

# NewsWatch

Missouri State University

## In memory of Dr. Lawrence E. Banks Jr.

Dr. Lawrence (Larry) Edison Banks Jr., 71, of Springfield passed away Jan. 6, 2010, after a brief struggle with cancer. He served the University faithfully for nearly 50 years.

Dr. Banks was born Jan. 20, 1938, in Lawton, Okla. He graduated from the University of Oklahoma with a B.S. in Physics in 1959 and a Ph.D. in Physics in 1969. Dr. Banks served Missouri State University during his entire professional career, beginning in 1961. At that time the University was a small college of fewer than 3,000 students and Dr. Howard Petefish was the only faculty physicist. The Science Department was headed by Dr. Robert W. Martin, a chemist. Dr. Banks' teaching load for the first few years was 19 hours/semester. In 1968, the University was divided into four divisions. It was within the Division of Science and Technology that the Department of Physical Sciences was formed and Dr. Banks was chosen as leader. As the University evolved, departments split and became schools, and eventually colleges; Dr. Banks was consistently chosen to lead. He served as the Physics and Astronomy Department head for 21 years, and in 1994, Dr. Banks was named dean of the College of Natural and Applied Sciences. He served as dean for 12 years. Dr. Banks was the primary originator of the Missouri Virtual School, a program that provides specialized instruction to students in rural schools throughout Missouri. When Dr. Banks retired from MSU in 2006, he continued to work with the Missouri Virtual School.

One of the many accolades Dr. Banks received during his tenure was the Science Teachers' of Missouri Distinguished Service Award (2000). He also was named a Fellow of the Missouri Academy of Science in 2004. Though he felt his contributions to the administration at Missouri State were small, Dr. Banks summarized his dedication to the University at his retirement reception in 2006, "I came because I loved the discipline of physics, and I stayed because I found that I loved helping students learn about physics." He uniquely appreciated the importance of learning, and his greatest joy was for each and every student to discover a disciplinary niche and an understanding of our complex world and society that could captivate their imagination. He inspired each one of us still at the University to carry on this tradition.

Dr. Banks is survived by his wife of 51 years, Judith Banks; daughter Kathy Robertson and her husband, Richard; son, Lawrence Edison (Eddy) Banks III and his wife, Cynthia; and granddaughters, Lauren Banks, Matty Banks and Rachel Robertson.

Memorial donations may be made to the Banks Family Scholarship in care of the MSU Foundation (<http://www.missouristatefoundation.org>).



Remembrances – "From the first day I arrived on campus, Larry spent lots of time with me; probably because I wasn't always doing the right thing. As a new assistant professor my teaching reviews were not that good, and everyone helped mentor me – I think this is a real testament to the way Larry ran the department and his skill of getting people to do the right thing. Through the years I always tried to do a lot of research, and Larry as department head and later dean, always supported my efforts; even when it didn't seem like more research was something the department really needed. He always loved undergraduate research projects and was very interested in what we might accomplish at that level. He was passionate and outspoken about maintaining the quality of our undergraduate science and math programs."

This remembrance comes from a faculty member hired by Dr. Banks – Ryan Giedd, now the executive director of JVIC. Dr. Giedd, like Dr. Banks, served time as Physics, Astronomy and Materials Science department head.

Do you have a story or a remembrance of Dr. Banks?

If so, please send it to CNAS. Recollections from faculty and staff will be placed in a scrapbook – one copy will remain in the college archives and the other will be passed on to his family.

## A few words from the Dean

Happy New Year!



The year 2009 was one of challenges and opportunities. I told you about many of the leadership changes occurring over the summer. The final change was made in late August when Dr. Pawan Kahol was appointed associate dean of the college. This opened up the opportunity to appoint Dr. Bob Patterson as acting head of the

Department of Physics, Astronomy and Materials Science (PAMS). A nation-wide search for a department head for PAMS is under way.

The public affair's theme for Missouri State University during the 2008-09 academic year was sustainability. It was important to me that the energy and enthusiasm generated from our many speakers and events on campus during the year not be forgotten. Fortunately, Ken McClure, vice president for administrative and information services at MSU, agreed and we formed a sustainability advisory committee which met for the first time during the summer of 2009. This committee reviewed the sustainability statement adopted by the University in early 2008 (<http://www.missouristate.edu/Sustainability/statement.htm>) and decided that our first action should be to highlight accomplishments made by the University and to start a list of challenges. We chose to hold a Sustainability Fair on Nov. 18, 2009, for all faculty, staff and students in the PSU Ballroom. We also held a breakfast that day for Springfield community leaders to share our accomplishments. The event was well received and served to highlight the many good things happening at Missouri State University. The sustainability advisory committee will continue to document the successes and help to facilitate goals and plans for the future based on the University's sustainability statement. Missouri State University became an institutional member of AASHE and we look forward to continuing to lift up this theme.

I continue my challenge to all alumni and friends to help to raise a permanently endowed equipment fund for the college. I have agreed to match \$1.00 (up to \$5,000) for each \$5.00 you donate. My goal is to have the full \$30,000 raised by Homecoming 2010. Won't you help me meet this goal? So far you have donated \$1,945 and I have done my part to match it 5:1: \$389. And yes, this is only the beginning. We will need an endowment of \$4 million to really help into the future, but this is a start and we will continue to lift up this very important need of the college.

We look forward to many successes in 2010: the outstanding students who always amaze us with their accomplishments; the faculty who continue to lead world-class research groups; and the continued strengthening of the William H. Darr School of Agriculture and the Department of Hospitality and Restaurant Administration.

## The College of Natural and Applied Sciences

[www.cnas.missouristate.edu](http://www.cnas.missouristate.edu)

### Dean

Tamera Jahnke

### Associate Dean

Pawan Kahol

### William H. Darr School of Agriculture

Anson Elliott, Department Head

#### Biology

Alicia Mathis, Department Head

#### Chemistry

Alan Schick, Department Head

#### Computer Science

Lloyd Smith, Department Head

#### Engineering Program

Doug Carroll, Program Director

#### Fashion and Interior Design

Paula Kemp, Acting Department Head

#### Geography, Geology and Planning

Tom Plymate, Department Head

#### Hospitality and Restaurant Administration

Melissa Dallas, Department Head

#### Mathematics

Yungchen Cheng, Department Head

#### Physics, Astronomy and Materials Science

Robert Patterson, Acting Department Head  
Director, Baker Observatory

#### Bull Shoals Field Station

Janice Greene, Director

#### William H. Darr Agricultural Center

Ben Fuqua, Director

#### Center For Grapevine Biotechnology

Wenping Qiu, Director

#### Center for Resource Planning and Management

Diane May, Director  
Jane Hood, Associate Director

#### Ozarks Environmental and Water Resources Institute

Bob Pavlowsky, Director

## Mountain Grove Cellars sold out!

While Missouri State's research winery (located at the State Fruit Experiment Station in Mountain Grove, Mo.) sold most of its 2009 inventory, the team is working hard to make its award winning wine for 2010. Last year this quiet branch of campus created a lot of buzz not only among the local wine connoisseurs but also on the national level. With the following awards you can see why the winery is gaining notoriety:

**Indy International** Silver – Maroon Blend & Chambourci Bronze – Pink Catawba

**International Eastern** Silver – Maroon Blend & Pink Catawba

**San Francisco International** Silver – Chambourcin

**Finger Lakes International** Silver – Pink Catawba

**Mid American** Silver – Pink Catawba Bronze – Maroon Blend & Chambourcin

We are anxiously awaiting the new products for 2010. We expect to have wine available for sale in early to mid-spring. Watch the web site for the exact release date and when wine will be available for purchase on our campus. Due to the experimental nature of the winery – our products are considered to be specialty items and therefore are very limited in quantity. While we have little inventory left, some of our community partners, including the good people at P.F.I. Western Store/Diamond Ridge Market still have a selection available for purchase.

We look forward to the opportunities in 2010 as we continue to learn, grow and expand our achievements. If you would like more information about the activities at the Fruit Station please call us at 417-547-7500. Visit our website at <http://mtngrv.missouristate.edu>.

## W.E.T. and W.I.L.D. for college credit

Project w.e.t. (Water Education for Teachers) had a great year thanks to our dedicated group of Project w.e.t. facilitators who lead workshops throughout all regions of the state. In 2009, more than 300 teachers, college students and many other educators from the Missouri Department of Conservation, Missouri Department of Natural Resources and other non-profit groups attended a Project w.e.t. workshop and received specialized training and learned activities to use with students and adults in the classroom. These activities illustrate basic physics, chemistry and biological concepts, as well as provide critical-thinking opportunities about environmental and health-related issues.

Project w.e.t. is supported by several groups in southwest Missouri that are all involved with water issues. Missouri State University, the City of Springfield, Greene County, the Watershed Committee of the Ozarks and the James River Basin Partnership all support Missouri Project w.e.t., and the state office is located on the campus of Missouri State University.

January 2010 started with a new facilitator training, held in conjunction with the Missouri Department of Conservation's Project w.i.l.d. (Wildlife in the Learning Design) and Project Learning Tree (providing training about forests and plants). Previous facilitator training opportunities included a weekend trip to Johnson Shut-Ins State Park in July. Participants enjoyed a Friday evening speaker who explained the igneous geology of the area and participants were treated to a tour of the re-opened park to survey the catastrophic damage done by the Taum Sauk Reservoir breach in December 2005 as well as the restoration efforts under way. In November 2009, the three partner projects w.e.t., w.i.l.d. and Learning Tree met at Lake of the Ozarks for a weekend. Participants were able to take this course at Missouri State University for undergraduate or graduate level credit and complete training in all three emphasis areas.

Feel free to contact me if you have questions about the program or would like more information about upcoming workshops.

For more information contact:

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### Upcoming Mountain Grove Campus Events

March 6	Pruning Workshop for the Home Fruit Grower
March 11	Food Safety Workshop
April 17	Composting Workshop

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## Student programs GPS service to track shuttles

By Geoff Pickle, *The Standard*

Starting as early as the spring semester, students will be able to track Bear Line shuttles via GPS. The project is a joint effort between the computer science department, the Office of Web and New Media, J. Howard Fisk Limousines and the Department of Safety and Transportation. Jeff Thomas, a senior computer science major and the Student Government Association director of research and development, created the software that allows GPS signals to be sent from phones located on shuttles to servers already in place at the university. Richard Martin, an associate professor of computer science, helped him.

Students will be able to track the shuttles on an online map at the Missouri State home page as well as on smart phones such as the iPhone, he said. "I think it's going to be a great resource for students to know where the shuttles are," Thomas said. "It will allow students to make a last-minute call whether it's better to wait for the shuttle or to walk."

Funding will be provided by the Department of Safety and Transportation and will come from shuttle funding, said Larry Combs, interim assistant director. There shouldn't be any cost increases for students, Thomas said. Throughout the semester, Thomas and the Office of Web and New Media have been testing the software. The Office of Web and New Media provided much of the help with the project, with Chad Killingsworth, assistant director of Web and New Media, taking the lead. The office had been working on an interactive map for the Missouri State campus that was completed late in the spring semester, Killingsworth said. The map can be found at <http://search.missouristate.edu/map/>.

Thomas did the work on the phone software, and Web and New Media worked on the programming needed to integrate the program into the campus map, Killingsworth said. Because the software was created in-house and a deal was able to be made with Sprint, costs associated with the project have been kept relatively low, Thomas said. Around the time when the project was started over summer intersession, Sprint had a deal going that allowed for free BlackBerry phones as long as a data plan is paid for each month, he said. Placing phones on all the shuttles and tracking their GPS signals will cost about \$150 a month, Thomas said. J. Howard Fisk Limousines provides the Bear Line shuttles to the university. Howard Fisk, owner of Fisk Transportation, said he and his drivers are in full support of the GPS tracking program. "Drivers are supportive of anything that'll make it easier for students," he said. "Other communities and schools use (similar programs) because it's a good planning tool."

## CNAS associate dean receives national teaching recognition

Dr. Pawan Kahol, associate dean for the College of Natural and Applied Science (CNAS) and professor of physics, astronomy and materials science, was selected as the recipient of the 2009 Carnegie Foundation for the Advancement of Teaching Missouri Professor of the Year. He received the award Nov. 19, 2009, in Washington, D. C.

"Pawan has a passion for teaching and has devoted much time to helping students with their problem solving skills," said Dr. Tamera Jahnke, CNAS dean. "Pawan cares about each student and works with them to help them succeed. He has also authored solution manuals for textbooks that go above and beyond providing a simple solution—they provide step-by-step problem solving techniques." Kahol was one of 38 state winners selected from more than 300 top professors in the United States. The Council for the Advancement and Support of Education (CASE) assembled two preliminary panels of judges to select finalists. The Carnegie Foundation then convened the third and final panel, which selected four national winners. CASE and Carnegie selected state winners from top entries resulting from the judging process. Kahol was selected from faculty members nominated by colleges and universities throughout the country.

"I am humbled to receive the award," Kahol said. "Like a large number of effective professors in this great country, the only thing that I care about is my students' success. I want my students to go beyond the ordinary and develop a higher-level understanding of the physical world that will become a part of their life. I explain to students the 'why' part of what I do in the class and use visualization, imagination and calculus to connect physics concepts to their daily experiences."

Kahol earned his doctorate in physics from Panjab University, India, in 1979 and has been at Missouri State since 2005. Prior to coming to Missouri State, he served for 17 years in a variety of academic and administrative positions at Wichita State University.

Some of Kahol's research interests are: electron spin resonance, organic light emitting devices, heat capacity of conducting polymers, spintronics, magnetic susceptibility, transport studies, and ferroelectricity of KDP-type systems.

The Carnegie Foundation for the Advancement of Teaching was founded in 1905 by Andrew Carnegie "to do all things necessary to encourage, uphold and dignify the profession of teaching." The foundation is the only advanced-study center for teachers in the world and the third-oldest foundation in the nation. Its nonprofit research activities are conducted by a small group of distinguished scholars.

## Managing your online presence

If you have ever used a social networking site, or have friends who do, you understand that your online persona is becoming increasingly important to employers, friends and the curious. Missouri State alumnus Laura Kleecamp, a seasoned executive in the telecommunications industry, returned to campus in October to drive this point home to CNAS students in a powerful (and sometimes painful) presentation entitled “Managing your Online Presence.”

Kleecamp is principle of LAK Enterprises, LLC, a contact center and telecommunications consulting company. Prior to forming her own company, Kleecamp spent 25 years in the telecommunications industry at Sprint and Embarq. Her most recent position was director of business marketing, where she led a team of 40 in the development of business strategy and marketing programs targeted to business customers.

Kleecamp has spoken before a number of audiences, including the Institute of Electrical and Electronics Engineers (IEEE), the International Society for Performance Improvement (ISPI) and business audiences on behalf of Frost and Sullivan, an industry research firm.



During each lecture, students received helpful tips on how to manage their online information. The session covered the emerging phenomenon of online persona, how search engines work, how the results they produce can be helpful or hurtful to your professional and personal life, as well as practical tips for managing how you appear to the online community.

In a powerful teaching moment, Laura “Googled” some of the students and professors in the room – live. While most of the information retrieved was accurate, much of it was not, and some was just decidedly unflattering. You could hear the collective groan as a student’s Facebook profile picture was displayed on the giant overhead screen. Kleecamp pointed out that this display was exactly what public information means – it can appear anywhere, in any context, for the rest of your life.



Fortunately, Kleecamp went on to offer constructive strategies for dealing with information that may already be out there, as well as strategically placing additional information.

Kleecamp is a 1984 graduate of Missouri State University, with a Bachelor of Science in Computer Science. She is a member of the Computer Science business advisory board.

**Worried about your online presence?** Try these quick and easy tips from Laura:

- Do drive up your own “hits.” Find the kind of information you do want others to see and view it often (number of clicks or hits = greater likelihood it will appear first when someone else searches for you.)
- Don’t be afraid to ask someone to take something down that portrays you in an unflattering light.
- Do be aware that your tweets, blogs and even personal messages are never truly private and that discerning web browsers can find nearly anything you post.

- Do write something great. Post or blog content you want others to see, or seek publication in other sources that will be referenced on the web.
- Don’t assume that people will be able to tell factual information about you from factual information about someone else who happens to share your name.

## Students visit Portland for bat conference

By Janelle Bowcock

Six biology graduate students traveled to Portland, Ore., Nov. 4-7, 2009, for the 39th Annual North American Symposium on Bat Research. They spent three days learning about the ecology, behavior, genetics, physiology and conservation of bats worldwide. Two hot topics discussed were the devastating effects of white-nose syndrome (WNS) and wind farms on bats in the U.S.

WNS was first discovered in 1996 near Albany, NY, and has since spread to caves in eight other states. Somehow caused by a cold loving fungus, *Geomyces destructans*, hibernating bats affected by the syndrome have depleted fat stores, act uncharacteristically and typically have the fungus growing around their nose. A conservative estimate of 1 million bat deaths have occurred from WNS. Amanda Janicki (adviser: Tom Tomasi) presented one clue of the WNS puzzle with her talk on torpid metabolic rates of the little brown bat (*Myotis lucifugus*).

Across the world, avenues for alternative energy are being explored and implemented, with wind energy development leading the movement. In the U.S., 36 states contain wind turbines ([awea.org](http://awea.org)) and virtually all of these wind farms have reported finding dead bats on the ground. In 2020, annual fatalities at wind farms are predicted to be between 33,000 and 62,000. (Kunz et al. 2007). Researchers are trying to determine how to decrease this bat mortality. Shelly Dey (adviser: Lynn Robbins) presented on roost tree selection and fidelity of the endangered Indiana bat (*Myotis sodalis*) in Northern Missouri. Her work in identifying the ecology of this bat will be used by wind energy companies to determine turbine placement and actions they can take to minimize bat death.

Also at the meeting, Janelle Bowcock presented on bat activity at caves and ponds in the Ozark National Scenic Riverways and her adviser, Lynn Robbins, challenged the protocol for determining the presence or absence of Indiana bats. Benjamin Hale (adviser: Lynn Robbins) described his summer research at a proposed wind energy site in Northern Missouri, depicting how bat activity relates to environmental variables. Shannon Romeling (adviser: Lynn Robbins) explained the differences in using bats versus mice as surrogates to practice increasing searcher efficiency. Her findings will be used when searching for dead bats during post construction monitoring surveys at wind energy facilities.

## CNAS emeriti recognized for lifelong accomplishments



*Dr. Milton Rafferty, center, receives his award.*

Over its 100 years of existence, Missouri State has developed a rich heritage of outstanding faculty and staff who have contributed much to the success of our University. The Wall of Fame, which is located outside the ballroom in the Plaster Student Union (3rd floor), is a designated location for the University to recognize and honor employees who have excelled at Missouri State and significantly contributed to the success and positive collegiate experience of students. While Missouri State has had many outstanding employees during its long history, the intention of the Wall of Fame is to recognize those faculty and staff members whose impact on students is considered truly noteworthy. Two esteemed faculty of the College of Natural and Applied Sciences were among the 2009 Wall of Fame inductees.

Great leadership through times of unprecedented growth characterizes John Schatz's tenure at Missouri State University. Schatz served as a faculty member in the agriculture department for 37 years, developing curriculum, advising and challenging students, contributing to many campus events, conducting research and participating in the development of the William H. Darr Agricultural Center and the National Association of College Teachers of Agriculture. From 1968–80, Schatz headed the department and his imprint can still be seen in the department and on the students he helped – many who have become successful in the horticulture industry.

Milton Rafferty leads by example. During his 24 years as department head of geography, geology and planning at Missouri State University, he served on committees, conducted research, published articles and books, and conducted business in an open door manner – all the things he expected out of his faculty members. He united a department that housed experts in a wide spectrum of subjects and elevated it from only two undergraduate programs to five with an interdisciplinary graduate program. With a total of 30 years at Missouri State, Rafferty became an expert on the Ozarks region and published the quintessential book on the area, *Ozarks Land and Life*, in 1980. He continues to travel and speak at conferences around the country.

Additional 2009 inductees include Linda Dollar, instructor, volleyball coach and assistant athletic director; Wensey Marsh, former career placement director; Dr. Genevieve (Genny) Cramer, professor emeritus of the graduate reading program; and Ralph Williams, former dean of the College of Business Administration.

## MSU engineering students receive scholarships

Due to the support of Structural Engineering Associates, INC, an engineering firm based in Kansas City, MO., the cooperative engineering program recently awarded four new scholarships. Each scholarship is worth \$500. The scholarships were awarded based on an application, resume, completed credit hours, GPA and involvement in Missouri State University's local chapter of the National Society of Professional Engineers. Students must also have declared a major in either electrical or civil engineering. The recipients this year are Ryan Budd, Ariel Domingo, Jared Davis and Timothy Schoenhoff.



*Program director Doug Carrol with the engineering scholarship recipients.*

## MSU scores at Fashion Group International contest

Seven Missouri State students brought home awards from the recent Fashion Group International of Kansas City competition. During this annual event, students attended professional development workshops and competed in multiple categories for scholarship money.

“There is a competition for apparel design where students submit their designs,” said Cathy Starr, assistant professor of fashion and interior design. “There is also a T-shirt competition and a presentation board competition.”

Fifteen apparel design students from Missouri State submitted their original designs and all were featured in the fashion show. Eighty original designs were submitted from participating schools and the top 50 made the runway show.

“There were a total of 61 boards submitted from participating schools, with 33 submitted in the store concept category and 28 submitted in the personal shopper category,” said Starr. “Missouri State swept the personal shopper category and won two awards in the store concept category.”

Christina Benson won third place for her store concept board, and April Whitlow received an honorable mention in the same category. In the personal shopper category, Rennee Osborn placed first, Leanna Yanes placed second, Whitney Davis placed third and Shannon Soper received an honorable mention.

Michelle Kelsay won the T-shirt design award. For winning, Kelsay received two free T-shirts, and her design will be featured on the official Career Day 2009 T-shirt.

The Fashion Group International is a global, non-profit, professional organization with 5,000 members in the fashion industry. The mission of the Fashion Group International is to be the pre-eminent authority on the business of fashion and design and to help its members become more effective in their careers.



*Proposed rendering of the new education facility at Darr Agricultural Center.*

### **Darr Agricultural Center enters Phase III**

Shovels will soon be breaking ground on the third and final phase of construction at the William H. Darr Agricultural Center. A \$1 million pledge made by Bill and Virginia Darr enabled the University to launch the project, an important component of Missouri State University's capital campaign. Fund-raising efforts to fully finance the \$6.5 million project are well under way.

The new facility is seeking LEED silver certification and will be constructed with the utmost care and concern for sustainability. University architect Doug Sampson shares how the students of Missouri State are helping shape the project. "The students are pushing for sustainable design to be incorporated into all the new facilities being constructed on campus. This project, and its function and location, all help the University to meet this desire of the campus. We are excited that this may be one of the first certified buildings the campus has constructed."

Several measures being incorporated in design plans will maximize energy efficiency and minimize environmental impact. Examples of this include the design of the site features to filter storm water runoff before it reaches the area streams, occupancy sensors that will shut down lighting and control temperatures when no one is in the room or area, the use of natural light where possible, and a special ground source heat-pump mechanical system to take advantage of the earth's constant temperature 200 feet below the surface. Finally, a light colored roof will be installed in order to minimize the solar heat gain through the roof.

Phase II, completed in fall 2007, included extensive renovation of the main arena, as well as the addition of a stalling barn, a multi-use barn, office space, bovine and equine handling facilities, a research laboratory, a classroom, and a two-bedroom apartment for graduate student housing. In addition, recent improvements include paving all of the interior roads, construction of parking lots on the east and west sides of the Pinegar Arena, installation of exterior lighting in the parking lots, and the construction of a deceleration lane to allow for safer access to the center from Kansas Expressway.

While design plans are not yet final, a proposed rendering is shown. The structure offers accommodations for lab/lecture, office, banquet/meeting space, as well as machine maintenance and storage. The building will serve educational, technical and customer service needs

within every sector of the agricultural industry: animal science, continuing education, community development, business and industry, human-environmental sciences, horticulture, consumer studies and youth development.

The center, located on a 90-acres near the intersection of Kansas Expressway and Sunshine Street in southwest Springfield, is a unique asset that supports the Department of Agriculture's diverse programs, and reflects the importance of agriculture as a key economic component of the region. Missouri State's metropolitan location and the Darr Agricultural Center provide a unique opportunity to demonstrate the interactions between traditional agriculture's rural origin and the more urban setting of modern America.

The Darr Agricultural Center serves as a laboratory and field experience classroom for the study of livestock management, equine studies, horticulture, agronomy, animal science, and wildlife conservation and management. An additional benefit of the Center is that it provides agricultural/green space within the rapidly expanding Springfield metropolitan area. For information on how you can help bring Phase III closer to serving students, please contact Jaimie Trussell, director of development, at 417-836-4143 or at [jtrussell@missouristate.edu](mailto:jtrussell@missouristate.edu)

### **CNAS spring speaker series**

- February 23** Dr. Diann Thomas "The Magic of Chemistry"
- March 23** Dr. Erich Steinle "Sensor Technology"
- April 20** Dr. Mike Reed "Alien Worlds, Hot Super Earths, Warm Jupiters and the Search for E.T."

Join your favorite CNAS scientists for an informal discussion of "hot" science topics designed for the education and enjoyment of the layperson. Programs begin at 7 p.m. in Temple Hall, Room 002 and parking is available in Lot 4.

Refreshments will be provided. For more information contact the CNAS office at 417-836-5249.

**Keep in touch!**

**Update your information at:**

[https://apps.missouristate.edu/alumni/secure/Address\\_Update.asp](https://apps.missouristate.edu/alumni/secure/Address_Update.asp)

## Materials science students shine



*Naveen at Argonne*

Naveen Dharmagunawardhane, a graduate student in materials science, and Joseph Demster, an undergraduate student in physics, participated in x-ray experiments at the Advanced Photon Source synchrotron facility located in Argonne National Laboratory near Chicago, Ill. The work was done under the supervision of Dr. Robert Mayanovic, professor of physics, astronomy and materials science. Their research involved investigations of novel materials needed

to meet the challenges posed by future energy demands. The Missouri State University researchers are participants in the Center for Energy Frontier Research in Extreme Environments (EFREE), which is a national center funded by the Department of Energy.

Demster, a physics major who anticipates graduating this spring, accompanied Dr. Mayanovic to Argonne in August. In his first semester at Missouri State, Dharmagunawardhane is an international student from Sri Lanka and a graduate assistant. He went with Dr. Mayanovic in October.



*Joe Dempster*

## Math grant to help high school students

The Mathematics Department received a \$500 grant from the 3M Foundation to help support the Enriching High School Math in the Southwest Missouri Area program under the direction of Yungchen Cheng and Patti Blanton. The mission of this program is to provide a forum, through monthly sessions, to help generate and promote broader interest of area high school students and teachers in advanced mathematics beyond classroom curriculum, and to help raise both the expectation and mastery levels as well. Many participating students aspire to a career in math, science or engineering which are in critical need.

## Tom Kachel retires after nearly 30 years

After teaching at Southern Illinois University in Carbondale, Tom Kachel joined the Southwest Missouri State University Department of Home Economics in 1980. He was responsible for the development of contract design classes for the growing interior design program. He retired as assistant professor of fashion and interior design.

To honor Kachel as a founding member of the Springfield Design Association, the organization hosted a December party in his honor.

Kachel intends to remain active on campus and in the community by teaching a few courses each semester.

## Advisory board “on board” with progress

Three years ago, if you had asked the group of alumni and community members who called themselves the Hospitality and Restaurant Administration Advisory Board what they envisioned for the future of the program at Missouri State, they would have given you a specific list of very ambitious goals:

- Become a fully fledged department under the College of Natural and Applied Sciences
- Launch the department’s first fund-raising campaign
- Hire a world-class department head
- Completely revamp the curriculum to meet market demand and increase standards of academic rigor
- Increase the number of faculty with nationally recognized research credentials
- Develop a timeline for the construction of a new facility specific to HRA

Three years later, their vision is reality. “The HRA Board is a great example of committed people continuing to make a difference in the program from which they graduated. Without their vocal support and considerable energies, many of the advances made in the last three years would not have been possible.” says Melissa Dallas, department head. Brian Inman, advisory board chair and general manager at the University Plaza Hotel (John Q. Hammons’ flagship property in Springfield), echoes the sentiment. “The diversity of the board, with leaders from all aspects of the hospitality industry, helps provide objectives and broad vision to the board.” In addition to the work of the board, Inman also credits a supportive administration and a phenomenal hire as department head for the tremendous progress the board has made in such a short time.

The group boasts a membership of 18, primarily alumni of the program, and all accomplished in the field. A student representative, Matt Williams, and long-time Missouri State educator Abbe Ehlers, round out the board. Ehlers, who has served as the board’s faculty representative since its inception, shares her high esteem of the board and its members. “Having a board of advisors has been the key to the department moving forward at the rate it has. You could say it is the ‘secret ingredient’ to our success.”

In its official capacity, the board provides feedback to the department about current industry trends, curriculum and offers a network of experienced professionals for current students and graduates to draw from. In addition to advising the program, the board actively promotes a comprehensive fund-raising campaign including an annual spring golf tournament – designed to raise money for student scholarships, equipment needs and faculty professional development. For more information about the HRA program, the board, or the upcoming golf tournament, please visit [www.missouristate.edu/hra](http://www.missouristate.edu/hra) or call 417-836-4409.

## Missouri State professor gone “batty”

*Bats of Missouri* is the third publication in Indiana State University’s series on the bats of the United States. Written by Dr. Lynn Robbins, a professor of biology at Missouri State, in conjunction with two former graduate students, Justin Boyles and John Timpono, *Bats of Missouri* is, according to Dr. Robbins, a “biological look at the habits and distribution of bats in Missouri.”

The book functions as a guide for the general public to identify all 16 species of bats native to Missouri. The book also contains sections on the culture and folklore of bats, as well as addressing misconceptions of bats. Biology of bats, their relationship with humans and what humans can do to help conserve bats from the myriad of threats that bats face are other issues addressed in the *Bats of Missouri*.

Robbins’ current research focuses on the ecology and conservation of bats, especially endangered species, like the Indiana Bat. His work studies the effects of human activities and ecological management on bat populations. Two current projects, with which he works with MSU graduate students, are forest management in the Ozark National Scenic Riverway and working with energy corporations in Northern Missouri to minimize the effects of wind turbine farms on bat populations.



Dr. Lynn Robbins netting Ozark bats.

## Expanding Your Horizons 2009

Diet Coke® + Mentos® = Fountains. Really, really big fountains.

Participants in the 2009 Expanding Your Horizons (EYH) conference on the Missouri State University campus got a chance to see this in action, learn the science behind it and have a lot of fun, all at the same time.

Oct. 24, 2009, marked the 16th annual EYH conference, sponsored by the College of Natural and Applied Science and the College of Health and Human Services, under the auspices of the Women in Science (WIS) group. WIS has been a member of the National EYH Network™ since 1994 when the group, led by Dr. Tamera Jahnke, offered its first annual EYH conference to sixth, seventh and eighth grade girls from the local area.

The National EYH Network™ (formerly the Math/Science Network), started in 1974 as an informal group of women scientists and educators in the San Francisco Bay Area who were concerned about low female participation in math courses. National surveys and government reports show many young women considering career options still avoid careers in science, technology, engineering and math, even though they have all the aptitudes, intelligence and interest necessary for such careers. The day-long conferences held at MSU are designed to get the participants involved with scientific

learning and to allow them to talk with women scientists and professionals from the community about their careers, work experience and education, as well as to provide parents, teachers and other adult leaders with the knowledge and resources to encourage young women to choose any career they desire.

“Mythbusters” was the theme for the 2009 conference. Activities revolved around dispelling often-held myths about science and math. Participants were welcomed onto campus with a demonstration of a Ruben’s Tube, courtesy of the Society of Physics Students. They then proceeded to a series of hands-on activities, including such colorfully-named activities as “Bat Busters,” “Fat is Phar” and “Does that Monster Make you Growl?” In the afternoon, participants were given an opportunity to interact with community mentors (scientists and professional women from the community) and to hear Kendra Williams, administrator of Community Health and Epidemiology, speak about “HINI Myths.” The final event was a Diet Coke/Mentos extravaganza, where students learned what it took to make the best fountain using these simple materials. They wrapped up the event by simultaneously setting off 150 fountains spelling out the letters “MSU,” an activity that provided plenty of “fount-astic” fun for everyone.

The WIS group is making plans for the 2010 conference and hoping to reach even more young women with the idea that careers in science, technology, engineering and math are open to them.



Participants at EYH 2009 enjoy the effects of diet cola fountains.

## Biologist migrates north at snails pace

Biology Professor John Havel is on sabbatical during the 2009-10 academic year, doing research on biological invasions at the Center for Limnology, University of Wisconsin (<http://limnology.wisc.edu/>). While at Trout Lake Research Station, he has sampled invasive snails in lakes and streams in the northern highland district and developed experiments to examine their dispersal capacity. Havel first tested the tolerance of exotic Chinese mystery snails to desiccation. Later, at the main campus in Madison, he began experiments with the snails in flow chambers to examine the conditions that lead to dispersal through streams. John will continue these experiments and surveys later this spring and summer during further research in Wisconsin. Havel has already published eight papers detailing his research, several in collaboration with former Missouri state graduate students.

## CNAS professors visit Ecuador

Constructed in 1995, the Yachana Lodge is located in the Ecuadorian Amazon Rain Forest and accessible only by a two and a half hour ride up the Napo River in a motorized canoe. The Yachana Lodge is part of a non-profit organization that aims “to provide education, fight poverty and disease, foster grassroots community organizations and conserve Ecuador’s imperiled tropical forests.” The organization has acquired more than 4,000 acres of land surrounding the lodge. The lodge has won many awards for ecotourism including being one of three destinations selected as the best example of geotourism by *National Geographic*.

The goals of the lodge fit well with Missouri State University’s public affairs mission and so a group of three faculty members, Ms. Abbe Ehlers, Dr. Judith Meyer and Dr. Alexander Wait, went to visit the lodge in order to evaluate its potential as a destination for international studies. At the lodge, the three found themselves immersed in Ecuadorian culture. They hiked through both primary and secondary rainforest and toured the local high school that the Yachana organization helps to support. One of the highlights of the trip was the interactions with the local people, which is part of the lodge’s goal to design activities that immerse its visitors in the local culture. The lodge even offers a chance to sample an indigenous meal. In fact, the lodge grows much of the food it serves.

Missouri State’s plans for the lodge are quite diverse and can encompass aspects of every major at Missouri State. “The possibilities for the sciences are obviously vast but there is also a need for students of education, health and human services, art and design, theatre, language, entrepreneurial development, etc.,” said Dr. Ehlers, who will be taking a group of students to the lodge in May for her course called “Behind the Scenes of Eco-tourism.”

## JVIC offers incredible opportunities for interns



The following students worked at JVIC during the fall 2009 semester:

### Name, Major, Hometown

- Ryan Fordyce, Industrial Management, Springfield, Mo.
- Matt Kreutzer, Finance, St. Louis, Mo.
- Li Mei, Master of Business Administration, Beijing, China
- Arthur Kittleson, Information Technology Service Management, Mtn. Home, Ark.
- Jeremiah Athmer, Microbiology, Dixon, Mo.
- Jeff Doak, Chemistry, Evanston, Ill.
- Zach Durham, Biology and Chemistry, Nixa, Mo.
- Jeff Hirst, Biology and Chemistry, Independence, Mo.
- Mi Hoang, Microbiology, Sikeston, Mo.
- Alex Mann, Microbiology, Willard, Mo.
- Alex Miller, Engineering Physics, St. Charles, Mo.
- Tricia Scanlon, Microbiology/Microtechnology, Broadview, Ohio
- Kael Smith, Biology, Kansas City, Mo.
- Logan Sullivan, Math and Biology, Nixa, Mo.
- Mandy Herbster, Biology, Springfield, Mo.
- Joe Kerwin, Biology, Springfield, Mo.
- Heather Manley, Clinical Psychology, Rogersville, Mo.



Galoshes await students at the rain forest campus.

## A note from Jaimie

Happy Birthday, Missouri State!



On Thursday, Aug. 28, 2009, the campus of Missouri State University came together to celebrate the fourth anniversary of our new name. In addition to celebrating the notoriety that comes along with our recognition as Missouri's second largest University, the campus paused to take note of the amazing strides we continue to make toward making and imagining Missouri's future.

Over the past year, in CNAs alone, our faculty have submitted 109 proposals for external funding, and 64 were funded for just over \$2.8 million. And we awarded nearly \$160,000 in scholarships to students in every department.

We have to thank much of this progress to the tremendous leadership of President Mike Nietzel and our own dean, Dr. Tammy Jahnke. While Dr. Nietzel will be leaving us at the conclusion of 2010, we have tremendous momentum that we are going to put to good use in the successful completion of the University's largest fund-raising campaign in history. I can imagine what you are thinking right now, "Why, in the world, would the University launch an aggressive campaign in the most dismal economic climate in 70 years?" – The answer "because providing a quality education to students who want one is the best thing we can do to turn things around." If you think getting a job is difficult now, try getting one without any marketable skills. We need to train our workforce to not only enter those available positions, but to also identify opportunities for entrepreneurship. We cannot hope to offer that vital training without both public and private support.

Governor Jay Nixon has been very supportive of higher education in the state of Missouri – holding our state appropriations steady for the 2010 fiscal year, and promising only a modest decrease (5%) in fiscal year 2011. Unfortunately, the cost of educating those students did increase – right along with inflation – and our appropriations, frozen at fiscal year 2009 levels, will only meet approximately 45% of the cost of doing business at Missouri State University. Simply put, now is exactly the time to launch a major fund-raising campaign – the need has never been greater.

For information on how you can support the students of Missouri State University and participate in Our Promise, the Campaign for Missouri State, please contact me 417-836-5161 or at [jtrussell@missouristate.edu](mailto:jtrussell@missouristate.edu).

Remember – a gift of any size can make a difference!

# Our Promise

The Campaign for Missouri State University

The promise of a great education has always been at the heart of Missouri State University. Now we stand ready to expand that promise – with your help.

Our Promise, the Campaign for Missouri State University, is a far-reaching effort that will transform every facet of the University. Our Promise will affect students, faculty, the community and the campus.

Our Promise begins with you. Together, we can shape a future in which Missouri State continues to excel in every way.

Excellence at the University is directly related to private support. It helps us attract the brightest students and the best faculty members. It expands the experiences offered to our scholars. It results in cultural events that elevate the communities in which we serve. It deepens the ties between alumni and their school. It allows the University to build and maintain cutting-edge facilities which promote learning opportunities for our students and the scholarly activities of our faculty.

Our Promise is an opportunity to invest in the future, to leave a lasting legacy and to make a powerful difference in lives.

You can trust us to keep Our Promise. With your help, we can and will turn dreams into reality.

Missouri State University adheres to a strict nondiscrimination policy and does not discriminate on the basis of race, color, religion, sex, national origin, ancestry, age, disability, veteran status, or on any basis (including, but not limited to, political affiliation and sexual orientation) not related to the applicable educational requirements for students in any program or activity offered or sponsored by the University.

# CNAS

MISSOURI STATE UNIVERSITY

COLLEGE OF NATURAL & APPLIED SCIENCES

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Springfield, Missouri 65897

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## Upcoming Events 2010

February 20	Science Olympiad	April 8-9	Undergraduate Hospitality Research Symposium
March 6	JETS Competition	April 14	Pummill Math Relays
March 6-14	Spring Break	April 16-17	Missouri Academy of Science Annual Meeting at MSU
March 26	CNAS Undergraduate Research/ Creative Activity Day - Kentwood Hall- Crystal Ballroom Interior Design Senior Show, Third Floor PCOB, 4-7 P.M.	April 17	Graduate College Interdisciplinary Forum
March 29	FFA Contest	April 24	Fashion Show, University Plaza, 4 P.M.
April 6-8	Ozarks Science and Engineering Fair	April 26	HRA Golf Tournament
		May 14	Spring Commencement

College of Natural and Applied Sciences

417-836-5249

Visit our web site for more information: [cnas.missouristate.edu](http://cnas.missouristate.edu)

# Missouri State™

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