



# The Basic Facts

Volume 3, Issue 11 November 2002

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

## The Science of Success

### Inside this issue:

Wulfsberg's Award	1
AERO Fly's High	1
Internet 2 on Campus	1
Our B.E.S.T	2



## Chemistry's Wulfsberg named Distinguished University Scientist



Dr. Gary Wulfsberg continues quite a trend and legacy for MTSU faculty members in the Tennessee Acad-

emy of Science.

On Nov. 15, Wulfsberg received the Distinguished University Scientist Award from the academy during its annual meeting held this year in Johnson City.

He became the third MTSU professor in the past four years to receive the honor. In 2000, Dr. Tom Hemmerly, professor, biology, earned the distinction that followed Dr. Marion Wells receiving the very first Distinguished University Scientist Award in '99.

"This is a very nice thing," said Wulfsberg, who has been the recipient of Distinguished Research Awards at MTSU.

Wulfsberg was nominated by Dr. Martin

Stewart, associate professor, chemistry.

"This award is not given every year," Stewart said. "We want these to be truly an honor and it is very truly an honor that Gary receive it."

"Professor Wulfsberg has earned an international reputation in the fields of both inorganic chemistry and chemical education," Stewart wrote in his nomination of his colleague that highlighted Wulfsberg's activities during the past 10 years. Stewart also made the committee aware of Wulfsberg's entire career.

Wulfsberg said that while it is a career award, he believes the publication of his latest book, *Inorganic Chemistry* (published by University Science Books), led to his selection.

"It is being used in at least 68 colleges and universities around the world and it's being translated into French," he said, mentioning that the Universities of

Florida, Memphis, Washington and Wisconsin, North Carolina State University, Southern Illinois and the Air Force Academy are among the U. S. universities using *Inorganic Chemistry* as a required textbook.

Published in 2000, the 978-page book weighs five pounds, "and it will appear in a Universal Studios movie, *The Hulk*," starring Nick Nolte and Jennifer Connelly," Wulfsberg said.

Stewart wrote in the nomination, "... This award not only will honor Gary Wulfsberg, but will also credit the academy as one having very high standards for the recognition of achievement."

A native of Cedar Rapids, Iowa, Wulfsberg earned his bachelor's from Iowa State University in 1966 and his doctorate from the University of Wisconsin in 1971.

## Aerospace Flying Higher

Thursday November 14, 2002 was an historic day for the Aerospace Department!

Department Chair Dr. Paul Craig spent the morning with Mike Gower, Associate Vice President for Business and Finance, in Nashville at the State Legislative Plaza. At about 10:30 the Tennessee State School Bonding Authority voted unanimously to approve our request to finance a new fleet of training airplanes. Dr. Jerry Preston pre-



sented our case to the board. They had several questions that Dr. Craig was able to answer, but most of the questions had been previously answered in the proforma that Mike Gower prepared. Then they voted unanimously in favor of a \$5.1 million bond issue to purchase a new training fleet for MTSU. The bid process is the next step. Dr. Craig is working with Mr. Joe Hugh to get the bid out within a week or two. The review process was very much a team effort with faculty and staff visiting aircraft manufacturers in Florida and Canada and working together on a proposal that will meet the needs of the department for the next decade and

keep the cost affordable for the flight labs. The current aircraft fleet is over 20 years old and was pieced together from surplus aircraft as they became available. The Aerospace students have a treat in store next fall when the new fleet is expected to be in place.



## Internet 2 Comes to MTSU

Internet 2 is a consortium being led by over 200 universities working in partnership with industry and government to develop and deploy advanced network applications and technologies, accelerating the creation of tomorrow's Internet. Internet 2 is recreating the partnership among academia, industry and government that fostered today's Internet in its infancy. The primary goals of Internet 2 are to:

- Create a leading edge network capability for the national research community
- Enable revolutionary Internet applications

- Ensure the rapid transfer of new network services and applications to the broader Internet community.

MTSU has received notification from the National Science Foundation that its application for a High Performance Network Computing grant has been approved. Dr. Richard Detmer (CSCI) assembled the grant proposal and is the Principal Investigator. Dr. Ralph Butler (CSCI), Dr. Ngee-Sing Chong (CHEM), Dr. Preston J. MacDougall (CHEM) and Dr. Zachariah Sinkala (MATH) are co-principal investigators.

Internet 2 is a research network that provides bandwidth of at least 45 Mbps to researchers' desktops. The co-PIs for this grant have specific research projects planned, but the network may be used for additional MTSU research efforts in the sciences and in other disciplines. The high performance connection should be available on the MTSU campus in early 2003.

Visit our newsletter web site to view all *The Basic Facts* issues:

<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

The MTSU Equestrian Team recently competed against the University of the South, University of Tennessee, Murray State University, Vanderbilt, Western Kentucky University, UT Martin, and Tennessee Tech at Murray State University, KY, at the season's first western show. MTSU brought home blue ribbons in five classes and tied for High-Point Team.

### Biology

**Jeff Walck** has been appointed to the Tennessee Rare Plant Advisory Committee by Milton Hamilton, Jr., Commissioner of the Tennessee Department of Environment and Conservation. The committee consists of 12 botanists knowledgeable of the flora of Tennessee and is authorized under the Tennessee Rare Plant Protection and Conservation Act of 1985. It reviews and considers nominations to the state's Rare Plant List.

**Rebecca Seipelt** was a recent recipient of the 2003 National Conference on College Teaching and Learning Award for Innovative Excellence in Teaching, Learning and Technology.

### Chemistry

**Gary Wulfsberg** presented a talk entitled "Weakly Coordinating Anions: NQR Studies of Oxygen-Metal Bonding in Metal Chloroacetates and Trichloromethanesulfonates ('Trichlates')." at the Tennessee Academy of Sciences meeting in Johnson City in November.

**Gary Wulfsberg** recently had his 2000 textbook *Inorganic Chemistry* published in a French translation entitled *Chimie Inorganique: Théories et applications*.

**Earl Pearson** presented a paper at the Tennessee Academy of Science meeting at ETSU in Johnson City entitled "Demonstration of a Year-Long General Chemistry Course on the Internet Using CourseInfo."

### Computer Science

**Joe Driscoll** made a presentation at the local Association for Computing Machinery entitled "Evolutionary Robotics."

**Cen Li** recently co-published "Applying the Hidden Markov Model Methodology for Unsupervised Learning of Temporal Data," (Postscript file), in the *International Journal of Knowledge-Based Intelligent Engineering Systems*. She also published, with others, "Assessing Impacts of Small Perturbations Using a Model-Based Approach" in *Ecological Modeling*.

**Ralph Butler** Recently made a presentation at the Ptools Conference at UT Knoxville

entitled "Scalable Process Management and Parallel Tools." He also made a presentation at the International Conference on Systems Engineering in Las Vegas, NV, entitled "A Rapid Recovery Beowulf Platform." Also he traveled to Chicago, IL as part of a research project on computational biology.

**Judy Hankins, Roland Untch, Jungsoon Yoo and Sung Yoo** attended the Music City Java Conference hosted by Vanderbilt University and MTJUG (Middle Tennessee Java User's Group).

### Engineering Technology/ Industrial Studies

**Heather Brown** chaperoned 15 students to INCON, a concrete trade show/seminar series in October in Orlando, FL.

**David Gore** received a Faculty Development Grant in November for training to be certified as a "Six-Sigma Black Belt," a quality and productivity improvement methodology for businesses. He also received a Russell Chair of Excellence grant for both software and technical training notes for the engineering technology class in plant output.

The following faculty have submitted abstracts to the American Society for Engineering Education for the 2003 ASEE conference being held in Nashville: **B.S. Sridhara** — entitled "Teaching Dynamics in a Master Classroom Using CourseInfo."

**David Gore** — entitled "Lean vs. 6-Sigma — Friends or Foes?"

**Chong Chen** — entitled "Helping Graduates to Get Professional Employment."

**Ahab Nasab** — entitled "Merits of Faculty Internship in Industry."

**Walter Boles** — entitled "A Case for Concrete Education."

**Saeed Foroudastan** — entitled "How to Bring Reality into the Classroom Through Project Innovation." The abstract has been accepted and the final paper is due in December.

**Saleh Shenaty** — two entitled "Building a DNA MicroArray by a Multidisciplinary Student Team in Collaboration with the Local Industry" and "Industry-Based Case-Study Models in Technical Education."

**Ken Sergeant** attended the South Central Job Shop Show at the Opryland Hotel Convention Center in October.

**Al Carter** attended the Regional Grants Conference hosted by the National Science Foundation and the College of Charleston in Charleston, SC in October.

### Mathematical Sciences

**Micheale Chappell** attended the Mathematics Learning Study Symposium held in September in Washington, DC. She also published a chapter entitled "Keeping Mathematics Front and Center: Reaction to Middle-Grades Curriculum Projects Research" in *Standards-Based School Mathematics Curricula: What Are They? What Do Students Learn?*

**Xiaoya Zha** co-authored an abstract entitled "On the Connectivity of Graphs Embedded in Surfaces II" which was published in *The Electronic Journal of Combinatorics* 9.

**Rajesh Barnwal** attended a professional seminar on financial risk management in October in Chicago, IL.

**Yuri Melnikov** gave a presentation entitled "Thermal Fields Caused by Point Sources in Multiply Connected Regions" at the 39th Annual Technical Meeting Society of Engineering Science Conference in October in College State, PA.

**Mary Anderson** gave a research presentation entitled "The Challenges in Confronting Teacher Change" at the Psychology of Mathematics Education in October in Athens, GA

**Mary Martin** gave a presentation at the 8th International Sloan-C Conference on Asynchronous Learning Networks. The title was "Effective Use of ALN in Teacher Recertifications Workshops" in November in Orlando, FL. She also gave a presentation entitled "From Chernobyl to Cavemen: What Do They Have in Common?" to 120 high school students at Oakland High School in November.

**Dovie Kimmins and Mary Martin** conducted a workshop entitled "Technology Tools for Displaying Mathematics and Graphics" held at the 15th Annual International Conference on Technology in Collegiate Mathematics in October held in Orlando, FL.

**Rong Luo and Don Nelson** gave presentations at the Southeastern American Mathematics Society held in November in Orlando, FL. **Luo's** presentation was entitled "The Laplacian Eigenvalue of Mixed Graphs" and **Nelson's** was entitled "The Structure of Saturated Critical Blocks."

**Lisa Bloomer** recently had a paper published entitled "Random Probability Measures with Given Mean and Variance" in the *Journal of Theoretical Probability*.

**Rong Luo** recently published the following: "Upper Bound for the Non-Maximal Eigenvalues of Irreducible Nonnegative Matrices in the *Czechoslovak Mathematical Journal*"; "The Spectral Radius of

Triangle-Free Graphs" in the *Australasian Journal of Combinatorics*; and "On Potentially C K-Graphic Sequences" in the *Ars Combinatoria*.

### Nursing

**Lynn Parsons and Martina Harris** recently published an article entitled "Relevance, Writing Style, and Synthesis: Key Elements in a Focused Review of the Literature" in the *Orthopedic Nursing* journal.

**Angela Weaver** presented "When to Call the Pediatrician" at the Children at Risk: New Issues and Challenges Conference held in October at MTSU.

**Patricia O'Leary** gave a presentation entitled "Use of Web-Based Multimedia Applications for Teaching Nursing Health Assessment" at the 7th National Conference for Nurse Educators: Assessing Program Outcomes, in Indianapolis, IN in November.

### CBAS

The following CBAS faculty were presenters at the recent 2002 Instructional Technology Share Fair:

**Sarah Barlow** (BIOL) presented on "Electronic Textbooks and Other Technologies for the Science Classroom,"

**Mary Anderson** (MATH) presented on "Field-Based Experiences for Pre-Service Mathematics Teachers via Video Conferencing,"

**Amy Jetton** (BIOL) presented "Coordination, Support and Study Tools: MTSU Anatomy and Physiology Web Site,"

**Patricia O'Leary** (NURS) presented "Use of Web-Based Multimedia Applications for Teaching Nursing health Assessment," and

**Earl Pearson** (CHEM) presented "A Full Year of Chemistry on CourseInfo."

**Lynn Parsons** gave the opening address at the National Gerontological Nurses Association in October in Chicago, IL. The address was titled "The Graying of Nurses and Ageing in America: Strategies for Managing in a New Era." She also traveled to Washington, DC in October as one of sixty nurse educators throughout the country participating in the Helene Fuld Academic Leadership Academy through the American Association of Colleges of Nurses. In addition, she gave the keynote presentation entitled "Empowerment Through Research: Bridging Research, Education and Practice," at Beta Chi Chapter of Sigma Theta Tau, International Annual Research Conference in Shreveport, LA.