



The Basic Facts

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MTSU Sigma Xi Chapter Receives Award

In November, the 2002 Annual Meeting was held in Galveston, Texas, and the MTSU Sigma Xi Chapter was presented with the Chapter Diversity Program Award.

The award was presented to Dr. Amy Jetton (BIOL) for Sigma Xi member participation and co-sponsorship in many programs that were organized by Dr. Judith Iriarte-Gross (CHEM) and Dr. Amy Jetton.

The programs recognized at the ceremony included Expanding Your Horizons in Mathematics and Science, a one-day series of hands-on workshops in science, engineering and mathematics for 6th, 7th, & 8th grade girls; "Perspectives of MTSU Women in Science," a panel discussion co-sponsored by Sigma Xi and National Women's History Month & Minorities; "Questions and Answers," co-sponsored by

National Women's History Month and African American History Month which utilized participation of Sigma Xi members to mentor current undergraduates about attending professional or graduate schools in the sciences.

The Diversity Program Award was one of only two awarded throughout the society this past year.

Founded in 1886, Sigma Xi, The Scientific Research Society is a non-profit membership society of nearly 75,000 scientists and engineers who were elected to the Society because of their research achievements or potential to contribute to their respective fields. Sigma Xi has more than

500 chapters at universities and colleges, government laboratories and industry research centers. In addition to publishing *American Scientist*, Sigma Xi awards grants annually to promising young researchers, holds forums on critical issues at the intersection of science and society and sponsors a variety of programs supporting honor in science and engineering, science education, science policy and the public understanding of science.



The Science of Success

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Military Science November Activities

In November, the MTSU Blue Raider Battalion was involved in several events on and off campus.

Early in the month, the third year Military Science Cadets participated in a challenging two-day training event in preparation for the National Advanced Leadership Camp which will be held in the summer of 2003 at Fort Lewis, Washington. Fort Lewis is located in the Pacific Northwest on Puget Sound and is adjacent to McChord Air Force Base.

The Blue Brigade participated in the recent Homecoming activities by presenting the national and state colors before the homecoming game. They also executed the Saber Arch for the Homecoming

Court, who were escorted through the ranks.

The Forrest Raiders participated in an orienteering event held at the Oak Mountain State Park in Alabama. The event was hosted by the Vulcan Orienteering Club in which the Raiders competed in a three-hour course. Most of the Forrest Raiders excelled on the course to the extent that many had enough time to make a second run!

The day before the Thanksgiving break, the following cadet seniors received their Army Branches: Travis

Brown and Buford Rachford (Quartermaster), David Lemay and Hilary Mann (Military Science), Christopher Mullin, Sean Murphy, Seth Olmstead, and William Short (Ordinance), James McCormick and Paul Sipe (Engineer), Patrick Dowd (Air Defense Artillery), William Raeth (Armor), Duke Reim (Infantry), Patrick Taylor (Aviation), James Taylor (Field Artillery), and James Word (Transportation).



The Role of the Internet in 2012



Dr. Al Cripps, Professor of Computer Science, established the first connection with the Internet ten years ago through funding he received from the National Science Foundation (NSF).

At that time, the bandwidth was a single 64,000 bits-per-second leased phone link to Vanderbilt University's connection. We have come a long way since then!

Ten years later Dr. Cripps believes that the Internet will continue to impact higher education by placing less emphasis on factual knowledge and more upon understanding knowledge, because with the Internet, information can be found

instantly. He adds that the Internet will continue to be a resource, but it will never replace faculty.

He went on to say that in 2012, the Internet will be easier to use and predicts it will be more user friendly and viewed as a more personal, wearable device. He ends by saying that the Internet is one resource, not an end all.

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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

Agribusiness/Agriscience

Dr. Warren Anderson attended the 2002 Tennessee Land Judging Contest and the 42nd Annual Awards Banquet hosted by Austin Peay State University in November. The contest and banquet are sponsored by Tennessee Farmers Mutual Insurance Company in cooperation with Tennessee Agricultural Extension Service, Tennessee Agricultural Education, Natural Resources Conservation Service, Soil and Water Conservation Society, Soil Conservation District Supervisors, Tennessee Agricultural Experiment Station, Tennessee Farm Bureau, Tennessee Department of Agriculture, and the Soil Scientists Association of Tennessee.

Biology

Cindi Smith-Walters and Kim Sadler recently conducted a teacher training session at the Annual Tennessee Science Teachers Association Meeting in Franklin, TN. The session focusing on endangered species and ecosystems within the state of Tennessee was sponsored by the U.S. Fish and Wildlife Service and was well attended with lively activities and discussions.

Jason Alexander, a biology student, presented a poster entitled "Reovirus Antigen Expression in Transformed and Non-Transformed Human Cells" at the KY-TN American Society for Microbiology Branch meeting held at the Garden Plaza Hotel in Murfreesboro in November. Alexander's mentor is **Anthony Farone**.

Chemistry

The following faculty recently made presentations at the Tennessee Academy of Science Annual Meeting in Johnson City, TN:

Judith Bonicamp gave an oral presentation entitled "How a Team of Undergraduate Teaching Interns Rejuvenated an American Chemical Society (ACS) Chemistry Program."

Amy Phelps and Michael Sanger gave an oral presentation entitled "Determining Rate Laws of Everyday Processes."

Earl Pearson presented "Demonstration of a Year-Long General Chemistry Course on the Internet Using CourseInfo."

Michael Sanger presented "Using Computer Animations to Teach Chemistry at the Molecular Level."

Amy Phelps presented "The Power of Practice: What Students Learn From How We Teach."

Tammy Melton was a co-presenter of a

poster entitled "Using Hardware Materials to Model the Mole, Stoichiometry, and Limiting Reactant in a Laboratory Exercise for Introductory Chemistry Students."

Judith Bonicamp recently published in the journal *Chemical Educator* an article entitled "Who's Minding the Store? — Or How a Team of Undergraduate Teaching Interns Rejuvenated an American Chemical Society (ACS) Certified Program."

Pat Patterson recently participated in the following activities:

She and **Dwight Patterson** took the "Science to You" Outreach to West Wilson Middle School in Mt. Juliet. They worked with 160 8th graders with hands-on/minds-on activities that centered around the Periodic Table and the applications of polymers.

She attended the Tullahoma Hands on Science Center (HOSC) Advisory Board meeting. She was elected to the Board of Directors of HOSC for 2002-2003.

She attended a day long workshop for the Renaissance Project and she attended the organizational meeting of Tennessee Science Olympiad Board of Directors and was elected secretary/treasurer.

Computer Science

Joseph Driscoll, Ginger Rowell (MATH), and B.S. Sridhara (ETIS) made a presentation recently to the National Science Foundation Computer Science, Engineering, and Mathematics scholarship students entitled "How to Choose a Research Topic" and "How to Choose a Major Professor."

Chrisila Pettey presented a paper at the Southeastern Consortium for Computing Sciences in Colleges in November. The paper entitled "Simple Maintenance of Beowulf Clusters in an Academic Environment" was written with co-authors **Ralph Butler, Brad Rudnik and Thomas Naughton**.

Sung Yoo coached a programming team at the 2002 Association of Computing Machinery (ACM) Mid-Central USA programming contest held in November at Tennessee Technology University. The contest draws students from colleges and universities throughout Kentucky, Tennessee, Illinois, Missouri, and Arkansas. Two teams from the Middle Tennessee State University Computer Science Department competed. MTSU finished 5th and 6th place among 14 teams. Final standing was 38th and 41st among 105

teams in the Mid-Central region. Team members included **Michael Peters, Julian McBride, John Lemon, Justin Sunley, Joseph Horton, and James Hargis**.

Brenda Parker and Chrisila Pettey have submitted a grant to NSF entitled ITEST (Information Technology Experiences for Students and Teachers).

Brenda Parker and Pat Patterson (CHEM) presented a seminar in October on "The Eisenhower Experience." They shared experiences and accomplishments resulting in two grants during the last two years — one for Rutherford County and one for Maury, Lewis, and Williamson Counties.

Judith Hankins, Brenda Parker, Chrisila Pettey, Ginger Rowell (MATH), Diane Perhac (MATH student) and Judith Iriarte-Gross (CHEM) had a paper accepted at the Association of Computing Machinery SIGCSE 2003 Conference entitled "Computer-Related Gender Differences."

Brad Palmquist, John Lemon, and Chad Lloyd participated in the Student Paper Competition at the Association of Computing Machinery in Gatlinburg in November. **Lemon's** paper in the Bachelor Division was "Pinned Down? Try Emulation," the title of **Lloyd's** paper in the Graduate Division was "An Approach to Embedded Technology: Outside the Box," and the title of **Palmquist's** paper in the Graduate Division was "Reduced Neighborhood Mutation Testing." **Palmquist** won first place in the Graduate Division.

Mark Thweatt attended the Association of Computing Machinery (ACM) Mid-Southeast Conference in Gatlinburg in November and was elected Vice President and Conference Chairman for 2003.

Brenda Parker attended the Association of Computing Machinery (ACM) Mid-Southeast Conference in Gatlinburg in November and served as Student Paper Competition Chair.

Nursing

Shelia Marquart recently received the 2002 Susan Culpepper Award for Advising from the Tennessee Association of Student Nurses.

Four nursing students recently went off of their way to make a difference in the lives of families in need. Their stories follow:

Jeremiah MacLaren and Karen Sawyer, after assessing a Hispanic family with a newborn, designed an information booklet written both in English and Spanish covering in month-to-month fashion a year of expected newborn development. There was nothing like it that could be purchased.

Nina Sunsera applied family assessment processes to her own family in the area of impaired communication and had a dramatic positive outcome.

Carrie Beam used family assessment processes quite effectively in a family with an alternative lifestyle who thought they already knew about safe sex practices.

These students' actions demonstrate the caring and humanity that can accompany the application of scientific methods in a systematic way.

Physics

Paul Lee assisted the 2nd grade classes of Marianne Chumley and Beth Mathis at Woodbury Grammar School in showing the class how to "make" a comet of dry ice and dirt.

William Robertson received approval from the Faculty Research and Creative Activity Committee for his equipment request for the project entitled "A Multidisciplinary Approach to Thin Film Characterization."

Charles Higgins received approval from the Faculty Research and Creative Activity Committee for his request for a student worker on his project entitled "Long Term Study of Jupiter's Radio Emission Using the Galileo Spacecraft."

C BAS

Lynn Parsons presented on the topic "Diversity in the Workforce: New Practice Initiatives in the New Millennium" in November for the Nurses Organization for Veterans Affairs (NOVA) in Murfreesboro. Also, she was one of the recipients of the MTSU Division of Continuing Studies Distinguished Educator Award in Distance Learning which was presented to her in December.