Random Bytes

ALUMNUS CREATES NEW SCHOLARSHIP

Alumnus Mike Barrett (B.S. '84) and his classmates from the '80's have created an endowed scholarship to honor two of their beloved professors – Drs. Judy and J.C. Hankins.

The Hankins served on the MTSU faculty for over 25 years and this scholarship is a well-deserved honor to them for their investment in the lives of many MTSU Computer Science and Math graduates since their arrival at MTSU in 1979.

Although Dr. J.C. Hankins retired from the Department of Mathematical Sciences in 2004 for health reasons, Dr. Judy Hankins is still teaching in the Department of Computer Science. Their contributions to the University are many.

Dr. Judy Hankins helped establish the student chapter of the Association for Computer Machinery (ACM) in 1980 and served as the faculty advisor until 1992. She also served as Department Chair of the Computer Science Department from 1987 until 1990 and Editor of the Computer Science Alumni Newsletter for almost 20 years.

Pictured L to R Front: Judy Hankins, J.C. Hankins, Mario Randolph and Mike Barrett. Pictured L to R Back: Richard Detmer and Tom Cheatham.

Dr. J.C. Hankins was instrumental in the development of the Actuarial Science program at MTSU and directed many students in preparing for the Society of Actuaries (SOA) and the Casualty Actuarial Society (CAS) exams.

This $750 scholarship is awarded each Fall to an incoming freshman Computer Science major. Mario Randolph was the first recipient of the newly established scholarship. It was awarded on Sunday, August 5, 2007 at the alumni reception coordinated by Dr. Cheatham and Mike Barrett (B.S. '84) at the Foundation Reception House on Thompson Lane.

Contributions to this scholarship can be made through the MTSU Foundation by noting the Hankins Scholarship.

FACULTY REVIEW

International Awards Received

Al Cripps, **Chrisila Pettey,** and Nghiep Nguyen, "Improving the Performance of FLN by Using Similarity Measures and Evolutionary Algorithms." World Congress on Computational Intelligence, Vancouver BC Canada. Selected as best paper in session FUZZ-IEEE 2006 special session 'S4 (Computational Intelligence Based on Lattice Theory), published in *Proceedings of the World Congress on Computational Intelligence*, July 2006.

Existing Funding

Ralph Butler has a full-year research contract with Argonne National Laboratory. It purchases one fourth of his time to work on parallel process management and asynchronous load balancing on behalf of very large applications, e.g. those that may exploit more than 100,000 processors. With overhead, the current dollar figure is $33,977.

Through CyberQuest, **Al Cripps** works as a consultant for the city of Franklin Special School District and Franklin Road Academy; this is an external grant amounting to $5,000 for the year.

Internal Funding

Zhijiang Dong received a Faculty Research and Creative Projects Committee grant for his proposal, "A Formal Approach to Specify and Analyze Dynamic Software Architectures." This

Zhijiang and Sung at the programming contest

grant paid for a four-hour Summer 2007 load ($8,881).

Bill Robertson and **Cen Li**, "Acoustic Signature Modeling and Classification using Machine Learning Approaches," submitted to the Research Enhancement Program, Graduate School, MTSU. Funded. ($5,695 + 3 credit hours in Spring 2007 for Cen Li)

Don Hong, **Cen Li,** Ping Zhang, and Jeff LeBlond, "Tools for Data Mining and Information Analysis with Applications in Cancer Study and Biological Sciences," submitted to the Research Enhancement Program, Graduate School, MTSU. Funded. ($5,695 for Cen Li)

Publications and Presentations

Ewing Lusk, Narayan Desai, Rick Bradshaw, Andrew Lusk, and **Ralph Butler**, "An Interoperability Approach to System Software, Tools, and Libraries for Clusters," published in the *International Journal of High Performance Computing Applications*, Fall 2006, Volume 20, No. 3, pp. 401-407.

Al Cripps and Nghiep Nguyen, "Fuzzy Lattice Reasoning with Delta Measures," WorldComp 2007 World Congress in Computer Science, Computer Engineering and Applied Computing, June 25-28, 2007, Las Vegas, Nevada.

Nghiep Nguyen (presenter), **Al Cripps**, and Hoang Nguyen, "Using the Quiz Tool in a Course Management System to Improve Online Learning Effectiveness: An Empirical Analysis," National Technology Conference in Las Vegas, April 15-17, 2007, submitted to the *National Social Science Journal*, May 11, 2007.

Al Cripps and Nghiep Nguyen, "Fuzzy Lattice Reasoning (FLR) Classification Using Similarity Measures," published in Chapter 13 in *Computational Intelligence Based on Lattice Theory*, Springer-Verlag, Heidelberg, Germany, March 2007.

Y. Fu, **Zhijiang Dong**, and X. He, "A Method for Realizing Software Architecture Design," published in the *Proceedings of QSIC06: Sixth International Conference on Quality Software*, Beijing, China, October 26-28, 2006.

Y. Fu, **Zhijiang Dong**, X. He, "Modeling, Validating and Automating Composition of Web Services," published in the *Proceedings of the 2006 IEEE International Conference on Web Engineering* (ICWE 2006), San Francisco, CA, July 12-14, 2006.

Y. Fu, **Zhijiang Dong**, X. He, "Formalizing and Validating UML Architecture Description of Web Systems," published in the *Proceedings of the 2nd International Workshop on Model-Driven Web Engineering* (MDWE 06), San Francisco, CA, July 11, 2006.

FACULTY REVIEW (CONTINUED)

Chrisila Pettey receives silver medallion for 15 years of service and Al Cripps receives gold medallion for 25 years of service.

Zhijiang Dong, Y. Fu, and X. He, "A Framework for Component-based System Modeling," published in the *Proceedings of SEKE'06: The Eighth International Conference on Software Engineering and Knowledge Engineering*, San Francisco Bay, CA, USA, July 5-7, 2006.

Cen Li, "Classifying Imbalanced Data Using a Bagging Ensemble Variation," published in the *Proceedings of the 45th ACMSE Conference*, pp 203-208, Winston-Salem, NC, March 23-24, 2007.

Cen Li, B. Stratman, and S. Mahadevan, "Improving Railroad Wheel Inspection Planning using Classification Methods," presented at the ISTED International Conference on Artificial Intelligence in Applications, Innsbruck, Austria, published in the *Proceedings of the ISTED International Conference on Artificial Intelligence in Applications*, pp 366-371, Innsbruck, Austria, February 12-14, 2007.

Cen Li, "Extending the 'Bagging' Ensemble Approach for Classifying Highly Skewed Data," MidSoutheast ACM Conference, Gatlinburg, TN, November 16-17, 2006.

Brenda Parker and Ian Mitchell (CS undergraduate student), "Effective Methods for Learning: A Study in Visualization," The Consortium for Computing Sciences in Colleges, published in *The Journal of Computing Sciences in Colleges*, CCSC (Consortium for Computing Sciences in Colleges), Volume 22, No. 2, December 2006.

Brenda Parker, "Alice: Learning to Program by Creating Movies," Mid-Southeast ACM Conference, November 16-17, 2006, Gatlinburg, Tennessee.

Brenda Parker and James Edmondson (CS undergraduate student), "Application of Simulation in Computer Architecture," published in the *Proceedings of the 4th International Conference on Education and Information Systems: Technologies and Applications,* (EISTA' 2006), Volume I.

Medha S. Sarkar, Abisoye Mudasiru (CS graduate student), and Nilanjan Sarkar, "Design and Implementation of a Command Processor for High-Level Human Robot Interaction System," published in the *Proceedings of the 45th ACMSE Conference*, pp 209-214, Winston-Salem, NC, March 23-24, 2007.

Suk J. Seo, "On Coupled and Proper-Coupled-Domination," 38th Southeast International Conference on Combinatorics Graph Theory and Computing held in Boca Raton, Florida on March 5-9, 2007.

Suk J. Seo and Peter J. Slater, "Second Player Optimal Graphs for Competitive Parameters," accepted for publication in *Graph Theory Notes of New York* (2007).

Suk J. Seo and Peter J. Slater, "Competitive-Directed Cycle-Numbers of a Graph," *Congressus Numerantium* 179 (2006), pp. 33-47.

Jungsoon Yoo and **Sung Yoo**, "Student Performance Monitoring in Classroom Teaching," published in *The Journal of the 2007 International Conference on Frontiers in Education: Computer Science and Computer Engineering*, June 25-28, 2007, Las Vegas, Nevada.

Jungsoon Yoo and **Sung Yoo**, "Custom Designed Student Response System," ACM Chapter Conference, November 2006.

ACM (Association for Computing Machinery) meeting in Computer Science lab

ABET Reaccreditation

by Richard Detmer

MTSU's Computer Science Department has had an accredited Bachelor of Science program since 1994. Accreditation was originally granted by the Computing Sciences Accreditation Board (CSAB), which later became a participating body of ABET. We are proud to have one of five ABET-accredited computing programs in the State of Tennessee, with only one other program accredited as long as ours has been.

The last reaccreditation became official in the summer of 2006 for our Professional Computer Science concentration (see the article, "What's in a Name?"). Accreditation guidelines have changed appreciably over the years. Now we not only have to demonstrate the quality of our courses and faculty, but we have to show that our graduates actually learn something!

This is a positive change, but it takes extra work to develop meaningful measurements. This is an ongoing process, and we expect all of our programs to benefit from our efforts.

What's in a Name?

by Richard Detmer

The MTSU Computer Science Department has had two "tracks" for BS students since 1994, the Business Applications concentration, and the "no emphasis" or "no concentration" track. Historically more than 80% of our students choose the second option. As we went through the recent accreditation process in 2005-2006, we discovered that we had a problem--ABET personnel felt that the track being accredited needed to be distinguished from the BS in general. We had to have a name for the "no emphasis" track!

Choosing a name was not an easy task. After much discussion, we finally settled on the "Professional Computer Science" concentration. For anybody who has wondered about our "new" concentration, it is just the same as the old "no concentration" track. Having two great concentrations with two distinct names helps eliminate confusion for all of us.

Our Students are Recognized

by Richard Detmer

Each Computer Science graduate is required to take a major field test (MFT) in his/her final semester. This provides the Department and the University with valuable information about what our students have learned. We use the national MFT from the Educational Testing Service (ETS), an exam used by about 75 colleges and universities across the country.

MTSU rewards departments whose students do well on the MFT with a small travel reward and with a plaque. Our students have scored above the national average each of the last five years! Both our students' mean score and the majority of students' individual scores have been above average. We are proud of what our students have learned and of how well they demonstrate this knowledge on the MFT.

MTSU also requires graduates to take a general education exam to determine the level of learning in these areas. Since computer science students often profess they don't like general education courses (and frequently their class grades show it), it is somewhat surprising that our graduates consistently score above MTSU and national averages on the general education exam. They have been recognized two of the last three years for their performance, and one of those years had the highest departmental average of all the MTSU departments.

ASSOCIATION FOR COMPUTING MACHINERY NEWS

Dr. Zhijiang Dong is our faculty advisor for the Association for Computing Machinery (ACM). He and the officers have been very busy with meetings and fund raisers and they are doing a fantastic job! The meeting rooms are full and the attendees are full of pizza.

ACM officers are: President, David Fiala; Vice-President, Alena Morozova; Secretary, Edgard Pinto; Assistant Secretary, Scott Pack; Treasurer,

Carl Figueroa; Photographer, Steven Foe; Consultant, Carl Caum; and Webmaster, Darren Hill.

Below is a list of some of ACM's speakers for this semester.

January 24, 2008 - Mr. Kenneth Kinney, Cook Systems International's Vice President of Marketing and Director of College Career Corp Recruiting, talked about great internships and job opportunities at Cook Systems.

January 31, 2008 - Mr. Kevin Ross, President of Metova LLC, a local company in Franklin, talked about great internship and job opportunities at Metova LLC.

February 12, 2008 - Women in Computer Science sponsored guest speaker Catherine Crimi, Project Manager in Information Technology Services at Vanderbilt University. This meeting was co-sponsored by the Women in Computer Science organization.

NEW COMPUTER SCIENCE ORGANIZATION

Brenda Parker; Mireya Martinez; Tasha Purnell, Julie Paige and Natalie Smelcer

Our newest student organization is Women in Computer Science (WCS). WCS was organized in Summer 2007 to address problems in attracting and retaining female students in the computer science field. WCS officers are: Julie Paige, President; Tasha Purnell, Vice-President; Natalie Smelcer, Secretary & Publicity Agent; and Sarvani Mallapragada, Treasurer.

Brenda Parker is the faculty sponsor for the new organization. WCS members are planning many activities and are encouraging all female computer science majors and minors to join.

More information can be found at http://wcs.cs.mtsu.edu.

2007 SCHOLARSHIP AND AWARD WINNERS

Outstanding Freshman in Computer Science: Charles Srodka

Outstanding Sophomore in Computer Science: Yong Duan Gao

Outstanding Junior in Computer Science: Scott Fulton

Outstanding Senior in Computer Science: Rodney Kincaid

Nancy Wahl Computer Science Scholarship: Diana King, Mireya Martinez and Alena Morozova

Computer Science Alumni Award: Joseph Thomason

Computer Science Scholarship Award: Max Edmiston and Andrew Love

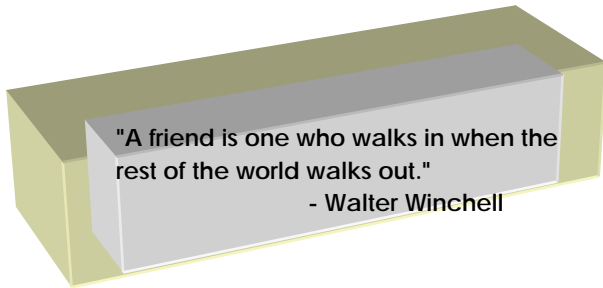**Paul H. Hutcheson Computer Science Graduate Award:** Brian Sulcer

Mack Thweatt Computer Science Scholarship: Luke Eitneir

Judy and J.C. Hankins Scholarship: Mario Randolph

Square D Computer Science Scholarship: Joshua Cole, James Edmondson, Patrick Farr, David Fiala, Scott Fulton, Joshua Kent, Rodney Kincaid, Gary Reynolds, David Rivenbark and Charles Srodka

"A friend is one who walks in when the rest of the world walks out."
                              - Walter Winchell

C H A R A C T E R

Watch your thoughts; they become words.

Watch your words; they become actions.

Watch your actions; they become habits.

Watch your habits; they become character.

Watch your character; it becomes your destiny.

-Patrick Overton

Managers are people who do things right,
while leaders are people who do the right thing.

- Warren Bennis

DECEMBER 15, 2007 WAS A VERY SPECIAL DAY

Special congratulations go out to our Lab Director of almost ten years, Neal McClain!

On Saturday, the fifteenth of December two thousand seven, during a private ceremony at the Buckhorn Inn in Gatlinbug, Tennessee, Mr. Neal Wilson McClain married Ms. BethAnna Schellberg. The couple resides in Murfreesboro.

BethAnna grew up mainly in Memphis, but with a pretty good smattering of the rest of the country thrown in; her father was a career Marine.

When asked to share something about the event, Neal responded, "The minister came to the cabin, so it was just the three of us there for the ceremony. When it came to the part where the minister asks, "Is there anyone present who objects to this union?" he stopped, and looked around like he was in a huge church or something, then got back to the ceremony. Naturally, we both just about died laughing."

Mr. and Mrs. Neal W. McClain
December 15, 2007