



# 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

| Inside this issue:                                     |   |
|--|---|
| MTSU Chemistry Professor Represents Women in STEM      | 1 |
| MTSU Studies International Agriculture in Argentina    | 1 |
| State Awards \$750,000 for MS                          | 1 |
| MTSU's ROTC Cadets to Experience International Culture | 1 |
| TAS Honors CBAS Faculty                                | 1 |
| Long-Serving Faculty/Staff                             | 1 |
| Our B.E.S.T.   | 2 |



## MTSU Chemistry Professor Represents Women in STEM



organization and part of the National Girls Collaborative Project. Dr. Iriarte-Gross also serves as director of the MTSU WISTEM (Women in STEM) Center and leads the MTSU Expanding Your Horizons (in math and science) efforts. Dr. Iriarte-Gross stated "We are making a difference for girls in STEM in Tennessee."

MTSU Chemistry Professor Dr. Judith Iriarte-Gross represented Tennessee recently at the "White House Champions of Change" in Washington, D.C. This event recognized organizations that recruit and retain girls and women in STEM. Dr. Iriarte-Gross was invited for her role as director of the GRITS Collaborative Project. GRITS, or Girls Raised in Tennessee Science, is a statewide

## MTSU Studies International Agriculture in Argentina



A group of 10 students and 2 faculty members (see photo on page 2) departed Murfreesboro December 26, 2011 and traveled to Mendoza, Argentina for a course in International Agriculture. The group was led by Dr. Tony Johnston, who was assisted by visiting scholar (and newly minted Ph.D.), Dr. Wendy Francesconi. The course, International Agriculture (ABAS 4190), was taught entirely on site in the Mendoza area and consisted of visits to numerous agricultural venues involved in the production, processing and international distribution of food products. Over the 18 days the class stayed in Mendoza, more than 25 companies within a 1.5 hour drive radius of the city were visited. Plans are being made to bring another class to Mendoza in 2012.

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## State Awards \$750,000 for MSP

Dr. Amy Phelps (Chemistry) and Angela Barlow (Mathematical Sciences) received a one-year math science partnership grant for modeling instruction and curriculum development in high school science. In addition to professional development for high school science/math teachers, the grant will develop curriculum for chemistry and biology in the invested curriculum which does conceptual physics (9th grade), chemistry (10th), and molecular biology (11th). Congratulations on funding for this important work!

## MTSU's ROTC Cadets to Experience International Culture

Ten MTSU Army ROTC Cadets have been selected for participation in US Army Cadet Command sponsored "Culture and Language Immersion" summer deployments. The purpose of this study abroad program is to deploy cadets into strategic overseas regions for cultural and language immersion. This is in support of Department of the Army and regional Army Service Component Command Security Cooperation strategies and objectives. These deployments help ROTC Cadets become more knowledgeable of cultures, languages and regions interfacing the American and Army culture and help dispel stereotypes and build mutual respect. Of those Blue Raiders selected, one Cadet will be going to Tanzania. Additionally, LTC Tharrel Kast and Enrollments Officer CPT Russell Newbill will lead nine MTSU Cadets, along with eleven others from universities nationwide, to the first Culture and Language Immersion Summer Deployment in Bulgaria three weeks this summer.

## TAS Honors CBAS Faculty

The Tennessee Academy of Sciences (TAS) honored retired chemistry professor, Dr. Jim Howard, with an award for Outstanding Service at its annual meeting in November 2011. For many years, Dr. Howard was responsible for the TAS website. TAS also honored Biology Professor Dr. Gore Ervin's long-time work as Editor of the TAS Journal by making Dr. Ervin a TAS Fellow. Congratulations to both!

## Long-Serving Faculty/Staff

MTSU celebrated 825 years of service for 43 CBAS faculty and staff, an average of 19 years each. Catherine Burnett (Math) leads with 40 years, and is followed by Nancy Garner (MS) and Cliff Ricketts (ABAS) with 35 years; Al Cripps (CSCI), Al Carter and David Hatfield (ET) with 30 years each, and Ron McBride (ET), Curtis Church, Vatsala Krishnamani, and Don Nelson (Math) with 25 years each. Special thanks to all 43 faculty and staff (and to all of you) for outstanding service to the College!

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The Basic Facts' issues:

<http://>

[www.mtsu.edu/cbas/basic\\_facts.shtml](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

### Agribusiness/ Agriscience

Dr. Justin Gardner, Professor in the School of Agribusiness and Agriscience, received an \$85,000 grant from the USDA's Agricultural Marketing Service to promote the Rutherford County Farmer's Market among low income persons in Rutherford County. In addition, this initiative, called Grow Healthy Rutherford, will provide point-of-sale equipment that will allow the farmer's market to not only accept debit and credit cards, but also accept electronic payment from SNAP participants. Approximately 14% of Rutherford County residents participate in SNAP, formerly known as food stamps. This grant is a partnership between MTSU and the University of Tennessee Extension.



Dr. Gardner with  
Janie Becker, UT Extension

### Biology

Dr. Jeffrey L. Walck has been named as a collaborator on a recently approved grant from the National Science Foundation of Sri Lanka to study mangrove seed ecology.

Dr. Charles McGhee, along with Elizabeth A. Ingianny and Jeffrey W. Shultz, published the following in the *Journal of Arachnology*:  
"Taxonomy of the Leiobunum calcar species-group (Opiliones: Sclerosomatidae: Leiobuninae)."

### Computer Science

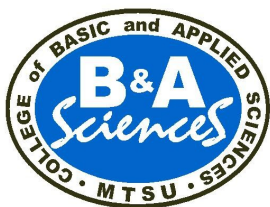
Ms. Brenda Parker, Computer Science Department, participated in CCSC (The Consortium for Computing Sciences in Colleges) held at Furman University, 11/11—11/12/2011. She presented her paper entitled "Teaching Experiences with Alice for High School Students."

### Concrete Industry Management

Concrete Industry Management (CIM) faculty presented three research papers during the Fall semester:

(1) Dr. Marcus Knight, CIM Assistant Professor, presented two papers at the annual conference of the Precast/Prestressed Concrete Institute: "Effect of Concrete Age on Pullout Strength of Headed Studs" as well as "Snow Creek Bridge Deck Replacement," in which he worked with TDOT to assess their use of Full Depth Prestressed Precast Concrete in lieu of cast-in-place decking, which significantly reduced construction time without sacrificing performance.

(2) Dr. Heather Brown, CIM Chair, presented on the "Development, Implementation and Use of Field Infiltration In Place of Pervious Concrete" at the American Society for Testing and Materials (ASTM) Symposium on Pervious Concrete, December 2012, Tampa, FL.



### Mathematical Sciences

Dr. Don Hong reports that three students in the Actuarial Science Program passed the following professional exams (part 1 or 2 of the third exam) in November 2011 from the Society of Actuaries:

Dmitry A. Terekhov and Lu Xiong (Exam MLC/3L);  
Brent R. Osantowski (Exam MFE/3F)

More exam news is available at:  
<http://frank.mtsu.edu/~amsa/Newsletter.htm>

### Physics and Astronomy

#### Star Parties Spring 2012

Feb. 3  
Galaxy Clusters  
(Brian Hart, special guest)

Feb. 24  
The Spring Triangle  
(Jana Ruth Ford)

Apr. 13 (Alumni Weekend)  
The "Magic" in Physics  
(Eric Klumpe)

Apr. 27  
The Elusive Higgs Boson  
(Charles Higgins)

Time: 6:30 pm—8:30 pm  
Place: WPS 102 and Outside

June 5  
SPECIAL EVENT  
The Transic of Venus  
(Special Time: 5:00 p.m. CDT)

For more information contact:  
Dr. Charles Higgins at 898-5946  
or  
Dr. Eric Klumpe at 898-2483

### C BAS

#### MS-PS Presentations

On December 8th, the Master of Science in Professional Sciences (MS-PS) program featured six impressive student capstone presentations. Each semester, MSPS students acquire workplace experience, complete detailed portfolios on professional projects and present an overview of the internship experience before peers, faculty and industry partners.

The students were selected for fall internships at BlueCross BlueShield of Tennessee, Center for Attention, AdvanceMed, Vanderbilt University Medical School, and Virginia Commonwealth University.

The MS-PS program at MTSU equips people for work in public and private business enterprises by bridging science and mathematics disciplines with business curriculum. Concentrations include Actuarial Sciences, Biostatistics, Biotechnology and Health Care Informatics.



Pictured front row, left to right, are:

Todd M. Henrichs  
Andrea Bacon  
Mohammedali A. Gangardiwala  
Cindy E. Guerrier  
Shauna Webb-Parker

Back row, left to right, are:

Dr. Saeed Foroudastan  
Dr. Vincent Smith  
Dr. Karen Ward  
Dr. Matthew Elrod-Erickson  
Ms. Janet Kelly  
(not pictured: Qinghong Kou)