Random Bytes

Computer Science Department
College of Basic and Applied Sciences

Bucher Is Hired as Full-Time Temp

Rebecca Bucher is not a newcomer to the Computer Science Department. She served as an adjunct faculty member in the fall of 2004 and did such a great job, she was hired on as a one-year full-time temporary instructor in the fall of 2005. Rebecca coordinates and teaches CSCI 1150, Computer Science Orientation. She replaced Joseph Driscoll who decided to go back to graduate school at Vanderbilt to study Physics.

Before coming to MTSU, Rebecca was a Technical Instructor at New Horizons Computer Learning Center where she was the instructor of a variety of networking classes including Windows 2000 with a special emphasis on SQL Server and also Oracle Database Administration courses. She is a Microsoft Certified Trainer (MCT), Microsoft Certified Systems Engineer (MCSE), Microsoft Certified Database Administrator (MCDBA) and an Oracle Certified Professional (OCP).

In 1994, Rebecca received her Bachelor of Engineering, double majoring in Biomedical Engineering and Mathematics from Vanderbilt University. She then attended the University of Memphis and received her Master of Science in Biomedical Engineering in 1996.

Rebecca lives in Woodbury with her husband, Andrew, who is a dentist. They have two beautiful boys. Drew (3), has his own computer (a very old one) and can navigate to his favorite websites all on his own. He is already learning computer terms and even frustrations. "Mom, it's locked up again!" "OK Drew, just hit ctrl-alt-delete, then click this button and that button to end task." Robert (1), is fascinated by all the blinking lights and takes great joy in turning the computers off and on, much to the angst of the rest of the family.

Rebecca has lived in Tennessee her whole life-from Knoxville to Nashville, to Memphis, and now back to middle Tennessee However, this Tennessee native loves to travel. She has been fortunate to participate on mission trips to Egypt, Brazil, and many cities in the US. Once the kids are older, she hopes to continue participating in local and foreign short term mission projects. Her favorite adventures include riding horseback at sunset around the great pyramids, taking the subway in New York City and standing at the base of the Christ statue in Rio de Janerio. Her next travel dream is to rent a motor home and visit the national parks out west.

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The Easter Lily. *For many, the beautiful trumpet-shaped white flowers symbolize purity, virtue, innocence, hope and life—the spiritual essence of Easter.*

Li Receives Promotion and Tenure

Cen Li began her B.S. studies in computer science at MTSU in the summer of 1991. Before coming to MTSU, she studied Electrical Engineering at East China Normal University, Shanghai, China.

Cen completed both her M.S. and Ph.D. at Vanderbilt in 1995 and 2000 respectively. She was hired as a temporary full-time faculty member in the Computer Science Department in the fall of 1999 and then hired as an assistant professor (tenure-track) in the fall of 2000.

Cen teaches artificial intelligence, robotics, and data mining. She is an active researcher and a member of the graduate faculty. In her spare time, Cen likes to read, watch movies, play tennis, and travel. She lives in Brentwood with her husband and nine year old daughter, Joyce. Her husband is a professor in the Electrical Engineering and Computer Science Department at Vanderbilt.

We congratulate Cen on her promotion from Assistant Professor to Associate Professor and for receiving tenure!

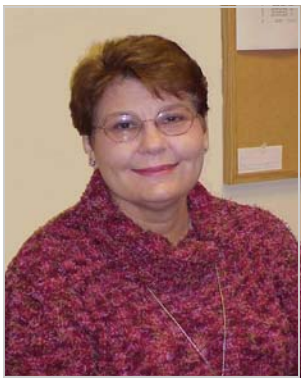
Computer Science Staff News

Pat Abogado is the latest addition to the Computer Science Department. She replaced Gwen Williams who took a position at the campus library. Pat is married and has four grown children.

Before moving to Murfreesboro in December 2002, Pat lived in suburban Chicago and worked as the assistant to the chief information officer of a large corporation. She also managed administration for the corporation's computer networking division for a couple of years and she really enjoyed working with the technicians.

In her spare time, Pat likes to organize, read, put puzzles together, make jewelry, and dance to the oldies.

Please join us in welcoming Pat to MTSU!



ACM Updates

Dr. **Medha Sarkar** serves as this year's ACM (Association for Computing Machinery) advisor. She has been very busy lining up great speakers. Officers kneeling L-R are **Joshua Beard**, Photographer; and **Cliff Taylor**, Secretary. Officers standing L-R are **Michael O'Brien**, Vice President; **Trevor Brown**, President; **Max Edmondson**, Treasurer; and ACM faculty advisor, **Medha Sarkar**.

Special speakers this semester have included **Mrs. Mimi Thomas**, Career Placement Coordinator for MTSU Basic and Applied Sciences, Dr. Douglas Schimdt from Vanderbilt University, Dr. Jack Dongarra from the University of Tennessee at Knoxville and Dr. Peter Cummings from Vanderbilt University.

Monitoring Success

Ralph Butler, along with colleagues Ross Overbeek and Tadhg Begley, published "The Subsystems Approach to Genome Annotation and its Use in the Project to Annotate 1,000 Genomes" in Nucleic Acids Research, 2005, Vol. 33, No. 17.

Sung Yoo attended Cisco Network Security Boot camp in Louisville, Kentucky on January 13-16, 2006.

Ralph Butler traveled to Argonne National Laboratory in Chicago, Illinois on January 31-February 3, 2006 to conduct research on a parallel computing project.

Richard Detmer attended the SIGSCE 2006 ACM Conference held in Houston, Texas on March 2-March 4.

Jungsoon Yoo and **Sung Yoo** presented "Adaptive Tutor for Online Learning" at the SIGSCE 2006 ACM Conference held in Houston, Texas on March 2-March 4. **Jungsoon Yoo** also presented "Student Progress Monitoring Tool Using Treeview" co-authored with **C. Lance** and **J. Hankins.**

Suk Jai Seo presented "The Competition Number of Directed Cycled in a Graph" co-authored with P. Slater at the 37th Southeastern International Conference on Combinatorics Graph Theory and Computing on March 6-March 10, 2006 held in Boca Raton, Florida.

Jungsoon Yoo presented "Intelligent Tutoring System for CS-I and II Laboratory" co-authored with **C. Pettey, S. Yoo, J. Hankins, C. Li** and **S. Seo** at the 2006 ACMSE Conference in Melbourne, Florida on March 10-March 12, 2006.

Suk Jai Seo presented "An Introduction to Proper-Coupled-Domination in Graphs (R#49)" co-authored with P. Slater at the 44th ACM Southeast Conference in Melbourne, Florida on March 10-March 12, 2006.

Cen Li presented "Modeling Student Online Learning Using Clustering" co-authored with **J. Yoo** at the 2006 ACMSE Conference in Melbourne, Florida on March 10-March 12, 2006.

Nothing Artificial About It

Those recognized for years of service at MTSU are: **Mack Thweatt,** 40 years; **Michelle Higdon,** 15 years; and **Jungsoon Yoo,** 15 years.

The **Computer Science Department** received both the General Education and Major Field Test awards for 2004-2005.

The Tennessee Delta Chapter Upsilon Epsilon (UPE) held its 13th Annual Initiation Ceremony on April 6, 2006 in the James Union Building. UPE is the first and only, existing international honor society in the Computing and Information Disciplines. Ten students electing to join UPE this year are: **Timothy Davies, Bradley Donegan, Maxwell Edmiston, Luke Eitneier, Craig Eli, Daniel Gibbs, Patrixit Khatri, Andrew Love, Rakesh Kuman Maskara and Tarak B. Patel.**

Faculty and staff members recognized as those "Making a Difference" in the lives of our students **include Pat Abogado, Ralph Butler, Al Cripps, Richard Detmer, Judy Hankins, Michelle Higdon, Neal McClain, Brenda Parker, Chrisila Pettey, Medha Sarkar, Mack Thweatt, and Roland Untch,**

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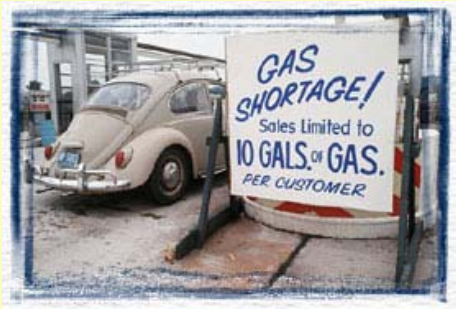
Spring Forward . . . Fall Back



Following the 1973 oil embargo, the U.S. Congress extended Daylight Saving Time to 8 months, rather than the normal six months. During that time, the U.S. Department of Transportation found that observing Daylight Saving Time in March and April saved the equivalent in energy of 10,000 barrels of oil each day - a total of 600,000 barrels in each of those two years.

Likewise, in 1986, Daylight Saving Time moved from the last Sunday in April to the first Sunday in April. No change was made to the ending date of the last Sunday in October. Adding the entire month of April to Daylight Saving Time is estimated to save the U.S. about 300,000 barrels of oil each year.

Changing Again in 2007

The **Energy Policy Act of 2005** was passed by Congress and then signed into law by President George W. Bush on August 8, 2005. Under the new law, Daylight Saving Time begins three weeks earlier than previously, on the second Sunday in March. DST is extended by one week to the first Sunday in November. The new start and stop period begins March 2007.

MEMORY LANE

Birth of Computer Science

Before the 1920s, *computers* were human clerks that performed calculations. They were usually under the lead of a physicist. Many thousands of computers were employed in commerce, government, and research establishments. Most of these computers were women, and they were known to have a degree in calculus. Some performed astronomical calculations for calendars.

After the 1920s, the expression *computing machine* referred to any machine that performed the work of a human computer, especially those in accordance with effective methods of The Church-Turing Thesis. The thesis states that a mathematical method is effective if it could be set out as a list of instructions able to be followed by a human clerk with paper and pencil, for as long as necessary, and without ingenuity or insight.

Machines that computed with continuous values became known as the *analog* kind. They used machinery that represented continuous numeric quantities, like the angle of a shaft rotation or difference in electrical potential.

Digital machinery, in contrast to analog, was able to render a state of a numeric value and store each individual digit. Digital machinery used difference engines or relays before the invention of faster memory devices.

The phrase *computing machine* gradually gave away, after the late 1940s, to just computer as the onset of electronic digital machinery became common. These computers were able to perform the calculations that were performed by the previous human clerks.

Since the values stored by digital machines were not bound to physical properties like analog devices, a logical computer, based on digital equipment, was able to do anything that could be described "purely mechanical." Alan Turing, known as the Father of Computer Science, invented such a logical computer known as the Turing Machine, which later evolved into the modern computer. These new computers were also able to perform non-numeric computations, like music.

From the time when computational processes were performed by human clerks, the study of computability began a science by being able to make evident which was not explicitly defined into ordinary sense more immediate.

For more information on this topic, go to:

http://en.wikipedia.org/wiki/History_of_computer_science#Birth_of_computer_science.