



The Basic Facts

Volume 2, Issue 6 October 2001

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

The Science of Success

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MTSU Hosts TAS and KAS November Joint Meeting

A historic joint meeting of the Tennessee Academy of Science (TAS) and the Kentucky Academy of Science (KAS) will be hosted by Middle Tennessee State University, Murfreesboro. The meeting will begin on Thursday, November 8, and continue through Saturday, November 10, 2001.

Approximately 300 oral or poster entrants will be presenting in 18 different scientific disciplines, including mathematics, agriculture, science education, health science, and anthropology. Oral presentations will be given in three locations on campus: the third floor of KUC, first floor of DSB, and

third floor of WPS. Posters will be displayed in rooms 322 and 324 of the KUC.

Additionally, Dr. James Lightbourne, from the National Science Foundation, will be speaking Friday at the plenary session in the JUB Tennessee Room at MTSU. His topic will be "Undergraduate Research." Dr. Lightbourne will also conduct a workshop Friday morning on NSF proposal preparation.

Dr. Engin Serpersu, UT, will deliver the symposium address on Thursday night at the Garden Plaza Hotel entitled "Increased Resistance of Pathogenic Bacteria to Current Antibodies," and Dr. William Bass,

State Forensic Anthropologist, will speak at the banquet on Friday night. His topic is entitled "Forensic Anthropology."

Faculty and students who are not TAS members are invited to attend the Friday and Saturday events. For more information or for offers to join the local Arrangement's Committee, please contact Dr. Martin V. Stewart, Chemistry Associate Professor and TAS President. Email: mstewart@mtsu.edu; phone: 2073. Or visit the TAS web page at <http://tas.rhodes.edu/tas.htm>.

Aerospace Hosting National Conference

The Aerospace Department will be hosting the National Education Conference of the University Aviation Association (UAA). The UAA has over 1000 member institutions nationwide and international. Conference speakers include Greg Feith, senior air safety investigator for the National Transportation Safety Board, and Hoot Gibson, a five time NASA Space Shuttle Commander. Dr. Paul A. Craig, MTSU Aerospace Department Chairman, will lead an Education Session and present research on a pilot's first 1,000 flight hours and the safety issues involved. The MTSU *College of Basic and Applied Sciences* is sponsoring a lunch during the part of the conference that is designed especially for student attendees. Forty-two MTSU Aerospace students will be attending the student conference, and another 30 students will attend from other aviation programs across the country. The conference is October 24 - 27 at Nashville's Music City Sheraton.

The Flying Raiders take to the skies November 7 - 10 as they host the regional air meet of the National Intercollegiate Flying Association. Flight Teams from Purdue, University of Illinois, University of Southern Illinois, St. Louis University, Lewis University, Eastern KY University and the University of North Dakota will literally descend on Murfreesboro for the competition. The teams compete in various ground and flight events. Teams participate in air navigation, precision landing, and aircraft inspection contests.



MTSU has fielded a flight team since 1972, winning the National Championship in 1985, and the National Safety Award in 1991. This year's top three teams at the regional meet will move on to the national meet next spring.

Basic and Applied Sciences Doing It's Part Toward Performance Funding Goals

According to a report distributed by Betty Dandridge Johnson, Executive Director of the Institutional Effectiveness, Planning and Research Department, "one of MTSU's performance-funding goals is to retain 75.3% of our first-time, full-time freshmen by 2004-05." The report continues that in addition to the above cycle, we must "also meet annual goals" with the "retention goal for 2001-02 being 74.7%."

The report goes on to state that "in an effort to increase the University's retention rate," it would be helpful for each department to be aware of their majors retention rates.

The *B & A Sciences College* had the largest number of returning students and the second highest rating for retention at 70 percent.

CALL TO ARMS

Associate Professors Kate Moore (NURS) and Tony Johnston (ABAS) have been called to active duty in the current war on terrorism which began soon after the tragedies on September 11, 2001. Dr. Johnston, a member of the Air Force reserves, has been deployed to serve near Dayton, Ohio, in a logistics capacity at a command nerve center. Ms. Moore was called to serve in Memphis for four days of active duty as a member of the Army reserves.

We're very proud of our faculty who are called to serve and wish them all a safe return to their home, families and the University.



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

All departments are invited to submit items for this column

Aerospace

Ronald Ferrara had an article published in the *Journal of the American Historical Society* entitled "Guinea Pigs with Wings - Tennessee's Women's Research Instructor School." The article appears in Volume 46, Number 3, Fall 2001.

Paul Craig appeared as a guest on the News 5 Plus "MorningLine" program on October 9, 2001. He discussed security and the new safety measures currently being implemented throughout the airline industry.

Agribusiness/Agriscience

ABAS helped sponsor the Annual Celebration Horse Judging Contest which was held on August 25, at Shelbyville, TN. Approximately 200 young people from all over the nation compete in this event.

The Annual ABAS Farm Festival will be held this year on October 26, on the MTSU campus. The Festival is geared toward helping pre-school to fifth grade children gain an insight into the scope of agricultural influence in their daily lives.

Farm tours, conducted by the Farm Labs during the past few months, were given to Interim President and Mrs. Smith, Trousdale/Van Buren County HS students, several preschool through 6th grade students, and Outlooke Pointe of Murfreesboro Assisted Living Center.

Biology

Matthew Elrod-Erickson appeared as a guest on the News 5 Plus "MorningLine" Program in August discussing stem cell research. In addition in October, he will be giving an Honors Lecture Series talk entitled "Human Genomics and Genetic Engineering" and will also be giving a talk at the Nashville Chapter of Phi Beta Kappa at Vanderbilt entitled "The Human Genome Project."

Jeffrey Walck presented two papers at the Botanical Society of America Meeting in Albuquerque, New Mexico in August. One was entitled "Growth and

Reproduction of the Nonnative *Ligustrum Sinense* and Native *Forestiera Ligustrina*: Implications for the Invasibility of Exotic Shrubs" and the other entitled "Seed Germination Ecology of North American *Heuchera* Species: The Eastern *H. Parviflora Cylindrica*."

Kim Sadler conducted a WET (Water Education for Teachers) in-service training session for several Campus School faculty in September.

Chemistry

Judith Iriarte-Gross has been appointed McNair Academic Coordinator.

Ngee-Sing Chong presented a seminar at TSU in September on "The Role of Analytical Chemistry in Studying Atmospheric Pollution and Indoor Air Quality."

The Chemistry Department has received a great upsurge of interest in the department's DA program which is the result of many people's efforts to publicize this program.

Tammy Melton and Amy Phelps had articles published in the "Journal of Chemical Education." Ms. Melton's article was entitled "A Modification of a Lactase Experiment by Use of Commercial Test Strips," and Ms. Phelps' was entitled "A Comparison of Secondary Chemistry Courses and Chemistry Teacher Preparation Programs in Iowa and St. Petersburg, Russia."

Computer Science

Ralph Butler attended a workshop in Albany, New York, entitled "New Directions in Bioinformatics and Biotechnology."

Al Cripps had an article published in the *National Social Science Journal* entitled "Application of the AAHE's Seven Principles for Good Practice in Undergraduate Education to Online Teaching."

Jungsoon and Sung Yoo co-presented a paper at the Sixth Annual Decision Science International Conference in Chihuahua, Mexico entitled "Usability Test for

On-line Retail Stores."

Engineering Technology/Industrial Studies

CIM program students and the concrete industry are donating materials and labor to complete the parking lot on Faulkenberry Drive across from the football stadium.

CIM patrons arranged a meeting with Dr. Sidney McPhee, President of MTSU, Austin Cheney, Director of the CIM Program, and Dr. Rod Page, U.S. Secretary of Education, in Washington, DC. The Secretary wants to use the CIM Program as a national model of education-business partnership.

Mathematical Sciences

Andrew Worsey has been awarded U.S. Patent # 6,256,597 B1 for his groundbreaking research work on developing an algorithm for "Three Dimensional Spray Coating and Simulation." The algorithm was developed for the GE Company who uses it to coat high energy rotating parts in aircraft engines with liquid plasma.

Diane Miller gave a speech/presentation entitled "What is Inquiry Based Mathematics Teaching?" to the Metro-Nashville Public School mathematics teachers grades 5-12. She has also co-authored a paper published in the *Journal of Mathematical Behavior* entitled "Diagnosing Conflict Factors in Calculus Through Students' Writings: One Teacher's Reflections."

Ginger Rowell was awarded a grant from the NASA Marshall Space Flight Center Engineering Cost Office to develop "Intermediate and Advanced Web-based Regression Tutorials."

Dennis Walsh published a solution to a mathematical analysis problem entitled "The Limit of a Definite Integral" in the *College Mathematics Journal*.

Jan and Rebecca Zijlstra conducted a workshop entitled "A Geometry and Problem Solving Workshop" in August for sixth graders from Hobgood Elementary School.

J.C. Hankins and Jeff McSweeney attended the 36th Actuarial Research Confer-

ence in August in Columbus, OH.

Nursing

Steven Krau presented a workshop conducted at "Focus 2001," a children's ministries program, entitled "Helping Children Cope with Loss: When a Loved One Dies."

Lynn Parsons contributed to the *Scope and Standards Orthopaedic Nursing Practice*, 2nd Ed publication (in both hard copy and software) through the Association of Orthopaedic Nurses, Anthony J. Janetti, Inc., Pitman, NJ. Also, Dr. Parsons has been selected by the American Association of Spinal Cord Injury Nurses to serve on their Job Analysis Panel for development of their certification exam in Spinal Cord Injury Nursing. In addition, she was selected to serve as guest editor for the September issue of the *Critical Care Nursing Clinics of North America*.

Suzanne Prevost served as featured speaker for the annual Margaret Eckerd Brown Symposium in Erie, PA. Her presentation was entitled "Take This Job and Love It!" Also, she serves as clinical editor of the journal *Critical Care Nursing Clinics of North America*.

Shelia Marquart and Jenny Sauls wrote an article in the September issue of *Critical Care Nursing Clinics of North America* entitled "Survivorship: Living Through a Life-Altering Event."

Lynn Parsons, Karen Ward, and Stephen Krau co-authored three manuscripts for the September issue of *Critical Care Nursing Clinics of North America*. They are entitled "Orthopedic Trauma: Managing Secondary Medical Problems," "Living the Healthy Heart Path: Rehabilitation After a Cardiac Event," and "Managing the Stress of Caring for Rehabilitation Patients."