity to the full extent.

I am happy for another reason: When applying, I was very doubtful because places like MTSU—we are still building the research infrastructure here—don’t receive such high honors. I think this serves as a great example and encouragement for other new faculty here at MTSU and for universities like ours. It is doable. Also, I hope it will help attract other talented new faculty to MTSU.

How has MTSU supported your research?

The first thing I did when I got this award was send many thank-you emails to all my mentors here, who helped me so much during the grant application process and during my first two years at MTSU. Several factors made this success possible. Having a reduced teaching load as new faculty helped me a lot. In my first year at MTSU, I also obtained a Faculty Research and Creative Activity Committee award, which I think played an important role in establishing my research group here and in collaborations. It allowed me to travel to the University of Michigan and to ORNL, where I began collaborating with several researchers who ended up being collaborators on the grant.

Could you talk about any other research or projects you have?

In addition, I am a principal investigator on another NSF grant, where I am involved in a collaborative research on taming the effects of disorder and impurities in real materials. This research direction is more in the material science area. The beauty of research is that you never know what the next place it is going to take you. Based on results from previous research, I have started new collaborations with researchers from the University at Albany and LSU on the non-equilibrium quantum systems and topological materials, respectively. These are very exciting areas of research, and I am looking forward to new adventures there too.

The first thing I did when I got this award was send many thank-you emails to all my mentors here.

How has the pandemic affected research for you and research opportunities for students?

There are already some research studies showing that COVID-19 was particularly hurting female faculty productivity. I have faced similar issues as many other mom-professors: Juggling child care, online school, teaching, Zoom lesson preparation, and research was hard. Due to the lack of child care, spring and summer 2020 were particularly hard. The nature of our research (it is all on computers) allows us to still do research with students, and we adapted to Zoom weekly research meetings and online communication. I ended up "traveling" a lot virtually during this time, giving about 15 invited talks since COVID-19 started.

What made you choose physics as your area of study and as a career path?

A short answer: my teachers. I am a first-generation college student—no one in my family was particularly good in physics or went to college. I always liked to study and learn. I was not particularly into experiments or building things (I guess an early indication that I would become a theorist). But I was really good in problem-solving. Each year, my school would send me to a Science Olympiad in physics, chemistry, and math. While I like math, physics was much more interesting and challenging, and I liked that it helped to logically explain things around us and how they work.

Our middle school physics teacher played an important role in my choosing physics. I vividly remember how much he was devoted to teaching physics and cared that we loved it too. When time came for college, I decided to major in physics. It is funny—I remember my mom trying to make me doubt my choice. She thought mathematics is more for females and is more prestigious (haha) than physics. Indeed, the perception that physics or STEM is for boys is very common. But we had 15 women and two men in our class of physics majors at my college, and the boys did not graduate with all of us. Here at MTSU, I have established the Women in Physics student group so women can get the support, mentoring, and encouragement to pursue their careers in physics. It already has played an important role, as many of our members end up going to grad school.

What my parents constantly emphasized and valued is that education is the key! They often told me that education is the ticket to a better life. And, indeed, because of physics I immigrated to the United States. I came here for my graduate study, first for the M.S. at Minnesota State, then a Ph.D. at Florida State University, followed by several postdoctoral trainings at the Brookhaven National Lab, LSU, Ames Lab, and University of Michigan, and finally the faculty position at MTSU.

Here at MTSU, we have many first-generation college students, who don't get much advice or guidance from their family members regarding college or their career path. Having good mentors often plays a deterministic role in their lives. Being a first-generation college student myself helps me understand those challenges even better. These are typically very, very talented students, but because of the lack of examples and support, they often don't even dare to follow the opportunities available for them. Recently, I had the honor to mentor four such Physics majors who now are pursuing doctorates in Physics in the top prestigious universities of the U.S. These kids will have a very different future now—and their families too.



Terletska with three of four recent MTSU mentees who are now Ph.D. candidates

- Carol Stuart

\$747K MTSU-led ginseng research alliance funding features major USDA grant award

The **International Ginseng Institute** at **Middle Tennessee State University** has received a total of **\$747,500** — including a **\$455,000** grant award from the **U.S. Department of Agriculture's National Institute of Food and Agriculture** — to investigate organic methods of protecting growers' ginseng investment.

In addition to the USDA/NIFA award, the remaining nearly \$300,000 comes from MTSU as a match.

The highly competitive three-year grant involves a partnership with other colleges, universities and supporters, as the researchers investigate root rot and other fungal issues and look to find solutions for rural farmers and growers. The grant started Sept. 1.

American ginseng is considered one of the highest unit value cash crops and one of the most well-known medicinal plants grown in North America, said **Iris Gao**, the **institute's** director, in her USDA-NIFA proposal.

After being harvested for more than 300 years in the Appalachian Mountains, wild ginseng has become scarce, and almost all of the American ginseng sold worldwide is cultivated.

Because ginseng is recognized for its numerous properties in promoting health such as boosting immunity and preventing respiratory diseases, the demand has skyrocketed during the COVID-19 pandemic, Gao added.

Gao said the researchers "will develop scientific solutions for sustainable organic production of American ginseng and promote organic production."

"Specifically, we will be testing the use of bacterial antagonists on fungal diseases, with the aim to prevent infection before it occurs," she added.

"The greatest immediate problem challenging organic American ginseng production is fungal diseases control, which typically requires frequent, sometime daily use of costly fungicides," Gao said.



United States
Department of
Agriculture

National Institute
of Food and
Agriculture



Dr. Iris Gao

Dr. Iris Gao, MTSU professor and International Ginseng Institute director, inspects two pieces of ginseng from the institute's laboratory. A team of MTSU researchers, including students, will be working in tandem with those from UT-Knoxville, Penn State, North Carolina State University and UVA Wise on a three-year grant to study ginseng and find positive results to aid rural farmers and growers in the Appalachian Mountains. (MTSU photo by Randy Weiler)

The research team

Gao said the project, which is an extension of a \$148,000 USDA grant to research ginseng in 2017, "brings together knowledgeable scientists from across the country." They include:

- **Bruce Cahoon**, the University of Virginia's College at Wise John C. Buchanan Endowed Chair of Biology and a former MTSU biology professor.
- **Eric Burkhart** of Pennsylvania State University. He is associate teaching professor of ecosystem science and management and program director for Appalachian botany and ethnobotany at the Shaver's Creek Environmental Center.
- **Eleanor Phillips**, an extension assistant responsible for agriculture and natural resources in the Soil Plant and Pest Center at the University of Tennessee-Knoxville.
- **Jim Hamilton**, county extension director with North Carolina State University.



Dr. Murat Arik

- **Susan Leopold**, executive director with the United Plant Savers and the Center for Medicinal Plant Conservation.
- **Caitlin Elam** from the Tennessee Division of Natural Areas and botanist and ginseng coordinator with the Natural Heritage Inventory Program.

Working with Gao from MTSU will be **School of Agriculture** professor and co-program director **Nate Phillips**, associate professor **Song Cui**, assistant professors **Samuel Haruna** and **Seockmo Ku**, lab technician **Ethan Swiggart** and senior **Robert Eichas**.

Recently, the MTSU **Business and Economic and Research Center**, its director, **Murat Arik**, and a graduate student researcher, **Hyorim "Lyn" Ho**, became involved with the project related to organic ginseng marketing. Ho is earning her MBA.

"The task involves creating market analysis of organic ginseng production," Arik said. "She will look at cost return, cost benefit calculations and methods – what kind of impact will it have on finances?"

Gao said graduate and undergraduate students at MTSU, UVA-Wise and Penn State "will be heavily involved" in the research process.

"This diverse group of talented scientists will bring a new perspective and passion as we work together to solve this very important problem," Gao said of all collaborators.

Annual fall ginseng workshop

The International Ginseng Institute's annual **fall workshop and demonstration day** for growers and others interested in ginseng has been rescheduled to 10 a.m. to 1 p.m. Friday, Nov. 5, at the Barfield Crescent Park's Wilderness Station, 697 Veterans Parkway, in Murfreesboro, Gao said. Limited to 30 participants, the event is free to attend. [Registration](#) remains open.

Topics will include site selection, proper planting techniques, regulations, harvest data, diseases and integrated pest management.



Iris Gao, left, director of the International Ginseng Institute at MTSU, receives research help from laboratory technician Ethan Swiggart in the lab located in the Stark Agriculture Building. (MTSU photo by Randy Weiler)



Dr. Iris Gao, MTSU professor and International Ginseng Institute director, inspects two pieces of ginseng from the institute's laboratory. (MTSU photo by Randy Weiler)

National Million Women Mentors Summit Inspires

Million Women Mentors successfully hosted the National MWM Virtual Summit on Wednesday, October 13, 2021 for over 500 registered attendees. With a myriad of inspiring speakers, the attendees were able to hear about different initiatives currently going on locally, as well as success stories from many of the global partners.

Million Women Mentors (MWM) is an initiative of STEMconnector to spark the interest and confidence in women and girls to pursue STEM careers and leadership opportunities through the power of mentoring. The mission of the MWM network is to encourage girls and women to pursue, persist, and thrive in STEM careers.

"We are grateful to all our amazing members who give up their time to make the world a better place for others. Over the last seven years MWM has facilitated more than two million mentoring relationships, forever changing lives," said Dr. Jo Webber, CEO of Million Women Mentors.

To kick-off the MWM Summit, they heard from a STEM-studded panel of MWM Honorary State Chairs including Lieutenant Governor Bethany Hall-Long from Delaware, Senator Sharon Hewitt from Louisiana and State Representative Sylleste Davis from South Carolina, who all had successful STEM-related careers before running for office.

The MWM Summit also included several breakout sessions that attendees could choose from including MWM Women in Insurance Data Insights Driving Change, MWM Global-Turkey, and MWM State Leaders Best Practices.

In the MWM State Leaders Best Practices breakout session, attendees heard about different ways state leaders from Texas, Connecticut, and Delaware are building their mentoring network and what they did that proved successful.

After the breakouts, the final session included a video sharing those who had received the MWM Trailblazer awards for the year. The award winners and other MWM network members alike are truly great influences and MWM is lucky to have them as loyal mentoring advocates.

This year, the MWM State of the State Award was presented to the current active, volunteer State Leaders for their exceptional commitment to advancing opportunities for girls and women in STEM across their respective states. During this award presentation, MWM Tennessee leader – **Dr. Judith Iriarte-Gross** was recognized.

MWM National States Chair and Learning Blade CEO, Sheila Boyington remarked that "since launching MWM in 2014, the State Leaders and their Committees have played an integral part in activating and growing MWM across the country. We appreciate the volunteer State Leaders for their dedicated efforts that range from hosting events and speaking at conferences to writing statewide newsletters and sponsoring awards. They are honored for their work to put literally millions of girls and women on pathways to pursue, persist and succeed in STEM."

While MWM wishes that the summit could have been in-person, they were grateful to all for adapting to the virtual space and joining them in the sharing of knowledge and impact on the STEM community. They look forward to seeing everyone next time and are proud to partner with and support mentor efforts across the globe.

About Million Women Mentors

Million Women Mentors (MWM) is an initiative of STEMconnector to spark the interest and confidence in women and girls to pursue STEM careers and leadership opportunities through the power of mentoring. The mission of the MWM network is to encourage girls and women to pursue, persist, and thrive in STEM careers.



Congratulations!

**Dr. Judith
Iriarte-Gross**

Tennessee State Leader



2021 Trailblazer Award

WELCOME NEW CBAS ADVISORS



Tracy Anderson
Aerospace Academic Advisor
Aviation Management
Flight Dispatch
Maintenance Management
Technology
UAS Operations
DSB, Room 120

Tracy Anderson comes to MTSU with over 20 years of academic advising experience from colleges and universities in TN, OH, SC, and CO. She will be advising all Aerospace Non-Pilot majors for CBAS and looks forward to getting to know everyone associated with the college. Tracy is originally from Toledo, OH and received her bachelor's degree from Wittenberg University and her master's degree from East Tennessee State. She resides in Lebanon with her husband, Jason, and two Labrador retrievers, Kenzie and Duncan.



Candyce (Candy) Corlew-Roberson, M. A.
Pre-Professional Health Science Advisor
DSB, Room 120
Office (615) 898-2495

Candyce Roberson, "Candy", is a wife, mother and educator. Candy has been married for 20 years and has 4 children ages 19, 17, 14 and 12; as well as three dogs. Candy has been an educator for over 14 years, serving in elementary and middle schools in Nashville and Murfreesboro. She has also had the opportunity to advise and teach adult students at local career colleges.

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Tiffany Fantine
Aerospace Academic Advisor
Professional Pilot L - Z
DSB, Room 120
(615)898-2495

Tiffany Fantine is new to Academic Advising, but she has been employed at MTSU for the last five years in Student Unions. In her new position she will be advising Pro-Pilot students (L-Z) in the Aerospace department. Tiffany

has a passion for helping students succeed and realize their goals not only at MTSU, but also later as professionals. Tiffany is originally from Columbus, Ohio and has lived in Middle Tennessee for about nine years. She attended The University of Toledo where she majored in Exercise Science and then earned a Master's in Counseling from Edinboro University of Pennsylvania while her husband was stationed in Erie Pennsylvania with the US Coast Guard. She is a part of a busy family of four + four (four people and four animals) and loves being a mom, traveling with family and reading whenever there is time to spare.

***Congratulations
to the following
CBAS
recipients of
Faculty Travel Grants!***

***Dr. Mina Mohebbi,
engineering technology***

***Dr. Lei Mao,
engineering technology***

***Dr. Chaengshan Wang,
chemistry***



**The
CBAS Advising Center
is located in the
Davis Science Building, Room 120(
615) 898-2495**

MTSU's concrete, veterans programs celebrate inaugural Big Machine Music City Grand Prix

NASHVILLE, Tenn. — True Blue seemed to be at every turn Friday, July 27, 2021 as **Middle Tennessee State University's** programs for **concrete** and **construction management, veterans service, Army ROTC** and the **alumni association** were showcased during the first day of the Big Machine Music City Grand Prix.

MTSU's **School of Concrete and Construction Management** and the **Charlie and Hazel Daniels Veterans and Military Family Center** shared prime real estate near the Prix's main stage



School of Concrete and Construction Management



From right, Kelly Strong, director of the MTSU School of Concrete and Construction Management; MTSU President Sidney A. McPhee; and former professor Heather Brown brief officials from industry partner Somero Enterprises Friday, Aug. 6, 2021, at MTSU's hospitality area on the grounds the Big Machine Music City Grand Prix in Nashville, Tenn., about the new \$40 million facility for the concrete program currently under construction on the Murfreesboro, Tenn., campus. (MTSU photo by Andrew Oppmann)

in a booth hosted by Somero Enterprises, a supporter of the concrete program, and **CIM Patrons**, an organization supporting the university's concrete industry management program (four other universities throughout the nation have their own CIM Patrons).

Through a partnership signed last fall by Provost **Mark Byrnes** and MTSU alumnus and Prix CEO **Matt Crews**, students helped research and test an environmentally friendly concrete mixture for both a barrier wall and pit lane.

Friday's practice laps were the first time cars took to the track in a formal setting. Branding from the university's School of Concrete and Construction Management and "I am True Blue" were visible at one of the turns near Nissan Stadium.

Friday's Prix events cumulated into a post-race **Freedom Friday concert** by

country legends **Brooks and Dunn** – and featured a \$25,000 donation to the Daniels Center. President **Sidney A. McPhee** and retired Army Lt. Gen. **Keith Huber**, MTSU's senior advisor for veterans and leadership initiatives, accepted the check.

"President McPhee and I are proud to report to you that the legacy of service to veterans begun by **Charlie Daniels** lives on at the center that bears his name at Middle Tennessee State University," Huber told the crowd.

"The Daniels Center is the largest and most comprehensive facility serving veterans of its kind in higher education. And we stand ready as a resource to all veterans, regardless of whether they are affiliated with the university."

Huber was joined on stage by Daniels Center Director **Hilary Miller**; College of Basic and Applied Sciences Interim Dean **Greg Van Patten**; and Director **Kelly Strong** and former professor **Heather Brown** of the MTSU School of Concrete and Construction Management.

"All of us here tonight from MTSU are the beneficiaries of the generous spirit and support of two patriots," Huber said, referencing Crews and former MTSU student **Chuck McDowell**, CEO of concert sponsor Wesley Financial Group.

- Andrew Oppmann

COLLEGE NEWS



MTSU President Sidney A. McPhee, front left, presents a special military-themed football helmet to former MTSU student Chuck McDowell at the Freedom Friday concert held Friday, Aug. 6, 2021. McDowell, CEO of concert sponsor Wesley Financial Group, was recognized for his support of the university's Charlie and Hazel Daniels Veterans and Military Family Center. Also pictured in the background, from left, are Kelly Strong and Heather Brown, director and former professor, respectively, from the MTSU School of Concrete and Construction Management; and Hilary Miller, director of the Daniels Center. (MTSU photo by James Cessna)



Kelly Strong, director of the MTSU School of Concrete and Construction Management enjoys the sights and sounds Friday, Aug. 6, 2021, from MTSU's hospitality area on the grounds of the Big Machine Music City Grand Prix in Nashville, Tenn. MTSU concrete students helped research and test an environmentally friendly concrete mixture for both a barrier wall and pit lane for the race. (MTSU photo by Andrew Oppmann)

What's Happening in CBAS?



An IndyCar driver zips past MTSU'S "I Am True Blue" signage affixed to the race barrier wall during practice Friday, Aug. 6, 2021, at the Big Machine Music City Grand Prix in Nashville, Tenn. MTSU concrete students helped research and test an environmentally friendly concrete mixture for both a barrier wall and pit lane for the race. (MTSU photo by James Cessna)

From left, MTSU President Sidney A. McPhee and retired Army Lt. Gen. Keith Huber, MTSU's senior advisor for veterans and leadership initiatives, accept a \$25,000 donation from a representative of the Big Machine Music City Grand Prix at the Freedom Friday concert held Friday, Aug. 6, 2021. The donation will support the university's Charlie and Hazel Daniels Veterans and Military Family Center. (MTSU photo by James Cessna)



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Big Machine Music City Grand Prix partners with MTSU's Daniels Veterans Center

Do you have your copy of the new CBAS "Innovations" magazine? If not, send an email to basdean@mtsu.edu. We will be happy to send you one!



MTSU concrete students thrive in pre-race 'mix' for Big Machine Music City Grand Prix

What's Happening in CBAS?

Grants Awarded CBAS Faculty/Staff

(This is a partial list of grants awarded in summer & fall 2021)

PI(s)		Department	Sponsor	Amount
Keying	Ding	Chemistry	NSF	\$172,182.00
Gao	Iris	Agriculture	USDA	455,000.00
Otter	Ryan	Biology	Advancing Women in Nashville	6,000.00
Collins	Joe	Geosciences	NSF	46,915.00
Cui	Song	Agriculture	USDA	749,924.00
Otter	Ryan			
Mosley	Chaney			
Rushton	Greg			
Corns	Kevin			
Haruna	Samuel			
Wu	Qiang			
Iris	Gao	Agriculture	USDA	747,000.00
Donald	Walker	Biology	NSF	870,000.00
Don	Hong	Mathematical Sciences	Casualty Actuarial Society	15,000.00
Keying	Ding	Chemistry	American Chemical Society	70,000.00
Kim	Sadler	Biology	TN Wildlife Resources Agency	36,658.00
Qiang	Wu	Mathematical Sciences	NSF	114,999.00
Mandy	Singleton	TSEC	TN Dept of Ed	15,000.00
Sarah	Bleiler-Baxter	Mathematical Sciences	NSF (via Auburn)	109,000.00
April	Weissmiller	Biology	NIH	379,815.00
Total				\$3,787,493.00

College of Basic and Applied Sciences 2021-22 Committee Assignments

Curriculum Committee (1 year terms)

Dr. Kevin Downs (ABAS)
 Dr. Yeqian Liu (Math)
 Dr. Emmanuel Rowe (ET)
 Dr. Suman Neupane (Physics)
 Dr. Matt Elrod-Erickson (Bio)
 Mr. Duane Vanhook (CCM)
 Mr. Joe Hawkins (Aero)
 Maj. Ben Sweeney (MS)
 Dr. Scott Handy (Chem; **Chair**)
 Dr. Jaishree Ranganathan (CS)
 Dr. Clay Harris (Geo)
 Ad Hoc Members: Dean,
 Associate Dean and Graduation Analyst

Research Committee (1-3 year terms)

Dr. Kevin Bicker (Chem; 3-year term)
 Dr. Greg Rushton (TSEC; 1-year term)
 Dr. Grant Gardner (Bio; 2-year term)
 Dr. Hannah Terletska (Physics, 1-year term)
 Dr. Mark Abolins (Geo; 3-year term)
 Dr. Holly Spooner (Ag; 2-year term; **Chair**)
 Dr. Mina Mohebbi (ET; 3-year term)
 Ad Hoc Member: Ms. Sharon Scott

Awards Committee (1-2 year terms)

Dr. Arpan Sainju (CS; 2-year term)
 Dr. Alisa Hass (Geo; 2-year term)
 Dr. Jana Ruth Ford (Physics; 2-year term)
 Dr. Justin Miller (Chem; 2-year term)
 Dr. Jennifer Lovett (Math; 1-year term)
 Ms. Joyce Miller (CBAS Staff; 2-year term)
 Ms. Suzanne Hicks (Staff; 1-year term)
 Dr. Kishor Luitel (Ag; 1-year term)
 Mr. Jon Huddleston (CCM; 2-year term)
 Dr. Peter Neff (AERO; 2-year term; **Chair**)
 Dr. Yangseung Jeong (BIO; 1-year term)
 Dr. Wendy Beckman (Aero; 2-year term)
 Ad Hoc Members – Dean

Teaching Committee (1-3 year terms)

Dr. Andrea Georgiou (Aero; 2-year term)
 Dr. Rhonda Hoffman (Ag; 3-year term)
 Dr. Lei Miao (ET; 1-year term; **Chair**)
 Dr. John Zamora (Biol; 3-year term)
 Dr. Xin Yang (CS; 2-year term)
 Dr. Don Nelson (Math; 1-year term)

Retention Committee (1-3 year terms)

Dr. Kevin Corns (Aero; 1-year term)
 Dr. Anthony Newsome (Biol; 3-year term)
 Dr. Warner Cribb (Geo; 2-year term)
 Mr. Jake Avila (CCM; 3-year term)
 Dr. Yi Gu (CS; 2-year term)
 Dr. Rachel Leander (Math; 1-year term;
Chair)
 Ad Hoc Members: Ms. Mimi Thomas,
 Mr. Eric Miller, Ms. Beth Bonner

CBAS Dean Faculty & Staff Awards 2020 - 21

Distinguished Research - Iris Gao (Ag)
 Faculty Service - Misa Faezipour (ET)
 Teaching Excellence - Rhonda Hoffman (Ag)
 Staff Award - Matthew Wade (Ag)

MTSU hosts prestigious NSF grant undergrad research cohorts

After winning the prestigious, three-year **National Science Foundation Research Experiences for Undergraduates** site award grant in 2019, **MTSU** hosted undergraduates from across the country for eight weeks of workshops, courses, travel, research and experiments from June 7 to July 30.

The students, selected after a rigorous application process, were part of one of two research groups made up of eight members each: the science-based chemistry research utilizing X-ray methods group, also known as CRUX, and the math-based computational modeling and simulation in applied sciences group, also known as COMS.

"It's a great opportunity for (faculty) to further our research because we have the opportunity to work with these highly-talented and hardworking students over eight weeks in the summer. That furthers our research program and also is a great, rewarding mentoring opportunity."

MTSU's **Rachel Leander**, an associate math professor who worked with the COMS group, said the grant, known within academia as the NSF REU, has been highly beneficial for the university and faculty involved.

"It furthers our greater educational mission," Leander said. "Here we have the opportunity to train students in this fast-growing and high-need area of computational science and prepare them for jobs in that field. It also helps ... by publicizing our research programs. That helps us to attract more talented students and also to earn public support and funding."

"It's a great opportunity for (faculty) to further our research because we have the opportunity to work with these highly-talented and hardworking students over eight weeks in the summer. That furthers our research program and also is a great, rewarding mentoring opportunity."

The computational science cohort

Students Daniel Bond, Adira Cohen, Alex LaVerde, Jennifer Lopez, Joshua Miller, Shawheen Naderi, Allis Royer and **Shivam Patel**, who is also an MTSU biology student, made up the COMS cohort.

MTSU's **Wandi Ding**, math professor; **William Robertson**, physics and astronomy professor; and **Joshua Phillips**, associate computer science professor, rounded out the faculty working with the COMS students.

Faculty used their combined expertise to help the students develop practical research skills, computer programming skills, high-performance computing skills and mathematical modeling skills.

MTSU student Patel credited professor Leander with informing him about the REU opportunity.

"When I talked to her, she was very supportive to me," he said. "She helped me with everything. It was her who got me into the program."

He said the COMS program had many benefits, especially because it was outside his normal area of study, biology, which allowed him to learn about math and computational science.

"Learning how to code," he said, was the biggest benefit along with learning how to work with students from other disciplines and conduct research.

The program was not all work and no play. Students enjoyed a day at Nashville Shores and capped off the eight weeks with a celebration and presentation of their research at the Science Building on campus.

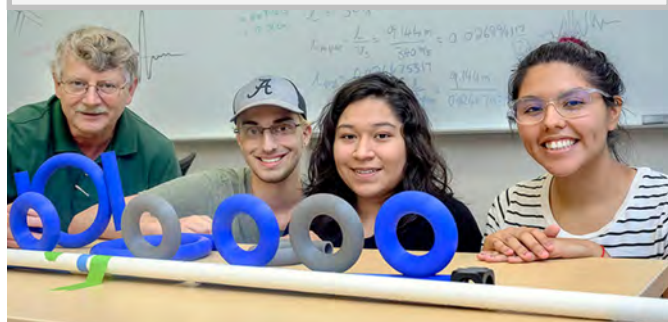
Undergraduate students who earned the National Science Foundation Research Experience for Undergraduates grant, including Alex LaVerde, right, from the University of Alabama and Jennifer Lopez, center, from Ginnell College, work on research with William Robertson, MTSU physics and astronomy professor, in the Wiser-Patten Science building on July 28, 2021. Middle Tennessee State University hosted the undergraduate students from around the country for eight weeks of workshops, courses, travel, research and experiments. (MTSU photo by J. Intintoli)



Undergraduate students from around the country who earned the National Science Foundation Research Experience for Undergraduates grant perform research while visiting Middle Tennessee State University this summer. From left are students Alex LaVerde and Carina Vazquez, MTSU physics and astronomy professor William Robertson and student Jennifer Lopez, who worked on math-based research like this acoustic ring resonance project on July 28, 2021, in the Wiser-Patten Science building. (MTSU photo by J. Intintoli)



Middle Tennessee State University faculty and computational science undergraduate students from around the country who earned the National Science Foundation Research Experience for Undergraduates grant meet for a workshop on research ethics on July 20, 2021, at MTSU's Wiser-Patten Science building. Standing, from left, are Dr. Wandi Ding, Rachel Leander, Nicolas Kaszynski, Shawheen Naderi, Jennifer Lopez, Allis Royer, Adira Cohen, Alex LaVerde, Daniel Bond, Shivam Patel, Joshua Miller and Dr. William Robertson. (MTSU photo by Stephanie Barrette).



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What's Happening in CBAS?

Garrett Trimble, Jake Collins, William Nese, Lindsey Foote, Dakota Cook, Noel Castillo, Nicole Chavarria and **Nirvana Almada**, who is starting at MTSU as a graduate student this fall, were part of the chemistry student group and the first chemistry student cohort allowed on campus following the COVID limitations of summer 2020.

The program began online to allow students to become acquainted before leaving their home states to travel to Tennessee. MTSU's **Andrienne Friedli**, interim chair of the **Department of Chemistry**, worked with the CRUX students along with chemistry professors **Ngee-Sing Chong**, **Keying Ding**, **Scott Handy** and **Piotr Kaszynski**. **Greg Van Patten**, interim dean of the **College of Basic and Applied Sciences**, and **Vishwas Bedekar**, interim chair of the **Department of Engineering Technology** until Aug. 1, worked with students, too.

CRUX students made new compounds that formed single crystals suitable for X-ray analysis or characterized materials using other X-ray methods. **Oleksandr Hietsoi**, professional MTSU crystallographer, collected and interpreted the crystal structures.

In addition to participating in workshops and courses, students visited the **University of Alabama in Huntsville** and the **HudsonAlpha Institute for Biotechnology**, also in Huntsville, Alabama, on June 25.

The Chemistry cohort

At UAH, students took a workshop with professor Joe Ng on bio molecule crystallization. "The highlight of the visit was a crystallography workshop where students from MTSU and UAH grew protein crystals," said **Justin Miller**, an MTSU assistant chemistry professor who collaborates with Ng.

CRUX students also participated in the celebration and presentation of their research at the close of the program and wrote up research reports in anticipation of scientific publication.

More undergraduate research opportunities

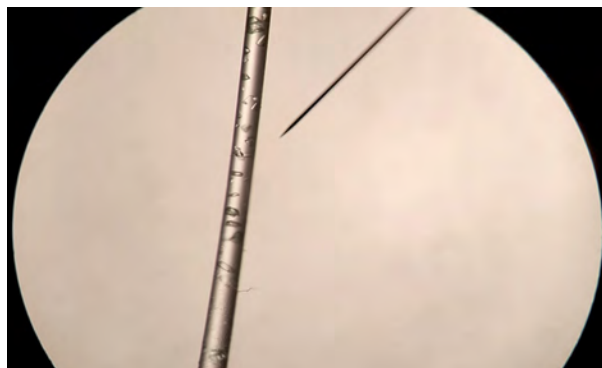
Leander recommends that MTSU undergraduates interested in research ask their professors about opportunities.

In addition, "Consider applying for an **Undergraduate Research Experience and Creative Activity** grant through the **Center for Undergraduate Research**," she said. "Also the **Office of Undergraduate Fellowships** holds workshops every year on how to get involved in these kind of research opportunities, so we have a lot of good resources like that that students should look into."

— Stephanie Barrette (Stephanie.Barrette@mtsu.edu)



Middle Tennessee State University faculty and chemistry undergraduate students who earned the National Science Foundation Research Experience for Undergraduates grant participate in a workshop at the University of Alabama in Huntsville taught by UAH professor Joseph Ng on June 25, 2021. (Photo courtesy of Adrienne Friedli)



Undergraduate students from around the country who earned the National Science Foundation Research Experience for Undergraduates grant, hosted this summer by Middle Tennessee State University, participate in research about crystals like the lysosome protein grown as single crystals pictured here. (Photo courtesy of Joseph Ng)



Alex LaVerde, left, from the University of Alabama in Tuscaloosa, Ala., and Jennifer Lopez from Ginnell College in Grinnell, Iowa, conduct research on acoustic ring resonance in MTSU's Wisner-Patten Science building on July 28, 2021. The two were among a group of undergraduate students from around the country who earned the National Science Foundation Research Experience for Undergraduates grant and spent eight weeks at Middle Tennessee State University this summer for workshops, courses, travel, research and experiments. (MTSU photo by J. Intintoli)

Higher-ed publication presents MTSU WISTEM Center with top diversity award

The **Middle Tennessee State University WISTEM Center** has received the 2021 **Inspiring Programs in STEM Award** from INSIGHT Into Diversity magazine.

The award honors colleges and universities encouraging and assisting students from underrepresented groups to enter the fields of science, technology, engineering and mathematics, or STEM.

MTSU's WISTEM (Women in STEM) Center will be featured with nearly 80 other recipients in the September issue of INSIGHT, the largest and oldest diversity and inclusion higher education publication. The award was announced Monday, Aug. 16.

Inspiring Programs in STEM Award winners were selected by the publication based on efforts to inspire and encourage a new generation of young people to consider careers in STEM through mentoring, teaching, research and successful programs and initiatives.

"This is wonderful news," said **Judith Iriarte-Gross**, MTSU **chemistry** professor and WISTEM Center director. "The center is very honored to be recognized by this national organization for our hard work over the years. Diversity is critical in STEM. Without diversity, what will the STEM workforce look like in the future?"

"Many thanks to (**College of Behavioral and Health Sciences**) Associate Dean **Barbara Turnage** for the amazing application she submitted."

The magazine selected the WISTEM Center because "it is home to several programs that encourage female students to pursue and succeed in STEM fields," Turnage wrote in the nomination.

"The mission of the center is to realize the intellectual potential and utilize the expertise of women in STEM," she added. "The goals are to maximize resources and opportunities for females to pursue STEM education and careers; to promote best practices of gender equity in STEM and to support female STEM professionals in their academic development and career growth."

The **center** is home to the Tennessee Girls in STEM Conference (formerly Expanding Your Horizons in Math and Science or EYH), which celebrates its 25th anniversary in September, and other programs. Fifth through 12th grade girls learn from STEM professionals and participate in hands-on conference workshops. Iriarte-Gross estimates nearly 10,000 girls and young women have been shown STEM opportunities through the years

College of Basic and Applied Sciences Interim Dean **Greg Van Patten** said "the recognition ... is a great honor. The award celebrates the work of numerous people on campus, including the director, Dr. (Judith) Iriarte-Gross, for the excellent work they have done in attracting and supporting women in STEM careers. I'm very proud of the WISTEM Center and the work they do."

Lenore Pearlstein, the publication's owner and publisher, said they "knew many STEM programs are not always recognized for their success, dedication and mentorship for underrepresented students."

"We want to honor the schools and organizations that inspire and encourage young people who may currently be in or are interested in a future career in STEM," Pearlstein added. "We are proud to honor these programs as role models to other institutions of higher education and beyond."

— Randy Weiler (*Randy.Weiler@mtsu.edu*)



MTSU chemistry professor and WISTEM Center Director Judith Iriarte-Gross, left, and College of Behavioral and Health Sciences Associate Dean Barbara Turnage promote women in STEM at the university. Turnage nominated the center for a 2021 Inspiring Programs in STEM Award from INSIGHT Into Diversity magazine. The publication announced Monday, Aug. 16, the center would be one of nearly 80 programs recognized nationally. (MTSU photo by Randy Weiler)

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Remember to check the CBAS Calendar for upcoming events at,

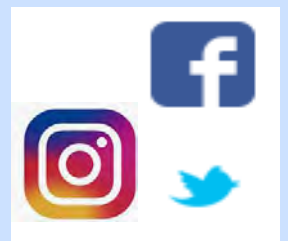
<http://www.mtsu.edu/cbas/calendar.php>,

can be found on the CBAS web page.

Send all upcoming CBAS events to Marlene at

Marlene.Lawson@mtsu.edu

Don't forget to connect with CBAS on facebook, instagram and twitter



MTSU-Meharry partnership keeps students on 7-year path to be rural primary care physicians

Maria Hite will be one of the first six MTSU students heading to Nashville's **Meharry Medical College** to earn her **Middle Tennessee State University** degree — and eventually her Meharry medical degree — and set sail to become a primary care physician in a rural region in Tennessee.

MTSU freshman **Hursha Kondee** is just starting the primary care physician journey as Hite did three years ago when the **Medical School Early Acceptance Program**, or MSEAP, launched.

The MTSU **College of Basic and Applied Sciences** is partnering with Meharry Medical College School of Medicine through MSEAP. The program's purpose is to increase the number of primary care physicians serving medically underserved populations as well as alleviating health care disparities in rural Tennessee.

Hite, Kondee and 17 others are in a seven-year early medical acceptance program restricted to incoming freshmen. It begins with acceptance into the program as an MTSU undergraduate and concludes with graduation from Meharry. By program's end, students will earn a bachelor's degree from MTSU in three years and doctor of medicine from Meharry in the remaining four years.

Students spent a week at MTSU and a week at Meharry this summer, acclimating to the academic and hospital environments.

Eric Miller, advising manager in the pre-professional health science advising center, said 19 of 20 students — a 95% success rate — are on task. Hite and the original group will start at Meharry this summer if they finish their MTSU requirements and meet the minimum MCAT score.

Miller said while attending MTSU, the students do not pay tuition or fees.

"Their scholarships cover those costs," he said. "They are responsible for such things as room, board, and books, but they also receive stipends for work they do over the summer."

"When they get to Meharry, they will receive a scholarship roughly equivalent to two years (out of four) for tuition. The actual number changes year to year but for the students that started this fall they will receive over \$32,000 in scholarships per year for their four years at Meharry."

Participants must be Tennessee residents, have scored a 28 or higher on the ACT (or SAT equivalent) and earned a 3.5 or higher in their high school course work.

The program consists of three years of study in a prescribed undergraduate premedical school curriculum and four years of medical school study. A two-year residency in primary care in a rural/underserved area of Tennessee is also required. Upon matriculation into the program, students receive conditional acceptance to Meharry's College of Medi

Hite's journey in progress

Being a competitive gymnast "sparked Hite's interest" to want to study medicine.

"By learning skills and dealing with injuries, I became interested in how the human body worked and healed," she said. "In high school, I got the opportunity to shadow my pediatrician. I was able to see the connections primary care physicians can make with patients. "As a physician, I want to ensure that a person's health does not prevent them from living their life to the fullest."



MTSU students in the Medical School Early Acceptance Program take a break during their summer bridge week at MTSU to visit the Blue Horseshoe in Walnut Grove. Nineteen students are in the program, which includes their first three years at MTSU and final four years at Meharry Medical College's School of Medicine. (Submitted photo)



MTSU students in the Medical School Early Acceptance Program, or MSEAP, helped with a Habitat for Humanity build in Murfreesboro as part of their summer bridge week at MTSU. Nineteen students are in the program to help increase the number of primary care physicians serving medically underserved populations as well as alleviating health care disparities in rural Tennessee. (Submitted photo)

The initial week at MTSU helped Hite, 20, who is a native of China now living in La Vergne, Tennessee, make a "smooth transition" and discover campus resources, including advisers, professors, free tutoring, writing center and more.

At Meharry's orientation, where she's headed in less than a year, she was able to meet medical students and faculty. "There was a strong sense of sense of mission on campus — wanting to serve the underserved," she said.

"I saw simulation labs where students get hands-on experience by working with mannequins and running through clinical scenarios. We also learned how you might scrub in before heading to an operating room."

In three years, Hite's "tried to embrace my college experience as much as possible. I've gotten involved in various clubs and organizations, and completed a virtual internship. This past summer, I was able to conduct research at Meharry that was related to the effects of diet on breast cancer development. I am currently doing biology research at MTSU and working on an Honors thesis."

Kondee's journey just beginning

Kondee, 18, from Nashville, Tennessee, grew up hearing stories

What's Happening in CBAS?



Eric Miller



Three of 19 MTSU students in the Medical School Early Acceptance Program share in a classroom setting. (Submitted photo)



Wearing scrubs in a Meharry Medical College School of Medicine training area, MTSU students prepare to await taking turns with a simulated surgical procedure. (Submitted photo)



Maria Hite

about her great-grandfather who was a primary care physician in India.

"I have seen the impact physicians have had on myself and my family members, and this really inspired me to go into medicine," she said.

Highlights of Kondree's summer bridge week at MTSU highlights included a Habitat for Humanity build, "which was awesome because we spent time together while helping the community," she said. "One of my favorite activities was the Escape Game. We broke into two teams and raced to see who could get out the fastest. ... I truly felt I was a part of the (program) family."

Hearing from Dr. **James Hildreth**, Meharry's president, Dean **Digna Forbes** and other faculty, Kondree said she appreciated "how we were introduced to people who could guide us. We were able to ask questions and really visualize where we will be in a few years. We got to sit in on a lecture, tour the research labs, hear from medical students as well as clinicians, and do exercises in the simulation lab.

"Everyone at Meharry was so friendly, and we were even more excited at the prospects of our futures. My favorite experiences were touring the cadaver lab, partaking in a simulation of someone giving birth, and learning how to scrub."

Kondree said she has enjoyed getting to know her fellow freshmen, plus those second and third year pre-med students.

"Everyone is so quick to help and advise, and the support I have received from my peers, as well as Mr. (Eric) Miller and Ms. (**Kimberly**) Stephens is immense," she said. "I have a lot of classes with other MSEAP students, and it really comforts me to know I have this amazing group of people to hold on to and rely on as we work toward our goals together."

- Randy Weiler. MTSU News & Media



Hursha Kondree



Kim Stephens

COLLEGE NEWS

Pharmacy Direct Admission Program

A Partnership Between MTSU and Union University College of Pharmacy

Purpose

The purpose of this agreement is to recruit highly qualified, talented students starting as early as a student's first year at MTSU and to offer them Direct Admission to the Doctor of Pharmacy degree program at Union University College of Pharmacy (UUCOP).

Benefits

The Direct Admission Program guarantees admission to the UUCOP pending successful adherence to progression and matriculation criteria. Direct Admission students are not required to take the Pharmacy College Admissions Test (PCAT).

Eligibility

Students admitted to MTSU as freshmen or transfer students automatically qualify for Direct Admission to UUCOP. A currently enrolled MTSU student must complete a minimum of 28 of the required pharmacy prerequisite hours at MTSU (at least 14 hours of science and math) with a minimum 3.0 GPA.

Students that are interested in the program, must complete and submit an [application](#) to Director for Pharmacy Admissions and Recruitment at Union University.

What's Happening in CBAS?

Medical School Early Acceptance Program (MSEAP)

Application Deadline: Dec. 1, 2021

The College of Basic and Applied Sciences (CBAS) is excited to announce its Medical School Early Acceptance Program (MSEAP) formed by a partnership between Meharry Medical College School of Medicine (MMCSOM) and Middle Tennessee State University (MTSU). The purpose of the program is to increase the number of primary care physicians, while serving the medically underserved populations as well as assisting with alleviating health care disparities in rural Tennessee.

MSEAP is a seven-year early medical acceptance program restricted to incoming freshmen that begins with acceptance into the program as an undergraduate at MTSU and concludes with graduation from Meharry Medical College. The program consists of three years of study in a prescribed undergraduate premedical school curriculum and four years of medical school study. Upon matriculation into the program, students receive conditional acceptance to MMCSOM.

Students must be admitted to MTSU as a first-time freshman no later than Dec. 1, 2021, in order to apply for this program. Link to webpage <https://www.mtsu.edu/cbas/MSEAP.php>



COLLEGE OF BASIC
AND APPLIED SCIENCES

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College of Basic and Applied Sciences

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