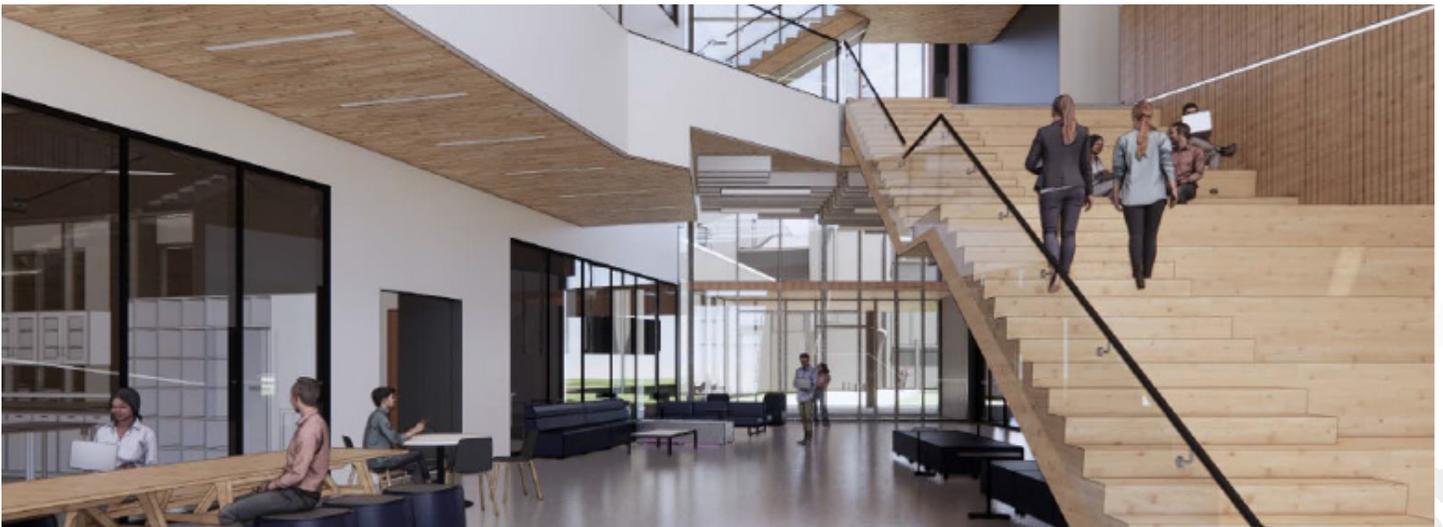




FIRST LOOK: THE NEW APPLIED ENGINEERING BUILDING



Last fall, preliminary design work began on the new Applied Engineering Building. Cooper Carry is the architectural firm that is designing the building and creating the engineering drawings to make it a reality. The planned site is at the corner of Alumni Drive and Blue Raider Drive, adjacent to the new Concrete and Construction Management Building scheduled to be completed this fall.



The photo above shows a preliminary layout of the center atrium, which will be the primary entrance to the building. The glass walls on the left offer views of both the Student Project Development and the Experimental Vehicle Program laboratories. Design review is ongoing and the timeline for the construction is being developed. Stay tuned as work continues on this exciting project!



CHONG CHEN RETIRES

Longtime faculty member **Chong Chen** retired in January, capping 31 years of service to the Engineering Technology Department. Chen came to MTSU in 1990 and instructed many ET graduates through the years in electronic circuits, industrial electricity, instrumentation, and controls.

Chen's plans include traveling as well as devoting more time to his woodworking projects.

We thank you for the knowledge and expertise you have so generously shared with your students and wish you a long and enjoyable retirement.



ROWE RECEIVES COVETED NRC FELLOWSHIP SEEKING SECURITY IN TODAY'S WORLD

Emmanuel Rowe, an assistant professor of Mechatronics Engineering, is researching a more sensitive means of detecting ionizing radiation as well as determining the type of radiation. Radiation detection devices utilize a scintillator, or material that converts high-energy radiation into visible light that can be measured and used to detect and determine the level of radioactivity emitted by an object.

Starting in July 2022 Dr. Rowe will be participating as a NRC Senior Research Associate through a program sponsored by the National Academies of Sciences/Engineering/Medicine. In his capacity as a Senior Research Associate, Dr. Rowe will be conducting research at the Air Force Research Laboratory at Wright-Patterson AFB in the area of "Crystal Growth and Characterization of Novel Functional Low Dimensional Materials for Optoelectronic, Nanoelectronic, and Magnetic Applications." This one-year fellowship will place Dr. Rowe at the forefront of ceramic materials and manufacturing methods.

The NRC Fellowship is a competitive research program with 300 new awards annually from 1,000 applicants. In addition to his research, Rowe teaches undergraduate courses in both Electrical Power and Machinery and Electrical Circuit Analysis.



RESEARCH RECAP

Lei Miao: Will be participating in a non-instructional assignment grant to develop, using reinforcement learning, adaptive traffic signal control algorithms. This research will lead to smart traffic signals that can sense traffic and adapt their timing to provide more efficient traffic flow.

Jorge Vargas: Continued work developing situational awareness radar sensors for autonomous vehicles. Also working on an ATE (Advanced Technological Education) grant through the National Science Foundation.

Misagh Faezipour: Modeling of system dynamics and application of systems engineering to identify risk factors and improve patient safety in health care. Exploring long-term impact of screen time on children.

DANIEL GARRETT EARNS MASTER'S DEGREE

Electronics Lab Director Daniel Garrett received his M.S. degree in Engineering Technology at the August Commencement. Daniel joined the ET Department in the summer of 2020 and has been teaching Intro to Electricity and Electronics, Circuit Analysis, as well as managing the electronics labs.

An Army veteran, Daniel served as an Explosive Ordnance Disposal (EOD) Technician in the 744th Ordnance Company at Fort Campbell. He also had a 9-month deployment to Afghanistan. After completing over 4 years of military service, Daniel came to MTSU in and received, in 2017, a BS in Aerospace with a concentration in Unmanned Aerial Systems.

REVIEW: MECH-TECH SENIOR PROJECT EXPO 2021-22

A SMALL SAMPLING OF SENIOR CAPSTONE PROJECTS FROM THE FALL AND SPRING SEMESTERS:



EXPERIMENTAL VEHICLE PROGRAM COMPETITION UPDATE

- **MTSU Rover team** received the Phoenix Award April 29 at the NASA 2022 Human Exploration Rover Challenge.
- **SAE Baja team** placed 51st out of 91 vehicles at the Tennessee Tech competition.
- The **Solar Boat team** placed fourth in the overall at the Solar Splash competition in Springfield, Ohio.

TNFIRST ROBOTICS CHAMPIONSHIP RETURNS

This past February 18–19, Engineering Technology hosted the **TNFIRST FTC Tennessee State and Regional Robotics Championship** at Alumni Memorial Gym. The event attracted student teams in grades 7 through 12 throughout Tennessee as well as other states. In total, 25 teams competed for a berth at the national championship this summer in Houston, Texas.

Commenting on the noise and excitement generated in Alumni Gym, ET Chair Ken Currie said, “These events bring together the best young engineers, designers, and programmers, and it is hoped that these students may return to our campus to continue their college education at MTSU.”



IN MEMORIAM



Bill Schenck, 64, an adjunct professor in Engineering Technology for several years, died September 20, 2021, from complications related to COVID-19. Raised in Meadowbrook N.Y., Schenck earned his pilot’s license after high school and enlisted in the Air Force in 1980; he served 20 years before retiring.

He came to MTSU in 2011 and early on was a graduate assistant in the ET Department. He earned his master’s degree in 2014, and taught many ET electronics courses over the years, from intro to electricity to digital circuits, robotics, and microprocessors

Schenck was also well known as a super fan of MTSU baseball and was a regular fixture at Reese Smith Field.

Greg Lewis, 50, died September 11, 2021, also from COVID-19. Lewis was an ITD specialist whose office was in the Voorhies Building. He provided outstanding IT support for ET faculty and staff. Lewis also was a student, working on a Professional Studies degree with a concentration in Audio Production.

He is survived by his wife, Cynthia, and three children, daughters Melissa and Melody, as well as son Gregory II.



CONTACT US

Middle Tennessee State University
Box 19
Murfreesboro, TN 37132

615-898-2776 Phone
615-898-5697 Fax
etdept@mtsu.edu

Tonya Scott, coordinator
(615) 898-3442 Phone
tonya.scott@mtsu.edu

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