



# The Basic Facts

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

## The Science of Success

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

## AeroMART Project

For the past several weeks, MTSU Aerospace students worked on a government flight project called Aerospace Mobile and Airborne Radio Testing (AeroMART). MTSU pilots flew ten airplanes in formation at low altitude back and forth across Tennessee. The airplanes were equipped with "top secret" radio equipment that was being tracked on the ground from radio transmitters/receivers which were in motion in SUVs.

AeroMART is funded by a grant with Redstone Arsenal, the U.S. Army, CenGen Inc., and Dynetics, Inc. The military application of the project is to

allow commanders on the battlefield moving on the ground in tanks to individually steer through radio transmissions of individual cruise missiles. The MTSU pilots in the test flew a



Cessna 172, not cruise missiles, but the effect was the same. The airplanes were provided by Fayetteville Aviation in Fayetteville, Tennessee.

The entire grant was worth over

\$300,000. The MTSU pilots flew over 1,400 flight hours, all without accident or incident. "The MTSU pilots were all very professional and were great to work with," said Allan Gamble, project director of Redstone Arsenal. "We could not have completed a successful project without them." In a ceremony August 18 at the MTSU airport campus, each pilot was awarded a framed certificate, photos of the project participants, and a commemorative coin that illustrated the project. The MTSU co-investigators on the project were Dr. Paul Craig, MTSU Aerospace department chair; Matt Taylor, MTSU director of aircraft maintenance; and Gerry Garcia, MTSU chief flight instructor.

## CBAS Advisory Council (CAC)

The dean has created an advisory council for the college. The mission of the CAC is to:

1. Assist the college in setting and achieving goals.
2. Advise the college on substantive matters.

Twenty-seven of the thirty-three members will join CBAS faculty, students and staff to kick off the group August 30, 2004. The program will consist of short presentations by Tom Cheatham, Paul Craig, Andrienne Friedli, Bill

Robertson, Adam Farmer, and Ken Garrett. We also plan to spend much time listening to council members. A list of CAC members and affiliations appears on page two of this newsletter.

## Physics Professor Creates Radio JOVE

Thanks to Dr. Chuck Higgins, assistant professor of physics and astronomy, amateurs can hear radio

emissions from the sun and Jupiter through the Radio JOVE Project he and NASA scientists created about six years ago. Through the project's web site at <http://radiojove.gsfc.nasa.gov>, anyone can purchase a kit to build their own radio telescope or listen to transmissions from telescopes across the world. The \$135 kit is for novices



with soldering knowledge and was designed as a hands-on educational activity for high school students. The idea was to get students interested in science through radio astronomy.

Dr. Higgins has recently returned from a 10-week NASA Faculty Fellowship Program at NASA's Goddard Space Flight Center in Greenbelt, MD

completing the second of a two-year program. His area of research is planetary radio astronomy. While he was at NASA,

Dr. Higgins worked with other scientists to analyze data brought back to Earth from Jupiter by the Voyager and Galileo spacecrafts. This study allows scientists to learn more about the history of the planet and some basic physics about what is happening around the planet.



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

All departments are invited to submit items for this column

### Computer Science

**Richard Detmer**, CSCI chair, traveled to Washington, DC, July 28-30 to review NSF course, curriculum and laboratory improvement proposals. Square D Company, located in Smyrna, Tennessee, donated \$2,000 to the Computer Science Department. Square D has been a generous supporter of the computer science program for many years. The money is awarded to promising computer science majors.

### Mathematical Sciences

**Michaele Chappell**, interim chair, recently served as series editor for the *Empowering the Beginning Teacher of Mathematics Series* which contains three volumes: *Empowering the Beginning Teacher of Mathematics in High School*, *Empowering the Beginning Teacher of Mathematics in Middle School*, and *Empowering the Beginning Teacher of Mathematics in Elementary School*. The series is published by the National Council of Teachers of Mathematics in Reston, VA.

**Dovie Kimmins** and **Michaele Chappell** recently had a publication accepted for the proceedings of the 26th Conference of the North American Chapter of the International Group for Psychology of Mathematics Education (PME-NA). Their paper was entitled "Positioning Teachers to Enact Standards-Based Mathematics Instruction." Kimmins and Chappell will present their paper at the October conference in Toronto, Canada.

### Military Science

The ROTC Department would like to recognize this year's Army ROTC scholarship winners. **Jami Bento** and **Stephen Bonney** received an Army ROTC four-year scholarship. **Rachael Schenk**, **Jessica Catellani**, **David Burnheisel** and **Robert Stewart** received an Army ROTC three-year scholarship. **Kevin Jones** received an Army Reserve Forces two-year scholarship.

What did 42 cadets do this summer? Four cadets graduated from Leadership Training Course at Fort Knox, KY, which substitutes for the first two years of ROTC. Twenty-two juniors graduated from the Leadership Training Course at Fort Lewis, Washington, competing with over 4,000 cadets across the U.S.

Additionally, five cadets earned the Silver Paratrooper Wings at Fort Benning, GA, and at Fort Campbell, Kentucky, two cadets earned the Air Assault Wings.

### Nursing

**Anita Crockett** presented "Choosing Nursing: A Qualitative Approach" at the 10th Annual Qualitative Health Research Conference April 30-May 4 in Banff, Alberta, Canada. The conference was sponsored by the International Institute for Qualitative Methodology.

**Anita Crockett** presented "Bringing Back Public Health Research Involvement to the Practice Setting" at the joint conference of Association of State and Territorial Directors of Nursing and Association of Community Health Nursing Educators Spring Institute June 2-5 in Minneapolis, Minnesota.

A former U.S. Army Reserve officer herself, **Anita Crockett** visited the U.S. Army Cadet Command's Warrior Forge at the National Advanced Leadership Camp (NALC) Nurse Educators' Visit at Fort Lewis, Washington, in July. She was sponsored by LTC Todd Overby, chair of the Military Science department.

### CBAS

**Karen Case**, college advisor for CBAS, represented MTSU at the Phi Kappa Phi Honor Society Triennial Convention in Albuquerque, NM, August 4-7.

### CBAS Advisory Council Members

Mr. Mike Barrett, EMC Corporation  
Mr. Tim Bent, Bridgestone/Firestone  
Mr. Mark Blair, FedEx Express  
Dr. Andy Brown, MTMC  
Mr. Larry Burkhart, HCA  
Ms. Ann Butterworth, Office of Public Finance  
Dr. Walter Chitwood, Dentist  
Mr. Elliott Dawson, BioVentures  
Mr. Roger Denton, Centex-Rodgers, Inc.  
Ms. Ann Duncan, TN Center for Nursing  
Mr. John Earl Ellington, Sr., World Airways  
Mr. Blake Fohl, Tractor Supply Company  
Mr. Dennis Grimaud, Premier Micronutrient Corporation  
Mr. Arthur Hastings, Retired, MTMC  
Dr. Sharon Horton-Jenkins, TN Bureau of Investigation  
Mr. Joe Huffine, TN Farmer's Cooperative  
Mr. Bob Lamb, Bob Parks Realty  
Dr. Elizabeth LaRoche, Physician  
Dr. Lee Martin, Clarity Resources, LLC  
Ms. Marilyn Mathis, Murfreesboro City Schools  
Mr. Hubert McCullough, McCullough Associates  
Ms. Deanna Menesses, TN Nurses Association  
Mr. Jerry Morgan, Whirlpool Corporation  
Brigadier General James Myles, U. S. Testing & Evaluation Command  
Ms. Elaine Perryman, TN Dept. of Labor & Workforce Development  
Mr. Ward Poston, Jr., Holcim, Inc.  
Ms. Penelope Price, FedEx  
Mr. Bill Rawnsley, ProCon Products  
Mr. Raul Regalado, Metro Nashville Airport Authority  
Mr. Ken Russell, Community Harbor  
Mr. Keith Shults, Esoterix



### UPCOMING EVENTS

Aug.-September 10

August 30, 6:00 p.m.

September 8, 12:00 Noon

September 9, 3:00

September 13

Candidates inform department chair of intent to apply for promotion & tenure  
**CAC meeting**, Foundation House  
**Deadline to submit a one-page abstract for Scholar's Day 2004.** (Application form can be accessed by visiting [www.mtsu.edu/~sponprog](http://www.mtsu.edu/~sponprog).  
**State of the College Address**, BAS State Farm Room  
**Undergraduate Research, Scholarship & Creative Activity Deadline for proposals** (Application forms are available at <http://www.mtsu.edu/~graduate/research/research.htm>)