



The Basic Facts

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The Basic Facts, College of Basic and Applied Sciences, Middle Tennessee State University, Murfreesboro, TN

MTSU's Moonbuggy Debut a Success!

The Science of Success

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MTSU and the Department of Engineering Technology and Industrial Studies was recently put on the map when students competed for the first time in the 10th Annual Great Moonbuggy Race at Marshall Space Center in Huntsville, Alabama. Dr. Saeed Foroudastan introduced the idea of participating in the competition to his two engineering fundamentals classes that he taught last fall. He told students that were interested to brainstorm and come up with possible design concepts under his direction as faculty advisor.

MTSU competed against some top universities in the country including Cornell, Rochester Institute of Technology, Purdue and Arizona State,

to name a few. Because these universities had past experience in the moon buggy race, they were at a clear advantage over MTSU. Schools came from across the



United States and Puerto Rico to participate in the event.

At one point in the race, according to the judges, the MTSU team, though anxious, was in 1st place. The MTSU team finished far better than they ever imagined!

North Dakota State University ended up taking 1st place, the University of Tennessee at Knoxville took 2nd place. The MTSU team came home with the 4th place award! They were ecstatic that their moonbuggy came home without a scratch! Congratulations to Dr. Foroudastan and the 12 students who designed the moonbuggy!

CBAS Students Win University Awards!

Students in the College of Basic and Applied Sciences (CBAS) had a good day this past April 10, 2003. Two CBAS students took the top awards!



In the above picture, Eric Freundt, winner of the President's Award

congratulates Jeremy Munday who was the 2003 recipient of the Provost's Award.

Eric Freundt, a graduating senior from the Biology Department majoring in microbiology, was the recipient of the Phi Kappa Phi Scholarship award of \$8,000. Eric had offers from the University of Michigan, the University of Wisconsin at Madison and Vanderbilt University. He chose to accept an award from the National Institute of Health to attend Oxford University in England.

Jeremy Munday, a senior in the Department of Physics and Astronomy has received a full scholarship to attend Harvard University. His program of study will focus on

Nanotechnology and BOSE-Einstein states. Jeremy will also receive a travel stipend, moving expenses and a \$25K fellowship.



Eric Wesley, student in the Aerospace Department, pictured with Dr. Paul Craig, was a recipient of the Cooperative Education Achievement Award.

Mathematics Majors Attend Mini StatFest in Nashville

MTSU Department of Mathematical Sciences faculty members, Drs. Dennis Walsh, Ginger Holmes Rowell and Lisa Bloomer took 12 mathematics majors to the 2003 Mini StatFest held in Nashville, Tennessee last month. The event was hosted by the Division of Public Health Practice at Meharry Medical College and was sponsored by the American Statistical Association, Office of Minority Health, Centers for Disease

Control (CDC), and Vanderbilt University.



The conference was a wonderful opportunity for students to learn about Statistics in Industry, Government and Academia.

Students learned about potential careers in statistics at such places as the CDC and the U.S. Census Bureau.



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<http://www.mtsu.edu/~collbas/newsletters>



The Basic B.E.S.T. (Boastful Educators Sharing Talents)

All departments are invited to submit items for this column

Aerospace

Janet McGhee presented "The History of the Jet Airliner" at the National Conference on Aviation and Space in Cincinnati, Ohio. The **Aerospace Department** has been selected to host the 2004 National Safety Conference (SAFECON) for the National Intercollegiate Flying Association. The conference will be held in the Smyrna Airport next May.

Agribusiness/Agriscience

Jessica Gentry attended the III International Meeting on Swine Production in Vila Real, Portugal that was hosted by the Association of International Students of Agriculture at the Universidade de Trás-os-Montes e Alto Douro. Her invited paper was on the topic, "Alternative Pork Production Systems: Overview of Facilities, Performance Measures and Meat Quality." She also presented a paper at the Midwestern Sectional American Society of Animal Science meetings in Des Moines, IA. Her invited talk was, "Comparison of Finishing Systems: Impact on Health, Performance and Carcass Composition."

The 2003 NACTA (National Association of Colleges and Teachers of Agriculture) Judging Contest was hosted by the **School of Agribusiness/Agriscience** April 4-6. Twenty-five junior and senior colleges convened on campus to have their students judge in 10 different contests. The contests included judging Livestock, Crops, Dairy, Cattle, Horses, Soils and Horticulture. Other contests were held in Computer Skills, Ag. Business Management, Ag. Knowledge and Ag. Discussion. A total of 310 students competed in the 3-day event. The contest moves to a different location next year. Schools competing were from as far away as California, Minnesota and Florida.

The MTSU Horse Judging Contest was held on April 4 at the Tennessee Miller Coliseum. Six hundred and forty-three youths ages 10-18 and college students competed. Virginia Tech won the college division while Sumner County 4-H students were declared winners in the Senior 4-H Division. The contest included 10 teams from the NACTA Contest which was hosted by the **School of Agribusiness/Agriscience**.

Biology

William Stewart co-authored "The Regulation and Activation of Ciliary Neurotrophic Factor Signaling Proteins in Adipo-

cytes" in the *Journal of Biological Chemistry*.

John DuBois co-authored "The Effect of NaCl on Growth, N₂-Fixation (Acetylene Reduction), and Percentage Total Nitrogen in *Leucaena leucophala* (Leguminosae) var.K-8."

Jeffrey Walck and three of his students, **Dwayne Estes**, **Kyle Hurt** and **Rachael Sulkers** presented four papers at the 10th Symposium on the Natural History of Lower Tennessee and Cumberland River Valleys held at Land Between the Lakes, Tennessee. The titles of the presentations were: "Seed Germination Ecology of the Rare Tennessee Plant, Yellow Sunbells," "A Floristic Inventory of Rattlesnake Falls: A Potential State Natural Area on the Highland Rim Escarpment in Tennessee," and "Effects from Management of the Nonnative Shrub *Ligustrum Sinense* on Native Herbaceous and Woody Vegetation."

Chemistry

Gary Wulfsberg presented, "Characteristics of Weakly Coordinating Chlorinated Anions for Catalysis: 35Cl NQR Spectroscopic Studies of Chloroacetates and Trichloromethanesulfonates ("trichalates") at the 225th National Meeting of the American Chemical Society in New Orleans, LA. This presentation was co-authored by **James Howard**, undergraduate research student **Michael Cochran**, and former graduate student **Debra Jackson-Jones**.

Gary Wulfsberg also presented a poster, "Weakly Coordinating Chlorinated Anions for Catalysis: Synthesis of Trichloromethanesulfonate ("trichlate") Salts and of the Strong Acid Trichloric Acid Dihydrate" co-authored with the aforementioned students at this same conference.

Pat Patterson and **Any Phelps**, along with 30 other MTSU faculty, hosted 22 teams in the Regional Science Olympiad. This was the 8th year of this competition and the largest ever held. There were 15 events for middle school students and 15 events for high school students.

Pat Patterson was a "final" judge for "Games" and "Make Life Easier" inventions of 6th graders as part of the Department of Elementary and Special Education's 11th Invention Convention.

Engineering Technology/Industrial Studies

Walter Boles (ETIS) and **Lisa Bloomer** (Mathematical Sciences) have been se-

lected to participate in NASA's Faculty Fellowship Program at Marshall Flight Center in Alabama.

The **CIM Program** sent four students and a faculty member to Salt Lake City, UT to exhibit at the Manufactured Concrete Products Expo. Fourteen students also traveled to the Southeast Regional ASCE Conference held in Miami, FL. These students will compete in the concrete canoe, t-shirt, mystery, technical paper and concrete dome events.

On March 4 the **CIM Program** held a special meeting with the Concrete Contractors of the industry. The contractors were on campus to start development of a new concentration for the CIM Program.

Marvin Runyon and **David Gore** attended the Global Automotive Conference held at Western Kentucky University in Bowling Green.

Saleh Shenaty presented, "Industry-Based Case Studies in Technical Education" at the CBAS Teaching-Learning seminar series.

Saeed Foroudastan presented a paper, "How to Bring Reality into the Classroom through Project Innovation," at the American Society for Engineering Education held in Macon, GA.

Mathematical Sciences

Ginger Rowell presented "Using Undergraduate Research to Improve Teaching and Learning" at the CBAS Teaching-Learning seminar series.

Rajesh Barnwal has earned the prestigious Financial Risk Manager designation from the Global Association of Risk Professionals. Dr. Barnwal specializes in Actuarial Sciences.

Michael Chappell and **Joan Raines** attended the National Council of Teachers of Mathematics (NTCM) this month in San Antonio, Texas.

Military Science

The MTSU **Blue Raider Battalion** was involved in Situational Training Exercises, Combat Water Survival Training and the Spring Field Training Exercise last month.

The junior year **Military Science Cadets** conducted Situational Training Exercises in preparation for the National Advanced Leadership Camp (NALC).

LTC McDaniel, a veteran of the first Gulf War was an invited speaker in the MS Department and spoke on,

"Challenges and Opportunities of Women in the Military."

The **Blue Raider Battalion** recently conducted its annual Joint Spring FTX at the National Guard Catoosa Training Area in Georgia. Carson Newman University, ETSU, UTK and Tennessee Tech participated. Land Navigation, Situational Training Exercises, Paintball, Survival Training and a live fire range highlighted the four-day training exercise.

Nursing

Suzanne Prevost made six presentations this past month: "The Value of Certification" and "Evidenced-Based Practice for Critical Care Nurses" at the Smokey Mountain Regional Critical Care Nursing Conference in Knoxville; "Nurse Managers' Perceptions Related to Certification" for the American Association of Critical Care Nurses Certification Corporation, Denver, CO.; "Mentorship: The Gift that Keeps on Giving," keynote presentation at Western Kentucky University, Bowling Green, KY; "Building Collaborative Teams" at the University of Kentucky, Lexington, KY and "Chest Pain in Women" at the School Nurse Conference held on MTSU's campus.

Michael Cheeney presented "Respiratory Ailments in the School Population," and **Janice Harris** presented "Bioterrorism—A Real Threat to Our World—Where is the School Nurse," "Use of Automated Defibrillators in the School Setting" and "Sprains/Strains/Fractures—Which is Which?" at the School Nurse Conference held on MTSU's campus.

Karen Ward and **Shirley Cantrell** presented "Weighing the Evidence: Childhood Obesity" at the 9th Annual Research Day (Pi Upsilon Chapter of Sigma Theta Tau) held at Tennessee State University. **Maria A. Smith** presented,

"Investigation of Side Effects and Level of Compliance for Renal Transplant Recipients" at this same conference.

Physics

Chuck Higgins presented "Gaseous Nebulas" at the First Friday Star Party.

CBAS

Lynn Parsons and **Stephen Krau (Nursing)** presented a poster, "The Pain Experience: A Nurse's Dilemma" at the 9th Annual Research Day held at TSU.