



MTSU

College of Basic and Applied Sciences



The Basic Facts

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The Science of Success

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Unmanned Aerial Vehicle (UAV) Program

A wonderful gift from ISR Group, Inc. in Savannah, TN, will allow AERO to create a new UAV program. ISR, a leading provider of training and restoration of UAVs, owns a 10 square mile training range near Savannah. With ISR support, MTSU has created a new research position. Kyle Snyder has been hired as the Director of UAV and is working on opportunities for research funding for MTSU Aerospace faculty/students and ISR. Faculty members, Mark Blanks and Nate Callender, have assisted Wayne Dornan, Chair, in initial planning for the new program.

Math/Science Education Research Conference

With support from the Tennessee Space Grant Consortium, TMSTEC hosted the 5th Annual Math/Science Research Conference at the Doubletree on February 3-4. Rick Vanosdall and Lee Ann Newton did a great job of organizing the program. Mr. Tim McCollum, an 8th grade teacher for 38 years, showed how he engages entire classes of 8th graders in research. Dr. Stephen Heyneman, education professor at Vanderbilt, discussed elementary school education in Third World countries. STEM Center directors from across the state spoke about the activities on their campuses. It was a great conference!

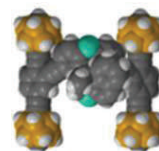


15th Annual Golden Goggles Invitational Lecture

Imagine a car so small it could transport a single atomic element. This was just one topic presented at the 15th Annual Golden Goggles Invitational Lecture on January 26, where the well-respected Professor James M. Tour gave a lecture on "Nanomaterials, Nanoelectronics, Nanomedicine, & Nanocars." In addition to a dazzling description of the future technologies that would be possible if electronic devices could be built from organic molecules instead of inorganic materials, Professor Tour recounted how his group designed and built a very small fleet of nano-cars, using both conven-



tional organic chemistry reactions as well as a few that had to be invented for the job at hand. The primary goal of the research is to develop means of transporting molecular building blocks, but another driving force is to explore what kinds of new nano-machines can be created with chemistry. Professor Tour is currently the Professor of Chemistry at Smalley Institute for Nanoscale Technology at Rice University. The lecture was held at Wisner-Patten Science Building and was sponsored by the MTSU Chemistry Society, the Department of Chemistry, and the Nashville ACS section.



CMT Wins Award; CIM-New Department

Congratulations to members of the Construction Management Technology team for winning second-place at the National Association of Home Builders Student Chapters Residential Construction Management Competition in Orlando, FL. MTSU has finished in the top 10 in 9 out of the last 11 years of its national competitions. A special thanks goes to David Hatfield, Construction Management Programs director, and his staff.



Congratulations is also extended to Heather Brown, Director of CIM, and the CIM faculty and staff on the approval of the new Department of Concrete Industry Management, which will be effective July 1, 2011. In addition, MTSU has been named an American Concrete Institute Excellent University for 2010. The ACI Award for University Student Activities was initiated to recognize universities that have participated in ACI-related activities.



Visit our newsletter web site to view all *The Basic Facts*' issues:

http://www.mtsu.edu/cbas/basic_facts.shtml



The Basic B.E.S.T.

(Boastful Educators Sharing Talents)

All departments are invited to submit items for this column

Agriscience/Agribusiness/

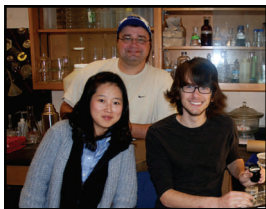
A poster presentation by Alana Neely, Cliff Ricketts, and Warren Gill titled "Incorporating Preparatory Exams into a Dual Credit Course Curriculum: Preparing Students for Computerized College Testing and Increasing Post-Secondary Credit Success Rates" placed first in the Innovative Idea Presentation category at the Southern Region Conference of the American Association for Agricultural Scientists. The poster was chosen the best of the 53 in the competition. For more information about the Dual Credit program, and this poster, visit www.mtsu.edu/abas/.

Aerospace

The Office of Distance Education Faculty Services in the University College congratulates Daniel Prather on his completion of the Certified Online Instructor (COI) Program.

Biology

Ji Suk Lee, an ecology Ph.D. student from Seoul National University, visited Jeffrey Walck's laboratory in February and observed experiments being conducted by his graduate and undergraduate students, Noah Flanigan and Jeff Cornelison.



Chemistry

AWIS National Board President, Dr. Joan M. Herbers, appointed Judith Iriarte-Gross to serve as Secretary of the National Board.

Computer Science

Roland Untch completed Elluminate's "Moderator Certification Program." The University College recently licensed Blackboard Incorporated's Elluminate product as a web conferencing platform for MTSU.

Mathematical Sciences

Abdul Khaliq gave an invited colloquium at the Western Kentucky University, Bowling Green. Dr. Khaliq has been appointed as Interim Director of the Computational Science PhD program for spring 2011.

David Craig, ACSI senior who will graduate in May 2011, has received two job offers. He has accepted an actuary position from a company located in Nashville. David serves as the president of Actuarial Student Association and has passed both P and FM exams from the Society of Actuaries. He plans to take the exam MLC in May 2011.

Richard Ewool, who was mentored by Abdul Khaliq, presented his research at the Georgia Scientific Computing Symposium, Emory University in Atlanta, in February. The title of his presentation was "Stochastic Models for Chemical Systems."

Abdul Khaliq took five PhD Computational Science students to the Georgia Scientific Computing Symposium, Emory University, Atlanta, in February 2011.

Military Science

MTSU Cadets organized the 61st Military Ball held on February 4, 2011.

MTSU ROTC cadets participated in a Valentine's Day celebration at the Veterans Affairs hospital in Murfreesboro on Monday. The cadets moved from building to building handing out valentines gifts to sick and wounded veterans. The valentines gifts, donated by local elementary school students, included a wide assortment of cards, candy and other Valentine's Day nick-knacks. The cadets also spent time conversing and sharing in the camaraderie of fellow service members who have sacrificed so much in service to their country.



Physics & Astronomy

On January 7, Vic Montemayor gave an invited presentation titled "Who Likes Math, Anyway?" to 350 high school students at Culleoka School. The school has been performing "below expectations" in mathematics, and wanted to try to motivate the students to take more math courses. In addition to the formal presentation, Dr. Montemayor also spoke with five math and science classrooms throughout the day.



Ron Henderson participated on a proposal review panel for the American Physical Society in College Park, Maryland, on February 4. Experts in Physics Education were brought from throughout the country to take part in the review process.

CBAS

Posters at the Capitol

MTSU hosted the 6th Annual Tennessee Undergraduate Research Posters at the Capitol in Nashville on February 9. Sixty-one students from all nine public universities were invited to present. Because of inclement weather students from the University of Memphis and University of Tennessee-Martin did not attend. Chancellor Morgan and Lt. Gov. Ramsey joined us for lunch and photos. Jennifer Danylo, Travis Tipton, Sheila Bleam, Andri Friedli, Emily Born, and Wassim Qureshi helped Dean Cheatham with the event.

MSE PhD Spring Seminar Series

The MSE 7820 PhD Seminar Series speakers for March are as follows:

- March 15-Dr. John Staver, Center for Research & Engagement in Science & Mathematics Education, Purdue University, "Constructivist Epistemology and Its Implications for Improving Teaching and Learning."
- March 29-Dr. Joi Spencer, University of San Diego, "Why are all the Students of Color Sitting at the Back of the Mathematics Classroom?: Teaching Mathematics for Freedom and Opportunity."