

La
SPRING 2010

LOUISIANE

THE MAGAZINE OF THE UNIVERSITY OF LOUISIANA AT LAFAYETTE



Researchers Get
Bio Ready



In January, a massive earthquake shook the Republic of Haiti.

Over 200,000 people in that Caribbean country were killed; more than one million were left homeless. Haiti was already one of the poorest countries in the world. Before the earthquake, 80 percent of its population lived in poverty.

Fourteen Haitian students were attending UL Lafayette when the quake hit. Their presence was especially notable because only 53 percent of Haitians who are 15 years old or older can read and write.

One of the students lost his grandmother, godmother, aunt and fiancée. All 14 students' family homes were destroyed.

In addition to such unthinkable loss, there was this grim reality: The Haitian students' families had been sending what cash they could spare to help them stay in school. That money was a lifeline and the earthquake took it, too.

Ema Haq is a UL Lafayette graduate who owns Bailey's Seafood and Grill. As an international student, he had experienced first-hand the day-to-day challenges the Haitians faced while living far from home. He could only imagine their distress after the earthquake struck.

So the restaurateur decided to hold a fund-raising dinner for them in February.

Here's what the late broadcaster Paul Harvey would have described as "the rest of the story."

Top university administrators showed up for the benefit dinner at Bailey's. But they weren't there to eat. They were there to serve. Some seated guests. Some took diners' food and beverage orders. Others cleared away dirty dishes and napkins so tables could be set for the next customers.

Another noteworthy group was present: UL Lafayette's Haitian students. They walked among the tables, stopping to say "Thank you" to the restaurant's guests.

None of the diners knew in advance who their servers would be that night. The UL Lafayette administrators were not there to generate positive publicity or earn kudos from anybody. They were simply there to help.

The benefit dinner was just one of many ways that people have raised money to assist the Haitian students. A generous donor, for example, provided frequent flier miles that enabled the student who had lost four loved ones to visit his mother and sister in Florida, where they had fled after the earthquake.

Isn't it amazing how much one simple meal can convey about a university and a community?

We hope you enjoy this issue of *La Louisiane*.

– Kathleen Thames



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ON THE COVER:
Graduate student Satish Patil transfers a biofuel sample into a glass beaker.

Photo by Doug Dugas
www.dougugasphotography.com

Photos on this page:
Left: Terri Fensel; *Center:* Doug Dugas; *Right:* Denny Culbert

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An interdisciplinary team of faculty and students seeks alternative fuel solutions.

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LaLOUISIANE

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President
University of Louisiana at Lafayette

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Innovation at Work

Folklorist documents the crawfish boat and its creators



TERRI FENSEL



TERRI FENSEL

Top: Crawfish farmer Randy Gossen lifts a trap from the water, working in a boat designed and built by Gerard Olinger. Right: Dr. John Laudun makes notes as he conducts field research.

AT LEAST ONCE A WEEK, DR. JOHN Laudun leaves the classroom and heads out to the coastal prairie.

A folklorist and assistant professor of English at UL Lafayette, he is interviewing farmers and fabricators there for a book he's writing about the crawfish boat in Louisiana.

Almost every crawfish pond on the prairie harbors such a boat: a flat-bottomed, aluminum craft topped with a canopy and driven by hydraulics. "As a folklorist, I'm interested in the boat and the people who developed it. But I'm also interested in the crawfish boat as an example of creativity in cultural context — how creativity bubbles up out of the ordinary," said Laudun in a recent interview.



TERRI FENSEL

"When you can identify actual individuals who have participated in the creation or development of an idea or artifact, it presents a double opportunity: to understand the idea better, and also to gain a better understanding of the way the culture works."

The crawfish farming industry is driven by these boats and the people who build them, Laudun said. "Over the past 30 years, a dozen or so men have played a vital role in the development the crawfish industry."

Laudun stands at the edge of a crawfish pond near Roberts Cove in Acadia Parish. He gestures across the water, his hand tracing the gentle curve of a clover-green levee. He points to the next pond, and the next, then to the horizon.

"This is a subtle, manmade landscape. From the highway, it doesn't look like much — just so many flooded fields. But you can't understand it from that perspective. You have to be in the environment, feet on the ground — or perhaps in the mud — to appreciate its complexity. If you look closely, you can see that each of these

ponds sits at a slightly different elevation. This terracing is incredibly beautiful."

The rich, dark soil of the prairie region, west of the Atchafalaya Basin, is a remnant of the Pleistocene delta. The bayous that now feed the Mermentau River were once channels of the Mississippi River. Bison grazed the tall grass prairie, the homeland of Native American tribes.

In the late 1700s, some of the Acadians who were exiled from Nova Scotia

settled on the prairie and began replacing the bison with cattle. The following century brought an agricultural revolution, when German and Midwestern American settlers realized the land was suitable for growing rice. A layer of clay lies a foot or two below the delta soil, which makes the area ideal for holding water. The former Midwesterners adapted equipment designed for wheat production; the development of rail transportation in South Louisiana in the 1800s helped make rice a commercial commodity.

By the 1960s, farmers had established the now-common practice of reflooding rice fields after the fall harvest to produce an additional crop: crawfish. Before the creation of prairie ponds, the freshwater crustaceans were caught in the Atchafalaya Basin. In the '70s and '80s, the crawfish farming industry had a major growth spurt. According to the Louisiana Department of Agriculture, statewide pond acreage jumped from about 20,000 acres in the early 1970s to 132,000 acres in 1988. Last year, 173,000 acres were devoted to crawfish farming.

The price of crawfish has remained in a fairly stable range over the last 30 years, noted Laudun. "That's because large amounts of crawfish are being raised in managed ponds. That would not be possible without these boats."

Before the modern-day boat emerged, a crawfish farmer might walk through a shallow pond, emptying traps into a floating washtub. Others used flat-bottomed jon boats, pushing and pulling them through the fields. Although relatively lightweight, the aluminum fishing boats were cumbersome, making the work difficult and tedious. "Every time you needed to cross a levee, you had to put down a



Top: Randy Gossen and Gerard Olinger discuss boat design in the field. Above: Olinger welds a steel channel to create a custom tractor attachment, a powertrain-operator ditcher.

stake, winch the boat over it, then unhook it," he explained. "These Cajun and German farmers knew there had to be a better way."

Laudun credits farmers Tedmon "Ted" Habetz of Loreauville and Harold Benoit of Morse with "the simultaneous invention of the crawfish boat." Although Habetz and Benoit had arrived at their inventions independently, their boats were similar. Both were modified jon boats, fitted with a cleated steel wheel that rode on the bottom of the pond, pulling the boat through the water. Notably, both boats were powered by

a hydraulic system, which uses pressurized oil within a series of sealed hoses.

"Hydraulics, quite literally, are what drive this industry," Laudun said. "Grit — in particular rice hulls — can cause havoc with chain drives and pulleys. A hydraulic system makes a lot more sense because it's better suited to the environment."

Farmers quickly realized they could increase their productivity with such a boat — and it seemed every farmer wanted one, said Laudun.

Neither Habetz nor Benoit considered himself a boat builder, but both were

pressed into service by their fellow farmers. Within 10 years, Habetz built 300 boats. Others got into the business, including Gerard Olinger of Roberts Cove and Greg Frugé of Eunice. Mike Richard of Richie and Kurt Venable of Rayne would later become the primary manufacturers of crawfish boats.

"They were not only building custom drive units, but were also building custom hulls. Each maker was experimenting with enhancements based on what his customers were telling him, as well as his own sense of what might work better," Laudun said.

In 1985, Olinger made a major change to the original design that future makers would adopt.

Instead of connecting the wheel drive at the front of the boat, he attached it to the rear, so that it could move more easily over levees. But by improving the design, he soon encountered a problem. A steady stream of customers was bringing in their boats for hull repair. Because the boats handled better with the rear wheel, farmers were driving them from pond to pond on gravel roads, instead of moving them by trailer. Olinger's solution was to add tires to the front of the boats, an innovation that made the vessels fully amphibious.

Venable contributed another improvement by welding steel rods at the ends of the driving-wheel cleats to keep them from quickly wearing out. That innovation provided an additional benefit, Laudun said. "The wheels ride more smoothly on the bottom of the ponds, rutting them less."

He points out that none of the builders has patented their products. "Instead, they contribute and draw from a common pool of ideas. They value their reputations more than a copyright portfolio."

While visiting farms, fabrication and welding shops, and farmers' equipment sheds, Laudun said he's also learning more about the Cajun and German cultures still present in south Louisiana.

"I think a lot of people drive by these places and never realize just how smart and creative these guys are. In many cases, these men are working entirely from designs that exist only in their minds.

"The blue spark of the welding torch is not just a physical phenomenon — it's an idea being manifested in the world." ■

Top 100

UL Lafayette ranks among nation's elite public research institutions

THE UNIVERSITY OF LOUISIANA AT Lafayette is one of the top 100 public research universities in the nation, a new report by The Nelson A. Rockefeller Institute of Government shows. The institute is the public policy research arm of the State University of New York.

"A New Paradigm for Economic Development," released in March by the Rockefeller Institute, describes the growing role colleges and universities play in economic development and community revitalization. It ranks public research universities and state-wide public systems.

UL Lafayette is third in Louisiana and 99th in the country. Louisiana State University Health Sciences Center (New Orleans and Shreveport) is 95th in the nation. LSU, including the main campus, Pennington Biomedical Research Center and LSU AgCenter, is first in the state and 45th in the nation.

According to the report, UL Lafayette attracted \$47.3 million in research funding in 2006, while LSU Health Sciences Center (New Orleans and Shreveport) received \$79.9 million and the LSU campus obtained \$246 million.

Only UL Lafayette, LSU in Baton Rouge and LSU Health Sciences Center are cited in the Rockefeller Institute study as top public research universities in Louisiana.

Total research dollars of all three institutions – \$373.3 million – earned Louisiana 27th place in the country.

An analysis of National Science Foundation research and development

expenditures by public universities in Louisiana in 2008 ranks UL Lafayette as the third highest, with a total of \$58.6 million. LSU Baton Rouge is first, with \$136 million in total expenditures. LSU Health Sciences Center in New Orleans is second with \$59.5 million. Pen-

a long history of using research as an economic development tool.

Its University Research Park, for instance, was established after Louisiana's oil-dependent economy faltered in the mid-1980s. Today, the research park has more than 575 employees and an annual payroll of more than \$36 million.

One of its tenants, the Louisiana Immersive Technologies Enterprise, was created specifically as an economic development tool through a partnership formed by the university, State of Louisiana and the Lafayette Economic Development Authority.

Dr. Steve Landry, provost and vice president for Academic Affairs at UL Lafayette, said the university's commitment to research is evident in the caliber of faculty it hires and its reputation for involving students in research projects. "Our goal is always to hire faculty members who excel at research *and* teaching. We want our students to benefit directly from the research our faculty is

conducting," he said.

Landry noted that UL Lafayette is also dedicated to using research to help solve real-world problems. He cited the BeauSoleil Louisiana Solar Home as an example.

Last year, UL Lafayette was one of only 20 universities in the world chosen to compete in the U.S. Department of Energy's Solar Decathlon in Washington, D.C. Its BeauSoleil Home, designed and built by UL Lafayette architecture, engineering and business administration students and advisors, earned two first-place awards. ■

State of Louisiana Public Universities and Affiliated Entities
National Science Foundation R&D Expenditures for FY 2008

University	Total	Percentage
Louisiana State University	\$136,000,000	33.8
LSU Health Sciences Center – New Orleans	59,500,000	14.8
UNIVERSITY OF LOUISIANA AT LAFAYETTE	58,667,000	14.6
Pennington Biomedical Research Center	40,500,000	10.1
LSU Health Sciences Center – Shreveport	33,458,000	8.3
UNO	24,800,000	6.2
Louisiana Tech University	19,406,000	4.8
University of Louisiana at Monroe	16,997,000	4.2
Southern University and A&M College all campuses	6,701,000	1.7
Southeastern Louisiana University	2,302,000	.6
Northwestern State University	1,175,000	.3
Nicholls State University	841,000	.2
McNeese State University	691,000	.2
Grambling State University	643,000	.2
LSU Shreveport	600,000	.1
Southern University New Orleans	197,000	0
Total R & D Expenditures	\$402,478,000	100%

nington Biomedical Research Center is fourth, with \$40.5 million, followed by LSU Health Sciences Center in Shreveport, with \$33.4 million.

The University of New Orleans is ranked sixth, with \$24.8 million in total expenditures, while Louisiana Tech is seventh, with \$19.4 million.

The Carnegie Foundation has designated UL Lafayette as a Research University – High Research Activity. Others in that category include Baylor, Clemson and Auburn.

Dr. Joseph Savoie, president of UL Lafayette, noted that the university has

Closer to a Cure

Can this sea creature help reverse human hearing loss?

DR. GLEN WATSON and his graduate students are working to answer an intriguing question: Can one species heal another? The answer may lie within the starlet sea anemone.

A cell biologist, Watson has studied sea anemones since 1978. Since arriving at UL Lafayette in 1989, he has received more than \$1.37 million in federal funding to continue his work.

Starlet sea anemones, which feed on brine shrimp, possess an extraordinary ability, Watson said. When the cells they use to detect their prey are damaged, they can heal themselves.

Watson and his team are exploring cellular and genetic connections among starlet sea anemones, zebrafish and humans, with the hope of someday contributing to a cure for deafness. The three species are among the relatively few whose entire genetic code is known and readily available to researchers.

The species also have similarities at the cellular level, Watson explained. Hair cells are found on the anemones' tentacles, on the fishes' scales, and in humans' inner ears. At the tip of these cells are finger-like projections called stereocilia, which are interconnected by linkages called tip links.

Anemones rely on the hair cells to detect the movements of the anemones' prey, brine shrimp, as they swim by. Hair cells on the lateral lines of fish allow them to orient themselves while swimming in a current. Human hair cells respond to vibrations in inner-ear fluid, sending electrical signals to the brain, which are interpreted as sound, music or language.

What's interesting, said Watson, is what happens in the different species when



The starlet sea anemone (*Nematostella vectensis*) produces a self-healing protein. UL Lafayette research suggests this marine animal could hold a cure for human deafness.

the hair cells' tip links are damaged.

"Most forms of human deafness come from a death of the hair cells," he explained. Noise-induced hearing loss can be caused by a single event, such as an explosion, or by exposure to loud sounds over an extended period of time. "The hair cell pivots in response to sound, but when it pivots too much, the tip links are ripped apart. As a result, the hair cells die and hearing is lost."

In mammals, including humans, hearing loss is typically painless and permanent. But in some fish and in the anemones, it's a different story. The fish re-grow damaged hair cells and tip links, replacing them in a few days. Starlet sea anemones go to work even faster, making the fix in a matter of hours, using a mix of proteins that bind with calcium to repair the tip links. "Tip links use calcium as a kind of glue, giving the tip link its structure," Watson explained.

Watson and his team have learned that the protein mixture produced by the anemones can be used to heal the damaged hair cells of blind cave fish. The research team is also studying the effects of the protein mixture on zebrafish.

Nesha Calais, a doctoral student pursuing a degree in environmental and evolutionary biology, carried out the experiments.

She placed healthy fish in a tank containing calcium-depleted water for 15 seconds; that's long enough for their tip links to be broken. The fish became disoriented, their movements chaotic. Calais then placed them in water that contained anemone hair-cell proteins. "They were perfectly fine. It's as if they were never damaged," she said.

Watson finds that result amazing. "Proteins from a primitive, invertebrate animal can not only repair anemone hair cells, they can repair vertebrate hair cells as well."

He suspects the starlet sea anemone proteins might have an effect on some types of human deafness. The two species share a number of common genes, including a gene anemones use to produce cadherin 23, a calcium-dependent protein, which forms tip links. Mutations in the cadherin 23 gene cause deafness in both mice and humans.

The next logical research subjects would be mice, whose genetic code has also been unlocked, Watson said.

He remains hopeful that one day his work might lead to a cure for deafness and other disorders, such as impaired balance.

"If you can make new hair cells, as fish do, or if you can keep the hair cells you have from dying, then you can cure deafness." ■

Tailored Approach

Researcher fine tunes study of cancer recovery and fitness

DR. ANDREW HATCHETT, AN ASSISTANT professor of kinesiology, is working with people recovering from cancer to see how they may benefit from exercise.

“Published research on fitness and cancer recovery has only been available for about 30 years. Compared with cardiac rehabilitation, cancer rehab is a relatively new area of study,” he said in a recent interview.

Research generally suggests that physical activity is beneficial, according to Hatchett. He’s looking more closely at the connection between working out and getting well by focusing on individual patients.

“Cancer is not a cookie-cutter disease. You may have two patients with the same type of cancer, receiving the same treatment, who will have totally different reactions to the treatment. So, it’s difficult to identify standardized measurements in rehabilitation,” he said.

Hatchett is working to make research-based rehabilitation programs



Dr. Andrew Hatchett

more widely available to oncologists and their patients. He has partnered with the Miles Perret Cancer Center, a Lafayette non-profit agency that provides free support services to cancer patients and their families. The center was established in 2002 by Hank and Debbie

Perret and is named for their 8-year-old son, who died in 1996 after being diagnosed with a malignant brain tumor.

In 2008, Hatchett and Carla Duhon, the center’s wellness director, created Miles Strong, a 10-week rehabilitation program focusing on exercise and nutrition.

Duhon, a clinical exercise physiologist with a certification in cancer and exercise, leads the workout sessions. Held twice a week, the sessions are designed to increase strength and flexibility, and to educate patients about overall health, nutrition and fitness.

Judy Arabie was diagnosed with breast cancer in July 2009. Four weeks after a mastectomy, Arabie’s doctors gave her permission to begin the Miles Strong program. “I was very fortunate. I had full range of motion in my arm. My goal was to start bowling again,” she said.

Arabie completed the Miles Strong program and has returned to her favorite sport. “Some days, it’s a huge goal just to walk from one side of the room to the other. If you’ve never gone through it, it’s hard to understand how difficult it can be and how important it is to have support and encouragement,” she said.

Each Miles Strong session is limited to four participants, so they may receive personalized attention. Duhon collects clinical data by monitoring the heart rate, oxygen levels and blood pressure of patients during their workouts. She also tracks patients’ progress over the course of the program.

Hatchett follows up with participants via e-mail to reinforce what they learn at the Center. “Published research shows that regular exercise can speed recovery for cancer patients. The ultimate goal is for patients who have participated in this program to remain active,” he said. ■



Shown at the Miles Perret Cancer Center, from left, are: Patsy Von Hoosen, Joni Hill and Crystal Anderson, patients; Travis Tolbert, a cancer exercise specialist; Dr. Andrew Hatchett, an assistant professor of kinesiology; and Carla Duhon, the center’s wellness director.

Scientists try to solve mystery of chocolate trees' killer

UL LAFAYETTE RESEARCHERS are working to protect the world's supply of chocolate. Roseline Devariste, a graduate student in biology, and her advisor, biology professor Dr. Karl Hasenstein, are learning more about the relationship between a deadly fungus and its host, the chocolate tree.

Trees infected with *Moniliophthora perniciosa* spores develop witches' broom disease, so called because the fungus forms broom-like growths. The chocolate industry — and the global economy connected to it — have suffered major losses from witches' broom. Brazil, once South America's largest producer, lost 70 percent of its crop in just 10 years, for example.



Graduate student Roseline Devariste and biologist Dr. Karl Hasenstein harvest a chocolate tree seed pod at UL Lafayette's Center for Ecology and Environmental Technology.

"I wanted to gain a better understanding of the physiological interactions between this pathogen and the tree itself," said Devariste.

At first, spores infect the tree without any visible problems. "Later on, you might see some green broom, massive growths within the host, but the tree is not dying yet. Then, something happens. This fungus switches its lifestyle and begins feeding off the host," Devariste said.

She grew the fungus in material with varying levels of carbon, mimicking internal conditions in living trees. "The data show nutrition plays a role in the development of the disease," she said. The fungus grew more slowly in material with higher levels of glycerol, a naturally occurring substance.

The results support similar studies but Hasenstein said there's still work to be done. Even though the chocolate tree has been cultivated for thousands of years, it has not been widely studied. "To better understand the disease in general and the interaction between host and pathogen, we need to study the fungus *and* the chocolate tree and how one affects the other," he said.

OCEANNA TRZECIAK-CATES

GOOD GUYS WORK TO GET A STEP AHEAD OF CYBER ATTACKERS

Researchers in UL Lafayette's Center for Advanced Computer Studies are focused on strengthening the nation's cyber infrastructure.

Their goal is to develop a deeper understanding of the cat-and-mouse game played by cyber attackers and cyber defenders.

Their newest project reflects a rare partnership among industry, higher education and government. It is led by Dr. Arun Lakhotia, a professor of computer science and head of the CACS Software Research Laboratory, and Dr. Andrew Walenstein, assistant professor of computer science in CACS.

The pair is collaborating with Dr. Vir Phoha, director of the Center for Secure Cyberspace at Louisiana Tech in Ruston and Dr. Bin Mai of Bowie State University in Bowie, Md.

The group will work with McAfee Labs, a leader in the anti-virus software industry. The Air Force Office of Scientific Research will oversee the three-year project, which is funded by a \$790,000 grant from by the U.S. Department of Defense.

Researchers will develop theoretical models of offensive and defensive strategies used on the Internet. These models will help cyber defenders predict hackers' next moves.

"So far, the defenders have been reactive, scampering to respond to the move by an attacker. The research will change the nature of the game," Lakhotia said.

Rachit Mathur, a McAfee Labs research scientist and one of Lakhotia's former students, will provide the investigators



with insights into mechanisms used by attackers.

Dr. Bradd Clark, dean of the Ray P. Authement College of Sciences at UL Lafayette, said the techniques and strategies used by cyber attackers evolve rapidly.

"Participation of McAfee Labs in an advisory capacity will help ground this research in reality so that the results produced can more directly impact development of defensive technologies," he said.

The involvement of McAfee Labs in the early stages of this project is expected to speed up research.

"We are very excited to participate in this project to help advance the state of research at a faster pace," said Hiep Dang, McAfee Labs' director of anti-malware research. "A deep understanding of the design options of stealth and anti-stealth techniques placed in the context of game theory should provide the industry a new way to design and analyze our defensive technologies."

Team promotes technology

A NEW CONSORTIUM at the University of Louisiana at Lafayette is taking a 3-D look at new methods of academic research.

The Computation and Visualization Enterprise consortium is an interdisciplinary team of 15 faculty members. It was formed to encourage the use of supercomputing, 3-D visualization and high-speed fiber optics available at the Louisiana Immersive Technologies Enterprise in University Research Park.

LITE technology could ultimately speed up conventional research.

“This consortium is an extension of the partnership between LITE and the university. Assembling this multidisciplinary team will help us more effectively handle modern science and engineering research,” said Dr. Bradd Clark, dean of the Ray P. Authement College of Sciences and chairman of the LITE Commission.

Henry Florsheim, chief executive officer of LITE, said the consortium enhances the relationship between LITE and UL Lafayette. “Having access to such

a diverse group of experts will allow LITE to tap into client markets that we couldn't have tapped into on our own,” he said.

Clark said the combination of researchers' expertise and supercomputing capabilities is key. “Most research problems are too difficult for one person to solve. With these teams and this computation power, we'll be better able to work on solutions,” he said.

UL Lafayette researchers in chemical engineering and biochemistry, for example, are exploring ways to use glycerol in a more efficient, green way. They are testing and identifying enzymes that can help convert glycerol into compounds utilized by the chemical industry.



Louisiana Immersive Technologies Enterprise

DOUG DUGAS

Glycerol is an abundant product with limited use. A modified enzyme could use it as a catalyst for chemical processes, helping to reduce waste and make chemical processes cleaner. Supercomputers are helping to narrow the number of enzymes that could be successfully modified.

“We are excited about being able to provide our faculty with the equipment it takes

to conduct research – like with these enzymes – that requires difficult computations,” Clark said.

Dr. Azmy Ackleh, a professor of mathematics at UL Lafayette, is the consortium's director.

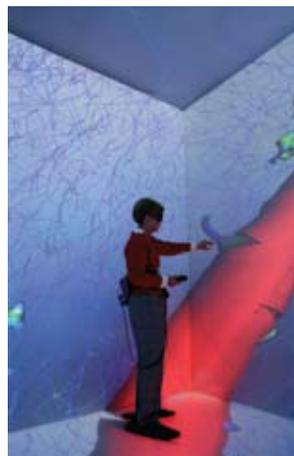
LITE SHINES IN LOUISIANA TECHNOLOGY COUNCIL COMPETITION

THE WINNER of the 2010 Innovator of the Year award couldn't travel to New Orleans to be honored for its achievements.

So Dr. Bradd Clark, dean of UL Lafayette's Ray P. Authement College of Sciences, and Henry Florsheim, chief executive officer of the Louisiana Immersive Technologies Enterprise, accepted the recognition on its behalf.

The Louisiana Technology Council bestowed the Innovator of the Year designation on LITE, which is located in University Research Park on UL Lafayette's campus.

“When you look at all the applications and high-performance tools



LITE's Total Immersive Space

DOUG DUGAS

they're using, the work they do across all industries made them a very worthy choice for Innovator of the Year Award. They're doing great things with companies and government to put Louisiana on the map when it comes to technology,” Mark Lewis, president of the Louisiana Technology Council, told *The Advertiser*, Lafayette's daily newspaper.

LITE is one of the first multi-user six-sided digital 3-D total immersive spaces that's based on CAVE® technologies. It opened in 2006.

It was created as an economic development tool by a partnership formed by the State of Louisiana, UL Lafayette and the Lafayette Economic Development Authority. Clark is president of the LITE Commission.

Florsheim said LITE concentrated on economic development last year. The facility's versatility is reflected in its clients.

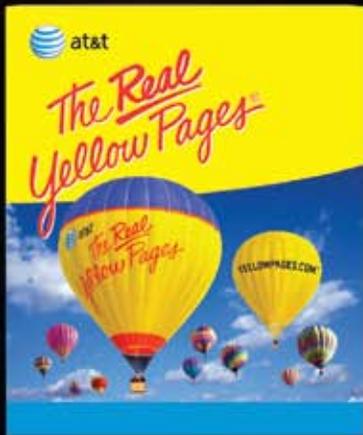
Pixel Magic, a leading digital effects company, opened a studio at LITE in November. And, 3-D visualization models were created at LITE for Our Lady of Lourdes Regional Medical Center, the City of New Iberia and Lafayette Consolidated Government.

This year, 3-D training simulation has been conducted at LITE for the state Department of Transportation and Development. LITE helped create a Technology Business Accelerator to assist startup technology firms and to help recruit other technology companies.

A Louisiana Technology Council committee chose award recipients with input from Gov. Bobby Jindal's staff. More than 50 companies and individuals were nominated for the Council's awards this year.

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Red, White and Green

UL Lafayette deepens its commitment to planting and preserving trees



Students, from left, Ashton Abel, Letesha Davis, Tyler Dunphy and Aimee Graugnard plant trees near Broussard Hall.

UL LAFAYETTE IS ONE OF ONLY FOUR universities in Louisiana to be named a Tree Campus USA by the Arbor Day Foundation. The others are Louisiana State University at Alexandria, Northwestern State University and Tulane University.

“We have a long history of celebrating trees, going all the way back to our first president, Dr. Edwin Stephens. So, it made perfect sense to become a Tree Campus,” said Mike Hess, UL Lafayette’s grounds manager.

Hess said more than 100 trees have been planted on campus since the designation was announced in December. Trees and shrubs have been added near Burke-Hawthorne Hall; Angelle Hall; Olivier Hall; Montgomery Hall; the Student Union; within the Quad and Legacy Park; and along Hebrard Boulevard.

At an Arbor Day ceremony held April 17, more than 50 UL Lafayette students, including members of AmeriCorps, a national service corps, planted 43 trees. Bald cypresses, red bud trees, maples and magnolias were placed near Broussard Hall and Lee Hall. The Arbor Day Foundation and Toyota Corporation provided the trees.

The planting ceremony was part of a campus-wide cleanup day, which involved more than 150 UL Lafayette students. Some faculty members, university staff and other volunteers pitched in to help.

Jim Foret, an instructor in the Renewable Resources Department, serves on the advisory committee. “Our trees make the campus more appealing and inviting. They provide shade and improve the air. And, in

times of storms, they protect our buildings.

“By becoming a Tree Campus, the university is setting an example within the community of how to plant, care for and honor our trees,” he said.

By summer, the campus and community landscape will include a splash of red and white, when hundreds of crape myrtles begin to bloom. Apache Corporation donated about 500 trees to add color to the campus and to help create a gateway to the university.

More than 300 of the trees were planted at the intersection of University Avenue and Interstate 10, where artist Robert Dafford

TREE CAMPUS USA

To become a Tree Campus USA, a university must:

- establish a campus tree advisory committee
- create a campus tree-care plan
- verify dedicated annual expenditures on the campus tree plan
- hold an Arbor Day observance
- develop a service-learning project involving students.

ford has created two murals depicting the university logo beneath the interstate overpass. The murals direct drivers toward the campus via University Avenue. Dafford volunteered the labor to create the murals; the City of Lafayette paid for the painting materials.

Jan Swift, executive director of the Upper Lafayette Economic Development Foundation, said the improvements “will enhance the interstate exchange and remind visitors and residents that our university is an integral part of this community.”

The gateway project is a partnership among Apache Corporation; the Upper Lafayette Economic Development Foundation; UL Lafayette; Dafford; the City of Lafayette; and McDonald’s of Acadiana, which provided labor and equipment.

Hess said the remainder of the donated crape myrtles will be planted on campus and along University Avenue. “Visually, the trees will tie the gateway to the campus.” ■

CENTURY OAKS

UL Lafayette's Century Oaks aren't the largest live oaks on campus, but they are the most treasured of the *Quercus virginiana*.

On Jan. 1, 1901, Dr. Edwin Stephens, the university's first president, planted 18 young trees near the campus entrance. Ten remain, lining the corner of Johnston Street and University Avenue and shading the grounds of Girard Hall. (See map below.)

"At the turn of the 20th century, Johnston and University were dirt roads," said Jim Foret, a UL Lafayette instructor and licensed arborist. "Over time, horse-and-buggy traffic became car traffic but there were no curbs at the intersection. People would park their cars right up on the roots, compacting the soil.

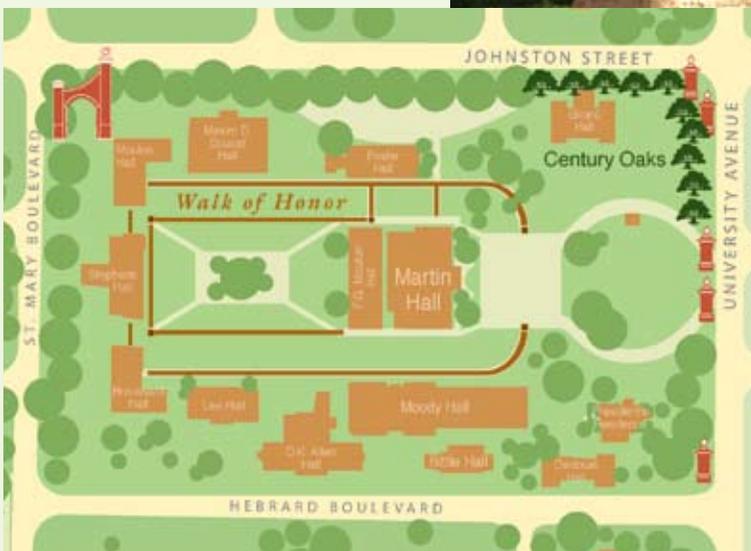
"Mature trees are especially vulnerable to root damage because they rely on an extensive root system."

The Century Oaks are receiving excellent care, said Mike Hess, UL Lafayette's grounds manager. "They are healthy. We're adding lots of mulch at the base of the trees to keep the roots cool and moist." The Century Oaks are among more than 250 live oaks on campus.

"In many ways, our trees are the ambassadors of our culture," said Hess. "By planting trees, Dr. Stephens was carrying out a vision. He was planning



TRAVIS GAUTHIER



UL Lafayette's Century Oaks are located near the North Gate.

for something he would never see but he wanted to establish a foundation. That's a tradition we're very proud of — and it shows in the beauty of the campus."

Stephens' commitment to promoting and preserving live oaks extends beyond the campus, said Hess. In 1934, he created the Live Oak Society, a registry of mature live oaks that now includes more than 6,000 trees throughout Louisiana. The society is managed by Louisiana Garden Club Federation Inc. Stephens' oaks were added to that list in 2001, when they reached the 100-year mark. ■

Little Houses

Filmmakers lead effort to preserve cemetery tradition

THEY ARE MONUMENTS TO THE dead unlike any others in Acadiana: small wooden houses with gabled roofs, windows and doors, built over a handful of graves in a rural Acadia Parish cemetery.

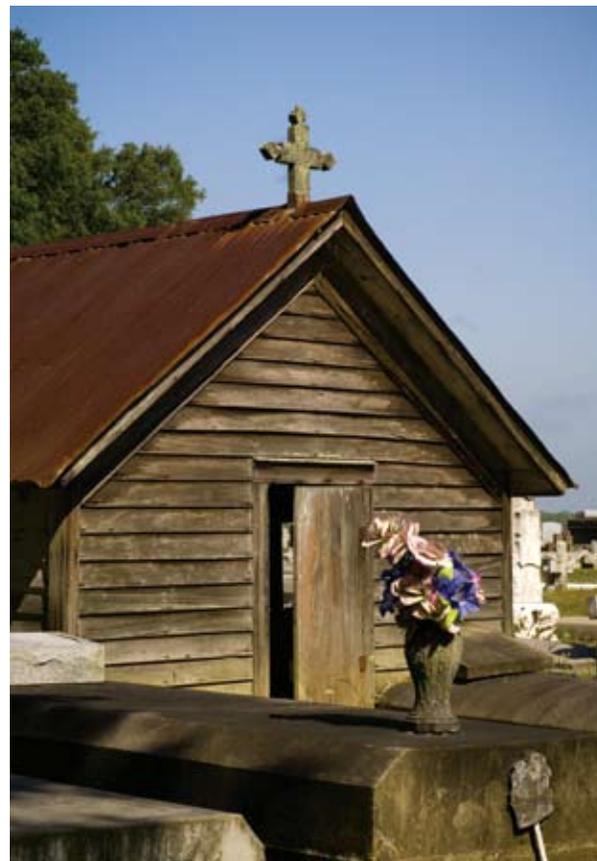
A trio of filmmakers, Donny, Jeremy and Zach Broussard, tell the story of these structures in a short film, "Little Houses: A Small Film About Death," which has inspired the rebirth of the unusual burial custom.

The Istre family of Mermentau Cove set aside land for the cemetery in the 1800s. No one knows for certain when the first grave houses were built, but records dating back to the 1930s show



there were a number of houses there.

"At one time, there were perhaps as many as 40 or 50 grave houses in the Istre cemetery. When we began to document them, there were only three left standing," Jeremy Broussard said.



Left: The Istre grave house. *Top left:* Jeremy Broussard, Donny Broussard and Zach Broussard, creators of "Little Houses." *Above:* The LeBlanc grave house is one of three such monuments listed on the National Register of Historic Places.

Jeremy and Zach Broussard, who are brothers, grew up in Mermentau Cove near the cemetery. "In Acadiana, we're surrounded by unique cultural expressions but I think because we're immersed in the culture, we don't al-

ways recognize the significance of our traditions," said Jeremy Broussard.

"We wanted to find out why the houses were built. They don't look like any other above-ground structure you might see in a south Louisiana cemetery. They're not crypts. They're not mausoleums. They're something altogether different."

He said there were three goals associated with the film. "We wanted to preserve the houses on film, to get the houses listed on the national historic register and to inspire people to preserve the graves."

Jeremy Broussard and Donny Broussard began the film project in 2002, working with a camera crew of six UL Lafayette student volunteers.

Donny Broussard, a UL Lafayette grad who is director of the university's Visual Arts Resource Center, recalled the experience. "At the beginning, we didn't have a clear idea of what the story would be. We just knew it was important to document the houses that were still standing.

"We camped out for two days and filmed in the freezing cold," he said. The team captured footage of the cemetery and began interviewing residents in the community, collecting stories about the grave houses and their possible origins.

"When we started the film, we were

CINEMATIC CONTRIBUTIONS



GWEN AUCCOIN

The documentary "Little Houses" explores the history and folklore connected with grave houses in an Acadia Parish cemetery.

hoping to find out why the houses were built. We never found that answer, but I think the fact that the question remains unanswered makes the film even more compelling."

After the initial filming, "Little Houses" was "put on the back burner for several years because of family commitments," said Jeremy Broussard.

"Then my brother Zach picked up the project and finished it for us."

In 2007, Zach Broussard enlisted the help of UL Lafayette's Cinematic Arts Workshop, working with folklorist Conni Castille and filmmaker Allison Bohl to update the script and shoot additional footage. The Workshop also provided office space and editing facilities.

"It took a long time to complete the film, but we eventually reached all our goals," Zach Broussard said.

In February 2008, the grave houses were added to the National Register of Historic Places. In 2009, the filmmakers created Benefilms, a non-profit organization that distributes "Little Houses." It dedicates 20 percent of DVD sales for the houses' preservation. The film premiered May 1, 2009, at the Rice Theatre in Crowley. To date, Benefilms has raised about \$1,500 for the preservation project.

In April, Jeremy Broussard published *Grave House Legends*, a book that complements the film. Ten percent of the book's profits are dedicated to the preservation effort.

Charles Richard, director of the Cinematic Arts Workshop, said the film is "an ideal example of the kind of project the workshop supports. It's a well-told story with aesthetic merit that is helping to increase cultural awareness."

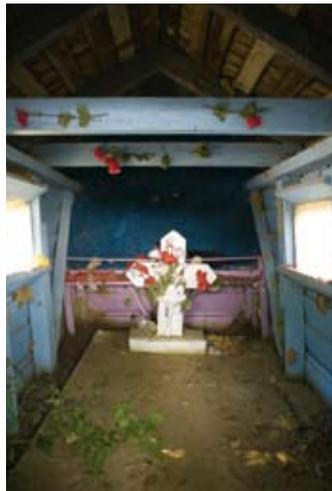
"Donny, Jeremy and Zach have definitely taken on the role of activist filmmakers with this piece," Richard added.

Leonard Smith, a lifelong resident of Mermentau Cove and president of the Istre Cemetery Board, said the filmmakers inspired him to carry on the grave house tradition. In March of last year, he built a new house over the grave of his

infant granddaughter, Karien Joy Benoit, who died in 1990.

The unpainted cypress house has a metal roof, "a window on each side and a little door with a latch. It kind of looks like a little doll house," Smith said.

"I just felt that I needed to put something over her. And I thought, 'If I make a little house, maybe other people will get interested and build some more.'" ■



GWEN AUCCOIN

Interior of the Istre grave house

Part of the UL Lafayette Cinematic Arts Workshop's mission is the "expression of art and ideas through digital media." Its productions include award-winning documentary films, promotional videos and content for educational computer games. The Workshop's main focus is to encourage interdisciplinary collaboration among students and professionals, including off-campus producers and faculty.

Conni Castille, a folklorist and filmmaker, is assistant director of the Workshop. Its latest project, a documentary set for release in June, tells the story of how Breaux Bridge became known as the Crawfish Capital of the World.

Other Cinematic Arts Workshop productions include:

■ **"Pin Pal,"** a promotional video that supports Festival International de Louisiane, the largest outdoor Franco-phone live music event in the United States. Held in downtown Lafayette each April, the festival relies on the sale of artist-designed pins to maintain free admission. The festival has an estimated annual economic impact of more than \$20 million.

■ **"BeauSoleil: Louisiana's Solar Home,"** a promotional video for UL Lafayette's Louisiana BeauSoleil Solar Home project. The energy-efficient, sustainable home won two top awards in the U.S. Department of Energy's 2009 Solar Decathlon, an international competition among 20 universities.

■ **"Congrès Mondial: the Bid for Louisiana,"** a 10-minute documentary created for the Lafayette Visitors and Convention Center, accompanied Louisiana's proposal for the world gathering of Cajun and Acadian descendants.

■ **"Raised on Rice and Gravy: A Film About Plate Lunch Houses In South Louisiana,"** a documentary that serves up the traditions of Cajun and Creole cooking in neighborhood lunch houses.

■ **"I Always Do My Collars First: A Film About Ironing,"** a documentary look at how a mundane chore is valued as a ritual and an expression of cultural identity in the lives of four Cajun women in French Louisiana.

More to Manage

Health information experts brace for a major shift in medical billing

WHEN HEALTH INFORMATION majors at UL Lafayette learn about a new medical code over the next couple of years, they will be taught by the best in the business.

Carol Venable, professor and head of the Health Information Management Department, and Anita Hazelwood, professor of health information management, have been studying the new identification system at the request of the American Health Information Management Association. They are “expert trainers,” according to the AHIMA. Only about 100 people in the United States have earned that designation.

A medical code is abbreviated information used by health care providers to describe services. “Codes are like shorthand or like a zip code,” Hazelwood explained. A physician’s diagnosis, for instance, has a predetermined code.

The United States has been using versions of the International Classification of Disease for the past 30 years. In 2009, the federal government enacted a law that requires health care providers to switch to an expanded ICD on Oct. 1, 2013.

“This will likely have as much of an impact on health care as the creation of Medicare and the enactment of the Health Insurance Portability and Accounting Act,” Hazelwood predicted in an interview this spring.

The current version, ICD-9, is composed of numbers. Letters were added to ICD-10. This extension will create a much more detailed database. There are about 10,000 codes in ICD-9; there will be about 68,000 codes in ICD-10.

“This will have a major impact on everyone in health care. This is going to affect anyone who files any kind of medical claim,” Hazelwood said.

The AHIMA asked Venable and Hazelwood in 2000 to learn about ICD-10



Carol Venable, left, and Anita Hazelwood

and help create an orientation guide for health care providers. Training manuals they have written are top sellers in the health information management field. Both have earned AHIMA Legacy Awards for their work.

In October, Venable and Hazelwood attended an intense three-day training session for ICD-10. They, in turn, will use their knowledge to train others. “Not just our students, but staff in doctors’ offices, hospitals and so on,” Venable said.

The faculty members have already started offering continuing education classes for people who handle billing for health care providers, such as physicians’ office managers.

ICD-10 will produce data that can be used for statistical purposes as well as billing for medical services. “So, reimbursement is important, but this information is also used in analysis by the Centers for Disease Control. The

CDC can look at trends in diseases,” Venable said.

She cited the human immunodeficiency virus, which causes AIDS, as an example. “Many years ago, it didn’t fit into any code. They designed a new code for it and over time, refined it, so that now we have a code that adequately describes that condition.”

Venable said the ability to collect more specific data will have far-reaching benefits.

“Several years ago, emergency room staff began treating injuries sustained in three-wheeler accidents. So, by assigning a code to that particular circumstance, we’ve collected that information across the entire United States. It gives you a tremendous amount of statistical information about trends and patterns that we wouldn’t otherwise have.”

Other countries have been using the expanded ICD for about 20 years. “Each country takes the umbrella document, issued by the World Health Organization, and produces its own version, but there’s really very little difference from one country to another,” Hazelwood said.

The professors said the switch to the expanded code in the United States is a “massive undertaking.”

“Adoption of the new system is going to be an expensive process,” Venable said. In addition to receiving extra training, health care providers must develop and modify their computer systems to accommodate new equipment and software.

Hazelwood teaches the coding system to UL Lafayette students each spring.

“I have a challenge, over the next two or three years, of teaching students the current system, while preparing them for the new system. There will be one class that will have to be fully versed in both,” she said. ■

READERS KEEP UP WITH UL LAFAYETTE ONLINE

Would you like to keep up with the latest UL Lafayette news?

Sign up for *ENews*, a weekly electronic newsletter produced by the university's Office of Communications and Marketing.

"It's an easy, quick way to learn about what's happening at the university. Content is eclectic. It ranges from faculty accomplishments to fun facts to information about innovative research," said Christine Payton, assistant director for print media, who is in charge of *ENews*.

In addition to writing news and feature articles related to the university, Payton constantly monitors a wide range of publications for references to UL Lafayette. So she often provides links to articles that were produced by media across the United States, ranging from *The New York Times* to the *Pittsburgh Post-Gazette*.

She welcomes feedback and news tips from readers. "The response to *ENews* has been gratifying. There are a lot of people with a keen interest in UL Lafayette," she said.

Readers can access *ENews* through the university's home page, www.louisiana.edu, said Payton. "Click on the 'News' button in the top left portion of the page. It will take you to the Communications and Marketing home page. Click the 'News and Events' bar, which leads to the 'electronic news' link."

Signing up to receive *ENews* is just as simple. The Communications and Marketing home page includes a link to an online request form. "It's as easy as filling out the designated fields and clicking 'Submit.'" "The newsletter's first issue was posted in September; issues are archived for easy retrieval.

For more information, contact Payton at (337) 482-6397 or payton@louisiana.edu



Nation's education leader turns spotlight on university

UL LAFAYETTE'S COLLEGE of Education has earned national media attention for its teacher training program.

It began with coverage of a speech given by U.S. Secretary of Education Arne Duncan at Columbia University's Teacher's College in late October. He recognized Louisiana for being the first state in the country to tie student test scores to effective and ineffective teacher preparation programs. Duncan called Louisiana a model for the nation and then cited UL Lafayette.

"Officials at the University of Louisiana at Lafayette opted to increase admission requirements, added a career counseling program to better prepare teachers for the transition to the classroom, and boosted coursework requirements in English language arts. Real change, based upon the real outcomes of children—revolutionary, isn't it?" he said.

Louisiana's accountability efforts began in 2002 with the federal No Child Left Behind initiative of the Bush administra-



tion. Now, the Obama administration wants to use test scores to evaluate teachers and the universities that train them.

Reporters with *The Washington Post* and National Public Radio met with UL Lafayette officials on campus in December to learn more about the university's teacher preparation.

Post reporter Nick Anderson spoke with Dr. Joseph Savoie, president of UL Lafayette, and Dr. Gerald Carlson, dean of its College of Education. Carlson, in turn, introduced Anderson to some students and recent graduates who are now teaching in Acadiana.

In the *Post* article, Savoie described the university's initiative as "accountability on steroids" and addressed a report from the Louisiana Board of Regents that examined three years of test data from classrooms. In the report, UL Lafayette scored lower than expected in elementary

English language arts.

"We got the numbers and said, 'We've got to figure this out,'" Savoie stated in the article. He quickly gathered administrators within the college to discuss remedies and decided to increase admissions criteria and add more writing and grammar instruction to the curriculum.

"As the institution that prepares the majority of the teachers in this area, it is our responsibility to make sure our graduates are ready for the classroom and can deliver effective instruction to our children on day one. We welcome ways to ensure that this preparation is successful and have no problems looking at the data and making changes if necessary," Savoie stated in the article.

Anderson wrote, "In the tradition-bound world of teacher education, experts say, such rapid-fire decisions based on classroom test results are rare."

The article was published in a Sunday issue of the *Post*, which has a potential audience of 2 million people.

NPR's Larry Abramson interviewed Savoie and Dr. Steve Landry, UL Lafayette's provost and vice president for Academic Affairs. NPR has a potential audience of 27 million people.

100 NEW JOBS: NOT JUST AN ILLUSION

Pixel Magic, a special effects company in University Research Park, is gearing up for the latest entertainment innovation – 3-D television.

It has begun the process of converting 2-D movies into 3-D movies.

The demand for 3-D movies is expected to increase quickly when 3-D televisions hit the marketplace this year. Sony announced that it will start selling 3-D televisions in Japan in June, for example. Sales in the United States will begin this year, too.

Stereoscopic conversion is labor intensive. So Pixel Magic has already started hiring and training artists who can do the frame-by-frame work. Company officials predict that about 100 jobs will be added over the next year.

Pixel Magic's main office is in the heart of the Media District in Los Angeles. It opened an office in the Louisiana Immersive Technologies Enterprise Center in November.

The company provides digital visual effects for motion pictures and television. It has worked on major films, such as "Marley and Me" and "Get Smart." It's handling special effects for "Secretariat," a Disney film about the racehorse that won the Triple Crown in 1973. Parts of that movie were shot in Acadiana.

Pixel Magic was included in a list of "50 Companies We Can't Do Without," published in the spring 2010 issue of *1012*, a Baton Rouge business magazine. The publication focuses on the Interstate 10 and Interstate 12 corridor in Louisiana. It chose the companies on the basis of their global footprint, innovation, value to key industries and reputation as good corporate citizens.

Pixel Magic General Manager Ray Scalice said a confluence of factors made opening an office in LITE attractive.

"After reviewing opportuni-

ties in Canada, Louisiana, New Mexico and other states, we chose Louisiana because of its variety of locations and diverse environments, the growth of film production in

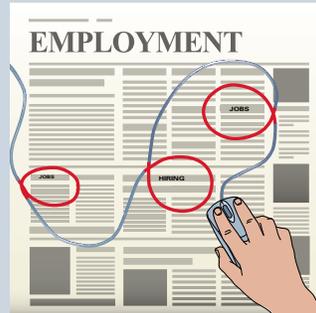
the state, and its industry-specific tax incentives," he said. "LITE has the skilled personnel and experience in digital media and the business community of Lafayette has a reputation of innovation that made our decision to open an office in Lafayette a clear

choice. This relationship will enable Pixel Magic to utilize LITE's cutting-edge tools for visual effects creation and high-speed infrastructure in the rendering and transfer of data to our clients."

Pixel Magic will benefit from Louisiana's recently strengthened film-production tax credits and could also utilize the new digital-interactive media tax credits for projects. The company has enrolled in the Louisiana FastStart™ program, which helps recruit and train qualified employees.

Pixel Magic will also receive one free year of office space. It is one of the first tenants of the business accelerator at LITE. The accelerator is designed to encourage the creation of new and innovative technology businesses in Acadiana through start-ups, joint ventures of existing businesses and the recruitment of out-of-state technology companies. It was created by LITE, UL Lafayette and the Lafayette Economic Development Authority.

"The establishment of the business accelerator at LITE and having Pixel Magic as its first tenant is a perfect example of Lafayette's wild-catter mentality and technological savvy converging to create the future of innovative and creative business in Acadiana today," said Gregg Gothreaux, president and chief executive officer of LEDA.



Quotable

"He just grabs you by the throat with those big chords. But it's not beautiful. It's compelling."

Dr. Susan V. Nicassio, UL Lafayette history professor, describes Puccini's score for *Scarpia*, the main villain in "Tosca," in the *St. Petersburg Times*

"The Louisiana State Penitentiary has a model prison hospice. With the help of an instructional teaching grant, I had the opportunity to bring the students there to meet with the patients. It was a very powerful experience for them."

Theresa Frederick, a UL Lafayette nursing instructor, comments on nursing students' trip to Angola, in *The Oncology Nurse*, a national publication for hematology and oncology nurses and advanced practitioners

"With regard to which gives you the greatest benefit — a credit or a deduction — the best course of action would be to compute your tax liability both ways and use the option that is of greatest value to you."

Ellen Cook, assistant vice president for academic affairs at UL Lafayette, offers advice about education tax credits and deductions in the "Ask an Expert" feature of a *New York Times* blog

"Waiting and delaying the first sales to mid-April means that the U.S. Treasury is rolling the dice."

Dr. Linus Wilson, an assistant professor of finance at UL Lafayette, remarks in the *Wall Street Journal* about the potential sale of the Treasury's 7.7 billion Citigroup shares

"She has leverage, and she's not afraid to use it."

Dr. Pearson Cross, head of UL Lafayette's Political Science Department, comments on Sen. Mary Landrieu in *USA Today*

AUTISM: THE DIAGNOSIS, TREATMENT AND ETIOLOGY OF THE UNDENIABLE EPIDEMIC



John W. Oller Jr., Stephen D. Oller Jones and Bartlett Publishers

One in 110 American children has been diagnosed with some form of autism, according to the Centers for Disease Control and Prevention. This introductory textbook focuses on the causes of autism spectrum disorders.

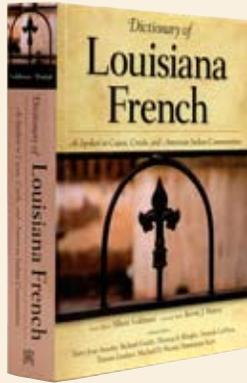
"Autism is a compelling subject of study, because it is the fastest growing diagnosis on the horizon," said co-author Dr. John W. Oller Jr., Hawthorne Regents Professor in the Department of Communicative Disorders at UL Lafayette. He founded the university's applied language and speech sciences doctoral program.

Autism and its related disorders, such as Attention Deficit and Hyperactivity Disorder and Asperger Syndrome, include symptoms such as impairment in thinking, feeling, language and the ability to relate to others. In this book, he points to toxins and their interactions as the primary causes of ASD.

Although it is a textbook, *Autism: The Diagnosis, Treatment and Etiology of the Undeniable Epidemic* also includes information for parents and other caregivers of children affected with autism and related disorders.

Dr. Stephen D. Oller is an assistant professor in the Department of Biological and Health Sciences at Texas A&M University-Kingsville. He earned a doctoral degree from UL Lafayette in 2005.

THE DICTIONARY OF LOUISIANA FRENCH AS SPOKEN IN CAJUN, CREOLE AND AMERICAN INDIAN COMMUNITIES



Barry Jean Ancelet, Tamara Lindner and other co-editors
University Press of Mississippi

This long-awaited volume is both a reference book and a window on south Louisiana cultures. The 800-page dictionary reveals the use of language by French-speaking people in five regions of south Louisiana: coastal marshes, the banks of the Mississippi River, central and northern areas, and the western prairie.

The dictionary is the culmination of 10 years of work and includes words collected from hundreds of field interviews. Its editors also collected words from archival recordings and from texts published after 1930.

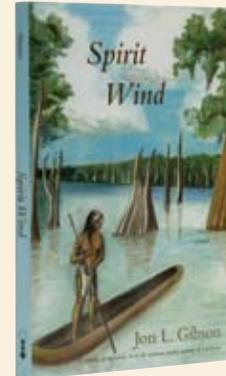
Research for the book was funded in part by the National Endowment for the Humanities.

Entries include each word's conventional French spelling, its pronunciation, its classification as a part of speech, its English equivalent and the word's use in common phrases. An English-to-Louisiana French index shows readers how particular ideas or sentiments would be expressed in the French of south Louisiana.

Dr. Barry Jean Ancelet and Dr. Tamara Lindner are among the dictionary's editors.

Ancelet is a professor of foreign languages, research fellow for the Center for Louisiana Studies and holds the Willis Granger and Tom Debailon/BORSF Professorship in Francophone Studies I. Lindner is an assistant professor of foreign languages.

SPIRIT WIND



Jon L. Gibson
The University of Alabama Press

Dr. Jon L. Gibson, a former UL Lafayette anthropology professor, blends imagination and reality in this coming-of-age novel. Although its characters are fictional, *Spirit Wind* is an "anthropologically accurate story of American Indian cultures in conflict," according to its publisher.

Gibson tells the tale of an orphan, Storm Rider, who is reared by the Chitimacha tribe and captured by an enemy raiding party. His story is set in the Atchafalaya Basin and anchored in Chitimacha culture and rituals.

Julian Granberry, author of *The Americas That Might Have Been: Native American Social Systems through Time*, described Gibson's narrative as "not only an excellent fictional approach to Chitimacha tribal mythology, but a fascinating and extremely well-written book, capturing the essence of Chitimacha storytelling technique in an excellent and thorough manner."

Gibson retired from UL Lafayette in 2001. His research has been focused on the native peoples of Louisiana.

He also is the author of *The Ancient Mounds of Poverty Point: Place of Rings* and coeditor of *Signs of Power: The Rise of Cultural Complexity in the Southeast*.

Electrified Ride

Student's design featured at Detroit auto show

KEEGAN MCCLAIN IS MAKING SOME fast moves in the design world. In January, he traveled to Detroit, Mich., where his concept design for an electric motorcycle was featured at the North American International Auto Show, the industry's annual showcase of up-and-coming vehicles. His design was one of 33 chosen in the international Michelin Challenge Design competition, which included 292 entries by students and professionals.

He earned a bachelor's degree in industrial design from UL Lafayette in 2008. He designed the MC Type 2 while working in the

Transportation Design Studio class taught by Jerry Malinowski, an internationally regarded designer who helped create the Ford Mustang. Now, McClain's moving his design off the

drawing board and into reality by building a life-size prototype, starting with a dirt bike chassis. He's also a student again, pursuing a second undergraduate degree in mechanical engineering.

La Louisiane magazine spoke to McClain about the MC Type 2 and his design philosophy.

Why did you design an electric motorcycle?

I've always been interested in motorcycles and in transportation. I like things that go.

While I was in my third year of

studying industrial design, I really got into what everybody calls 'green' design. Green's a buzz word now, but back then, just a few years ago, I was kind of 'that guy,' the guy who was doing something different.

At first, I was just designing 'things.' At some point, those things have to become meaningful. As a designer, you have to find something to stand on. So, I decided that sustainability and green design would differentiate the meaningless from the meaningful in my work.

How did you come up with the design?

First, I asked, 'What are the basic requirements of a commuter vehicle?' It would have to be able to carry two people in freeway traffic. That was my basic starting point.

I also wanted it to be something people could afford, so I chose affordable materials, like aluminum, and batteries that are commercially available. I didn't want it to be a rich man's toy.

How fast will it go?

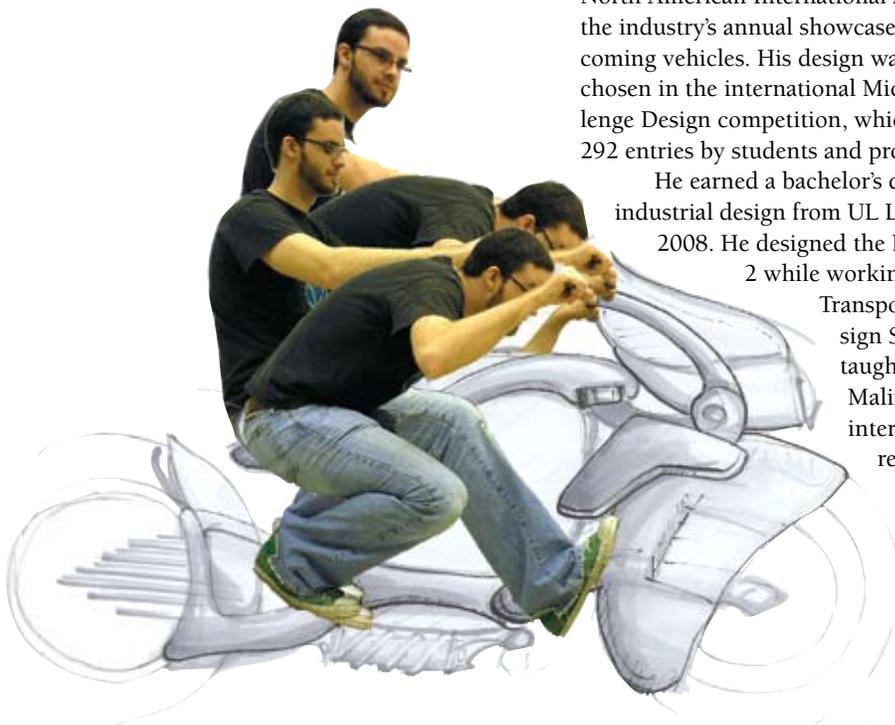
This thing can do 100.

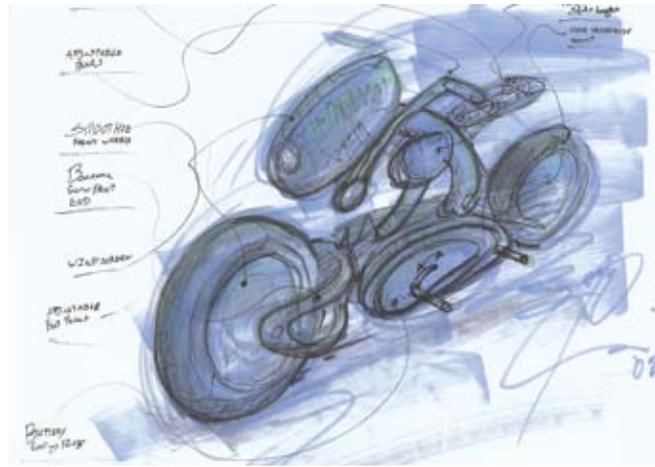
And where does it get its power?

There are 142 rechargeable lithium-ion cells positioned in the cooling fins at the base of the bike. You would recharge the bike by plugging it into a standard, 110-volt outlet.

It's also partially solar-powered. The fairing (a design feature that protects the rider from weather and lessens wind resistance) and the fender are covered in a thin-film, solar-cell material, so they can collect passive energy from the sun to charge the batteries. It wouldn't be your main source of power, but the solar collection system would be an auxiliary means to charge the batteries.

Keegan McClain imagined and designed an electric motorcycle in the Transportation Design Studio of UL Lafayette's Industrial Design program.





Top left: An image of the MC Type 2 on display at the Detroit auto show. Top right: A page from McClain's sketchbook. Above: A scale model of the MC Type 2

What about the look of the bike?

There are two schools of thought about how motorcycles should look. There are bikes that hide their technology and those that show it off.

I designed a naked bike. In the U.K., they call them hooligan bikes, in the U.S., they call them naked bikes. They're bikes that don't have a big fairing.

Naked bikes are part of a trend in design right now. Victory Motorcycles came out with its new touring bike. It's got a big fairing on the front, saddlebags and a big trunk. But Victory left the V-twin engine exposed.

They understand that the engine is the heart of the vehicle. That's why people buy it. And I think that's something that's important in a motorcycle.

You want to see the engine?

Yes. I really like honesty in design. I want to see the engine and see how it

works. I think that makes it a lot more fun. The design is clean and simple. That's one of the philosophies I really stand on.

How is your design different from other electric bikes?

Instead of putting the motor into some kind of plastic-covered cave in the interior of the vehicle, I placed it in an area where I could showcase it.

I have a perpendicular hub motor in an orbital, or hubless, wheel. It can be air cooled really well and it's really exciting looking. You can see the motion it seems to have.

Who is it designed for?

This bike fits 100 percent of the market segment for motorcycles. It weighs less than 300 pounds and it's adaptable to almost any rider. Someone who's 5'2" can ride

it. Someone who's 6'5" can ride it, too.

It's got a memory-foam seat that's adjustable. It's attached to a hidden rail system. It sits at 26 inches at its lowest point. At its highest point, 33 inches, the bike can accommodate two people.

The handlebars pivot at two points, so they are almost universally adjustable. You can position them in a clip-on racing style or the big tall bars they call ape hangers. You could have anything in between.

What about safety?

The bike has airless tires, so there is less maintenance and you'll never have a blowout.

And comfort?

The fairing telescopes back to cover the seat and protect it from the elements. So, let's say, while you have it parked, there's a light shower. Your seat's not going to be all wet when you come outside.

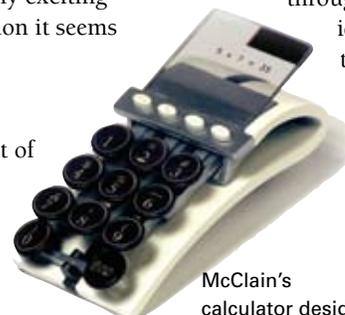
Or you can cover the seat to shield it from the sun and keep it cool. And while it's doing that, the fairing is collecting solar power, recharging your battery.

Is there another project you've worked on that really shows who you are as a designer?

I had an assignment in my second year of industrial design to build a calculator out of balsa foam. The assignment is supposed to teach you how to use balsa foam as a modeling material.

Most students designed calculators that were shaped kind of like a steak or Africa. It's that blob-object school of thought that I don't belong to. I used negative space throughout the calculator. So, the idea is that it would give you the satisfaction of punching the keys, kind of like on an old typewriter.

It's the difference between a static object and a non-static object. A conventional calculator is a static object. This isn't. ■



McClain's calculator design

Student-Athletes Score in the Classroom

ALMOST HALF of UL Lafayette's student-athletes posted a 3.0 grade point average or higher for the Fall 2009 semester.

A total of 177 of them hit that mark. That's 47 percent of 380 Ragin' Cajuns® who participate in the NCAA-sanctioned sports of football, basketball, baseball, softball, soccer, tennis, golf, track and field, cross country and volleyball.

Eighteen Cajuns earned a perfect 4.0, while 52 others obtained 3.50 to 3.99 GPAs. A total of 107 had GPAs between 3.0 and 3.49.

"It seems like we say it every year but our student-athletes continue to amaze us. They work hard and are committed to academics," said Christy Alford, acting director of UL Lafayette's Student-Athlete Academic Center.

The softball team captured the best team GPA with a 3.228. Since 2003, it has gone to the Women's College World Series twice and has posted a team GPA of 3.0 or higher for



nine semesters, including the past five consecutive semesters.

UL Lafayette's soccer team was right behind, with a Fall 2009 GPA of 3.217. Fall 2009 was the soccer team's 14th consecutive semester with a GPA greater than 3.0.

The golf team led the men's programs for the fifth straight semester, with a 3.098 GPA. The Ragin' Cajun golf team has had a 3.0 GPA or higher for eight of the past 11 semesters. Eleven of the 14 sports teams saw their Fall 2009 team GPA increase from the Spring 2009 total (indoor and outdoor track are considered one sport for this data). In addition, 10 of the 14 teams posted a better team GPA in Fall 2009 than Fall 2008.

Ten of 14 teams had a GPA of 2.9 or better for the Fall 2009 semester, including six teams that posted a GPA of 3.0 or greater.

Students Help Transform Urban Landscape



COMMUNITY DESIGN WORKSHOP

UL Lafayette's Community Design workshop created plans for a bicycle and pedestrian path on campus.

OVER THE LAST 15 YEARS, UL Lafayette's Community Design Workshop has produced more than 80 detailed plans to improve neighborhoods and communities. That's an average of about five collaborative design projects a year. The Workshop provides expertise in urban planning and landscape design, as well as architecture, housing and preservation.

Its latest design is a bicycle and pedestrian path to connect the university's main campus with University Common. The \$1.2 million project, which includes lighting and landscaping, is funded by a grant from the Louisiana Department of Transportation and De-

velopment. Bids for the project will be opened this summer.

"Each project is a complex puzzle," said Tom Sammons, a UL Lafayette architecture professor who has served as director of Community Design Workshop since it was created in 1995. Faculty and students talk with residents and business owners in planning meetings called charrettes, to find out what they want and need.

"We're able to take that information and help community members visualize solutions," said Sammons. Fifth-year undergraduate and graduate architecture students create digital ren-

THE COMMUNITY DESIGN WORKSHOP HAS INCLUDED REVITALIZATION PLANS FOR THE FOLLOWING LOUISIANA COMMUNITIES AND CITIES:

Breaux Bridge	Lafayette
Broussard	Maurice
Carencro	New Iberia
Cameron	Opelousas
Delcambre	Scott
Dry Prong	Washington
Kaplan	

URBAN PLANNING DESIGNS WITHIN THE CITY OF LAFAYETTE:

UL Lafayette master plan
 Interstate 49 connector
 Interstate 10 service roads
 North-South beltway
 Johnston Street master plan
 Ambassador Caffery master plan
 Oil Center revitalization plan
 Simcoe Street neighborhood plan
 Freetown neighborhood plan

derings, which appear in brochures that describe each project.

Communities use the brochures as tools when seeking funding for their projects. "Once we've given a community a starting point with design, that momentum typically grows and they're able to carry the project forward," Sammons said.

NEW LOOK PLANNED FOR QUADRANGLE



Students in UL Lafayette's Community Design Workshop created a new design for The Quad.

THE STUDENT GOVERNMENT Association is spearheading an effort to redesign one of the most popular places on campus: the Quadrangle.

In March, it approved a plan created by the UL Lafayette School of Architecture's Community Design Workshop. The workshop gives senior-level and graduate students hands-on experience designing public spaces.

The redesign features the addition of a brick water fountain in the shape of a fleur-de-lis; a circular walkway that encompasses most of the Quad; the addition of four live oaks, 14 crape myrtles and eight magnolia trees; and the addition of 40 benches.

Tom Sammons, professor of architecture and director of the Community Design Workshop, said the plan is versatile. "It provides intimate gathering places, yet it can be transformed for larger assemblies or press conferences."

Seven graduate architecture students contributed to the project. Four were appointed by Sammons to form a "brainstorming" team: Kelly Russo, Aaron Schaubhut, Stephanie Graziano and Justin Fredricks.

Russo said Sammons "had us brainstorm for a couple of weeks. Then we started developing our designs."

Graziano focused on creating a central fountain, while Fredricks concentrated on the open space. Russo and Schaubhut combined their ideas for a

proposal that incorporated the circular walkway and additional trees.

Blake Kidder then synthesized their work; Trevor Ducote digitally animated it. Max Nochez developed related construction documents.

The architecture students unveiled their plans to SGA and UL Lafayette President Dr. Joseph Savoie in February.

"We each presented our own proposal so that they could see what elements each of us thought were important. The final design includes components from all three presentations. It's really a combination of elements the SGA asked for, ideas that students contributed and some ideas we found while doing research for the design," Russo said.

The students kept cost in mind.

"As we worked on the redesign, we paid attention to the existing lighting. It costs a lot of money to put in lighting, so we left the existing infrastructure in place in the new design," Russo said.

SGA President Dustin Domangue said the student group has earmarked \$15,000 as seed money to establish a foundation dedicated to the Quad beautification project. Half of that amount was raised by an SGA-sponsored scooter raffle; the remainder was allocated from the organization's general fund.

"The whole idea behind this project is to add to the campus ambiance and encourage interaction," he said.

Geaux R.E.D. Recycling Program Starts to Take Shape

A campus known for wearing red is going green. This semester, the UL Lafayette Student Government Association created a sustainability committee to explore ways to reduce waste and conserve energy. Five SGA senators serve on the committee.

"We're working with the university's administration to identify and implement sustainable practices across campus," said Laura Bullinger, SGA vice president. The collaboration among students and administrators is already bearing fruit, she said.

Sodexo Dining Services, which operates the university's food service program, has removed food trays from the Student Union's Cane Break Cafeteria. With no trays to wash, the cafeteria uses less water.



The SGA and university are preparing to launch a campus-wide recycling program.

"I think people are willing to recycle if it's convenient," said Bullinger.

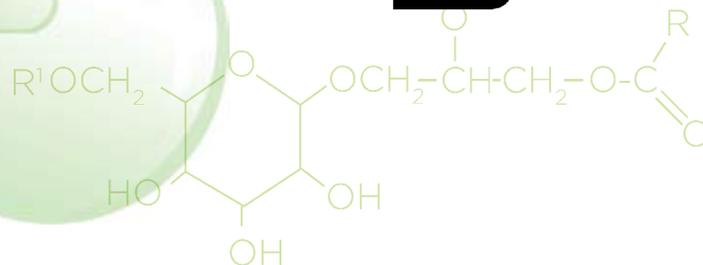
The SGA plans to place large recycling containers in high-traffic areas on campus and provide small recycling containers for faculty, staff and students in dorms and offices. Bullinger said the containers should be in place by the Fall 2010 semester.

Conor Runkel, an SGA senator, created a slogan for the recycling effort: "Geaux R.E.D.: Recycle Everything Daily." Trey Petitjean, a sophomore studying industrial design, created an original logo that incorporates the message.

"The green initiative is going to provide us with an environment that is safe and beautiful. We can look at it as beautifying our campus, cutting costs, and setting an example for future students," Bullinger said.



Researchers Get **Bio Ready**



The world's appetite for energy continues to expand. And while demand for oil and natural gas isn't likely to wane any time soon, there's also a growing hunger for energy sources that are renewable and eco-friendly. A team of UL Lafayette experts is exploring some intriguing alternatives to fossil fuels.

BY SARAH SPELL

PHOTOGRAPHY BY DOUG DUGAS



Dr. Barbara Benson leans forward, taking a closer look at a tabletop aquarium in an engineering lab in UL Lafayette's Madison Hall. • To the untrained eye, the tank filled with olive green slime may look like a science experiment run amok. To Benson, the algae growing inside are a beautiful sight. In the murky water, she sees a source of renewable energy. • Benson is an assistant professor of environmental science in the Department of Renewable Resources. She is part of UL Lafayette's Bioprocessing Research Laboratory, a multidisciplinary effort involving more than 20 faculty members from the College of Engineering, the Ray P. Authement College of Sciences and the B.I. Moody III College of Business Administration. The engineers, chemists, biologists, economists and the students who study with them, are investigating alternatives to petroleum-based fuels. • The Bioprocessing Research Laboratory encompasses several facilities across campus where experiments are under way to unlock power from a variety of materials, from algae to alligator fat, from sweet potatoes to sausages.

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Left: Dried, crushed algae. Opposite page: Vaughn Hulin, a freshman chemical engineering student, takes a sample from a 10-liter biodiesel reactor in a Madison Hall lab.

BIOFUELS GLOSSARY

biofuel: fuel made from renewable biological resources

biodiesel: liquid fuel produced by the separation of fats and glycerin in biological material. It can be used in diesel engines.

biomass: biological source material. Biomass can include but is not limited to wood; grasses and woody plants; food crops; animal parts; algae; and the organic components of municipal and industrial waste.

energy crops: agricultural crops grown specifically for their energy value

ethanol: liquid fuel produced from the fermentation of sugar that can be used in gasoline engines

feedstock: biological material used in the creation of a particular biofuel

gasification: heat process used to convert carbon-based materials into a gas that contains carbon monoxide, carbon dioxide and hydrogen

green diesel: liquid fuel derived from biomass. Unlike biodiesel, green diesel is compatible with existing petroleum industry infrastructure.

syngas: synthesis gas; gas produced from biomass through the gasification process. Syngas can be used to produce liquid fuels, including ethanol and green diesel, as well as other chemicals and products, such as biodegradable plastics.

transesterification: the chemical process in which alcohol reacts with triglycerides in vegetable oil or animal fats, separating the glycerin and producing biodiesel

DR. MARK ZAPPI, dean of the College of Engineering and leader of the research team, describes the quest for alternative energy as a “horse race” of competing technologies. “It’s too early to tell how that race will end. So, we’re spreading our bets, collaborating on several possible solutions,” he said.

When Zappi was named dean in 2005, he was well-qualified to establish high-level biofuels research. He earned a bachelor’s degree in civil engineering from UL Lafayette and then began more than a decade of work as an environmental engineer at the U.S. Army Corps of Engineers’ Waterways Experiment Station in Vicksburg, Miss. While



Dr. Mark Zappi, Dean of the College of Engineering

working there, he completed master’s and doctoral degrees in chemical engineering at Mississippi State University. In 1995, he began his academic career at MSU.

While at MSU, Zappi conducted research, taught classes and was director of the Mississippi University Research Consortium for the Utilization of Biomass and director of the MSU Environ-

mental Technology Research Laboratory. During his career, he’s helped secure \$30 million for projects ranging from basic technology research and development to industrial economic development.

He serves as an advisor to several Mississippi companies involved with biofuels and bioproduct development.

At MSU, Zappi and other scientists created a manure biorefinery on a poultry farm in south Mississippi to conduct to research poultry litter as a power source. The biorefinery on the 1,000-acre farm transforms chicken

LOUISIANA'S REGIONAL ADVANTAGES & POTENTIAL ENERGY SOURCES



Acadiana is an international hub of the oil-and-gas industry. Its infrastructure and shipping capabilities could be used to produce and distribute alternative energy.



Dr. Barbara Benson, assistant professor of environmental science, and chemical engineering graduate student Harry Daultani inoculate a bioreactor tank with algae.

litter into a methane-rich biogas, which is then used to generate electricity. Solids and liquids left over from the process can be used as fertilizer.

“To see a project like that move from idea to reality is extremely rewarding. But what’s more exciting is that it shows the potential for biofuels research in general,” he said.

ZAPPI SAID UL LAFAYETTE RESEARCHERS ARE “RE-thinking and rebuilding” Louisiana’s energy industry. “Louisiana is well-positioned to make an economic and industrial transition to biofuels. We have the infrastructure and industry already in place, along with research capabilities.”

UL Lafayette is a member of the statewide Clean Power and Energy Research Consortium, which includes Tulane University, Louisiana State University, Nicholls State University, Southern University, the University of New Orleans and the LSU AgCenter. The consortium supports interdisciplinary research to improve existing energy technology and to explore alternative energy sources.

“Petroleum is a finite resource,” Zappi said. “Expert opinions differ as to when petroleum supplies will be depleted but I think the economics of petroleum will play out before the world actually runs out of petroleum. There will be an economic shift toward renewable fuels. We’re preparing for that shift by conducting a broad

range of research.”

He points to a number of indicators that suggest that shift may already have started. For instance, the Obama administration’s economic stimulus bill, signed into law in February, has earmarked billions of dollars for grants, tax credits and investments in clean energy development and training. And, noted Zappi, “oil and gas companies are redefining themselves as energy companies.” Last year, Exxon Mobil announced it would invest \$600 million to produce fuel from algae. Chevron and Weyerhaeuser have a partnership to develop biofuels from wood waste.

Non-toxic and biodegradable, biofuels can be made from any biomass, or biological source. Two of the most promising options are

COMPONENTS OF A SUCCESSFUL BIOFUEL INDUSTRY

Renewable Feedstocks

- Long-term availability
- Chemical stability
- Suitable land

Resource Collection

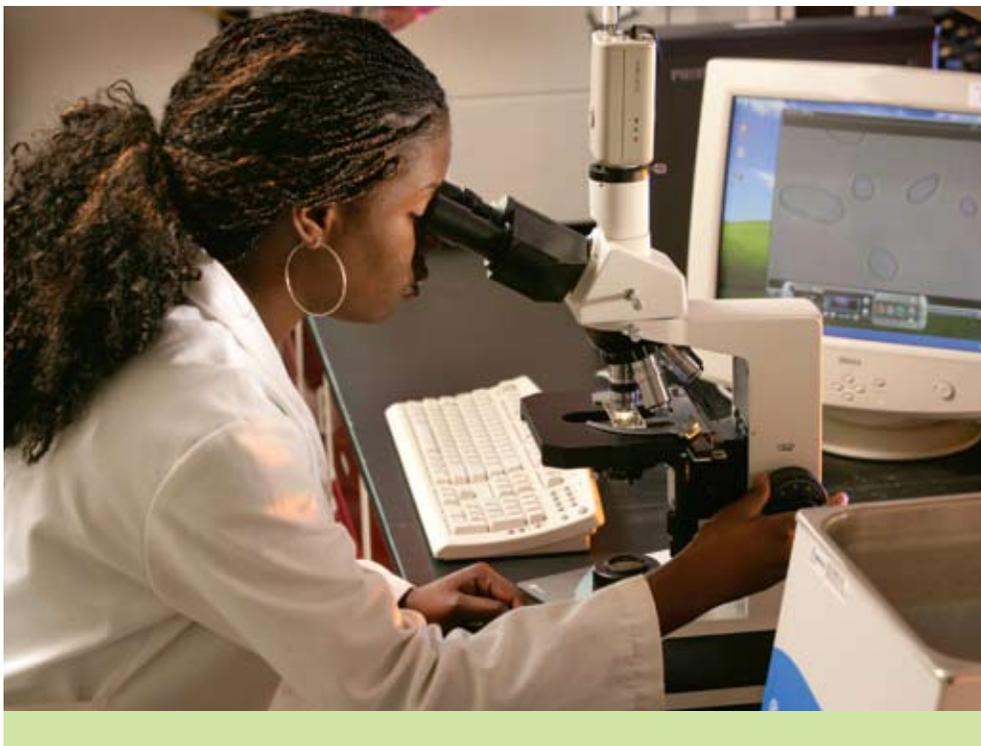
- Harvesting
- Storage and handling
- Transportation

Product Conversion

- Processing and waste management
- Potential to create secondary products
- Profit analysis

Product Distribution/Usage

- Market development
- Price
- Product performance



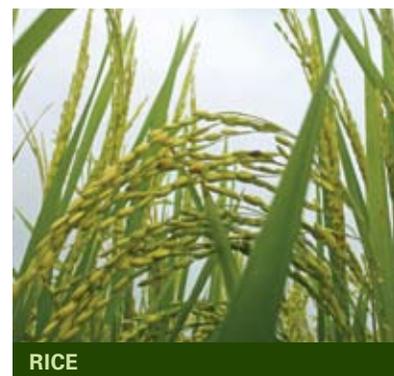
Judith Adewusi, a chemical engineering graduate student, compares the amount of oil produced by yeast grown on rice versus yeast grown on sweet potatoes.

ethanol and biodiesel. Consumers are likely familiar with ethanol, which is often blended into gasoline at the pump. Ethanol is an alcohol, but it is also a hydrocarbon, which makes it compatible with gasoline.

Ethanol can be made from three types of feedstock: sugars, starches and cellulose, or plant, material. Brazil, the world's largest exporter of ethanol, produces the fuel from sugar cane. In the United States, corn has been the staple ingredient in ethanol. Unlike sugar cane, corn requires an additional process-



SWEET POTATOES



RICE

Biodiesel is made from plant or animal oils through a chemical process called transesterification, which transforms fats into fuel. Green diesel, or renewable diesel, is made through catalytic processing of the oils produced from biomass, a process that's similar to the traditional refining process for petroleum crude oils.

Dr. Stephen Dufreche, an assistant professor of chemical engineering at UL Lafayette, said biodiesel is relatively simple to make. "With the right equipment and materials, you could make it at home," he said. In the engineering lab, researchers use a portable reactor to produce biodiesel.

That fuel could go into a standard diesel engine, but might cause some problems, said Dufreche. The fats congeal in cold temperatures, changing the liquid fuel to a gel. And because biodiesel is a solvent, it will break down deposits of residue left by diesel, clogging fuel lines.

Green diesel is chemically similar to traditional

ing step of fermentation – to convert the cornstarch into sugar – before it can become fuel.

"There's at least one other drawback, Zappi said. "Using corn as a feedstock has really spurred the food-versus-fuel debate."

Louisiana moved away from corn-based ethanol in 2008 with the creation of the Advanced Biofuel Industry Initiative, signed into law by Gov. Bobby Jindal. The legislation created a pilot program that combines research, production and distribution of non-corn based ethanol.

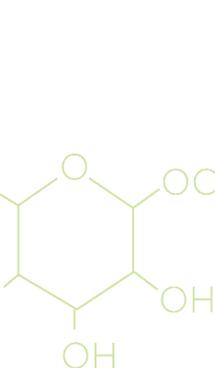
Zappi said the UL Lafayette team is exploring sources such as cultivated plant materials and waste materials that don't compete with food supply.

Plants can be cost-efficient to grow and harvest for biomass feedstock and can provide a desirable feedstock-to-fuel ratio. UL Lafayette researchers are also exploring the use of low-grade rice and waste sweet potatoes to produce ethanol.

'THERE WILL BE AN ECONOMIC SHIFT TOWARD RENEWABLE FUELS. WE'RE PREPARING FOR THAT SHIFT BY CONDUCTING A BROAD RANGE OF RESEARCH.'

DR. MARK ZAPPI, DEAN OF THE COLLEGE OF ENGINEERING

Continued on page 28



TECHNOLOGY ENABLES RESEARCHERS TO SEE MOLECULES IN A NEW LIGHT

An interdisciplinary team of top researchers at the University of Louisiana at Lafayette is exploring a “green” way to use glycerol, a byproduct of biodiesel manufacturing.

Its members are identifying and testing enzymes present in bacteria commonly found in soil. An enzyme is a protein that speeds up chemical processes. These scientists are working to develop enzymes that are able to convert glycerol into compounds with much higher value for the chemical industry.

They are harnessing the power of Zeke, UL Lafayette’s supercomputer, to make mind-boggling computations and then convert these data into images that can be examined using virtual reality at the Louisiana Immersive Technologies Enterprise on campus.

LITE is one of only a few public facilities that combine high-speed networks and high-performance computing with 3-D visualization and immersive technologies.

“So this enzyme project is an amazing confluence of brainpower, computer horsepower, computational chemistry and advanced immersive visualization,” said Dr. Bradd Clark, dean of the Ray P. Authement College of Sciences at UL Lafayette.

As the volume of biodiesel, an alternative to fossil fuels, has increased dramatically worldwide, the amount of glycerol produced has grown too. For every 10 pounds of biodiesel, about a pound of glycerol is created. So glycerol is abundant and inexpensive but of limited use.

Dr. Rakesh K. Bajpai is a professor of chemical engineering and holds UL Lafayette’s endowed chair in bioprocessing. He is also associate director of the Bioprocessing Research Laboratory in the university’s College of Engineering.

Using a chemically modified enzyme to convert glycerol would be a “green” alternative to chemical processes that require more energy, Bajpai said. “Using this modified enzyme, we would not be producing anything harmful and we would reduce waste.”

Enzyme development is of great interest in Europe and the United States. In 1994, a French group of scientists sequenced the gene of an enzyme that was capable of converting glycerol. Last year, a patent was granted for improvements of the enzyme’s properties. When a patent is obtained, future work on that enzyme becomes off limits to other researchers.

Clark said Dr. Wu Xu, an associate professor of biochemistry at UL Lafayette, is working to improve a different type of enzyme, one that is even more efficient than the patented one.

Xu has identified about 25 similar enzymes. However, testing each enzyme using traditional chemistry would be expensive and time consuming. So scientists at UL Lafayette’s Center for Advanced Computer Studies are using its supercomputer, Zeke, to come up with calculations and visualizations of enzymes ideal for glycerol conversion.

Bajpai explained that enzymes fit chemical compounds “like a key in a lock.” The desired product of the enzyme is obtained when a water molecule is removed from glycerol. “If the glycerol fits exactly, the enzyme can unlock the water molecule. If it doesn’t

match up precisely, nothing will happen,” he said.

Dr. Dipesh Bhattarai and Si Feng, UL Lafayette research scientists, used the computations of Dr. Yen-Shan Liu, a researcher in Dr. Wu’s lab, to develop 3-D images of the enzyme with the most potential.

These enzyme molecules are large. That may seem like an oxymoron, but in the overall scheme of tiny particles that make up matter, enzyme molecules are giants.

Some molecules are composed of only a few

atoms. The enzymes that the UL Lafayette team is studying are made up of about 15,000 atoms.

The images can be displayed in The Flex, an interactive 3-D immersive space in LITE that has a three-projector curved screen, motion tracking and an immersive sound system. The researchers can add and subtract atoms; the images morph to illustrate the new configurations.

When viewed through special eyeglasses, the images are three-dimensional. “You actually feel like you can touch the molecule. That’s the exciting part,” Bhattarai said.

When the scientists find the virtual enzyme they want to produce in the laboratory, they will turn to another team member, Dr. Andrei Chistoserdov, an associate professor of biology and microbiology, to genetically modify the bacteria so they will produce desired enzymes.

LITE’s technology may be used in another enzyme-related project. Dr. Stephen Dufreche, an assistant professor of chemical engineering, is exploring the use of enzymes to create trinitrotoluene, better known as TNT.

Chemical processes have been used to make the explosive for the past 80 or 90 years. “But with those processes, we make an undesirable byproduct in environmentally unacceptable quantities,” Bajpai said. “We think that if we can make it enzymatically, we can make it in an environmentally safe manner.” ■



Dr. Dipesh Bhattarai, left, and Si Feng use The Flex, an immersive visualization tool, to get a 3-D look at a glycerol dehydratase protein molecule.

SI FENG

POWERFUL PARTNERSHIP

An alternative energy production facility planned for Acadia Parish will provide UL faculty and students with research opportunities while generating power for Louisiana utility customers.

Cleco Power LLC will build a \$1.5 million gasifier on a five-acre site in Acadia Parish Industrial Park, adjacent to interstate and rail transportation. The project is a partnership among Cleco, NorthStar Resources LLC, Acadia Parish and UL Lafayette's College of Engineering. Construction is set to begin this summer.

Dr. John Guillory, associate professor and acting head of UL Lafayette's Department of Mechanical Engineering, is the lead designer of the facility. He collaborated with EDG Inc., an international engineering firm based in Louisiana.

Dr. Mark Zappi, dean of UL Lafayette's College of Engineering said the gasifier will be a training facility where students learn to make fuels.

"A gasifier can transform any combustible material," he explained. Material is burned at high temperatures with low levels of oxygen. Instead of burning completely, the raw material is converted into syngas, or synthesis gas, a mixture of hydrogen, carbon monoxide and carbon dioxide. Syngas can be processed further to generate electricity or create liquid fuels or other chemical compounds.

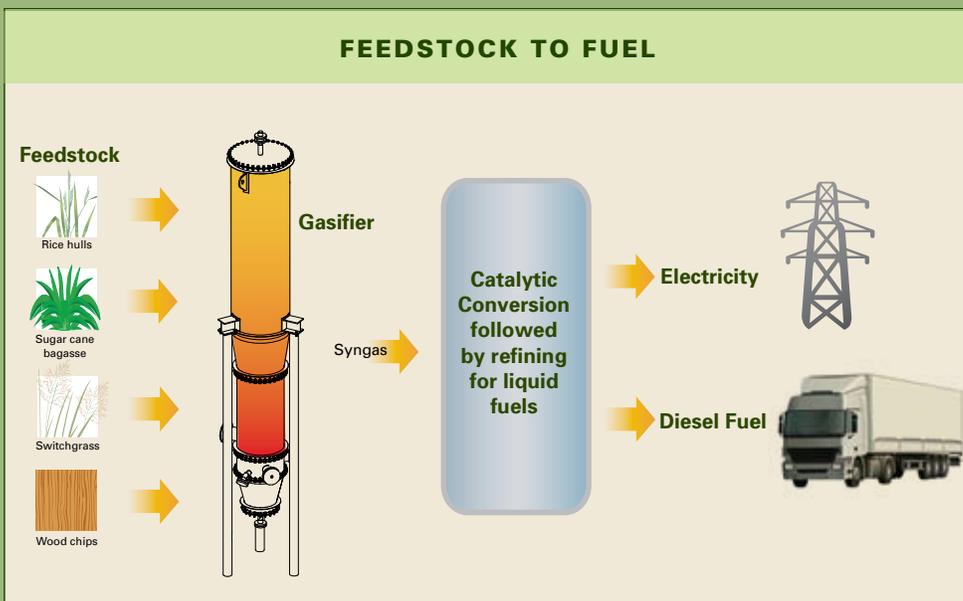
"We're essentially ripping apart complex chemicals and reducing them to their building blocks. Then we can reassemble those chemicals into compounds we want to produce," Zappi said.

Students and faculty will explore the energy potential of rice hulls, sugar cane bagasse, poultry litter and sewage sludge. Researchers are also considering cultivated energy crops, such as switchgrass, a perennial grass native to Louisiana's coastal prairie, and giant reed, a grass that produces a bamboo-like stalk. The facility is designed to process three tons of material each day.

"UL Lafayette will be one of a few institutions to have access to a large-scale facility," said Zappi. The facility will be a model for commercialization of full-scale gasifiers. "It is designed exactly as an industrial facility, with all of the safety systems and protocols in place," he said.

Ben Russo, director of market development for Cleco, said the research and development facility will help his company form long-range plans for investment in alternative energy. "We've been moving in this direction for about two years, but we still have lots of unanswered questions about what materials will work best and what the overall cost may be.

"We want to look at a wide variety of renewable energy sources. Ultimately, the research conducted by the UL Lafayette group will help us determine a cost-benefit ratio for a variety of materials. We want to know, for instance, how much energy we can produce from a ton of rice hulls or a ton of wood chips." ■



Continued from page 26

diesel, so it doesn't present those challenges. It remains fluid in cold temperatures and can be used in existing industry infrastructure. It can be blended with diesel and produces lower emissions than traditional diesel.

"Because of the obvious advantages, energy companies are moving away from investing in biodiesel development in favor of renewable diesel," Dufreche said.

UL Lafayette scientists are addressing two primary challenges in biofuels research: developing high-yield feedstocks, or biological source material, and cost-effective extraction and refining methods. (See related article, page 27.)

THE MOST DESIRABLE FEEDstocks for biodiesel contain high amounts of fat, which can be refined into fuel. Chinese tallow trees, for example, are "an almost perfect feedstock" for green diesel, Dufreche said. That's because their white, waxy seeds yield large amounts of polysaturated fat.

"To produce renewable diesel, you have to introduce high levels of hydrogen into the refining process. If you're working with a highly saturated feedstock, it's already full of hydrogen to begin with," he said.

In addition to tallow trees, the UL Lafayette research team is analyzing alligator fat as a fuel source, Dufreche said. "We can look at almost any oil as a basis for research. What we want to know is: Can we develop technology to produce that fuel in a way that is both cost efficient and environmentally responsible?"

LOUISIANA SWEET POTATOES MAY be a source of fuel, according to research under way in UL Lafayette laboratories. The work is being led by Dr. Rakesh K. Bajpai, a professor of chemical engineering. Bajpai, who came to UL Lafayette from the University of Missouri-Columbia, is an internationally known biofuels expert.

Satish Patil is a graduate student working in Bajpai's lab.



“We are focusing on sweet potato starch because we are in Louisiana, partnering with local industry,” Patil said.

Each fall, part of the crop is left in the field because it doesn’t measure up to food-grade standards. Researchers are using sweet potato waste — raw sweet potatoes and sweet potato peels — as food for yeast.

“The yeast we are using for our research has strong extracellular enzyme activity, which means it has the ability to break down the sweet potato starch and consume it,” Patil explained. As the yeast, or fungi, feed on the starch, they produce oil.

He measures the amounts of carbon and nitrogen as the fermentation process unfolds. As the yeast deplete the carbon in the starch, nitrogen levels rise. “As long as carbon is present, the yeast are multiplying. But when they



CHINESE TALLOW TREE

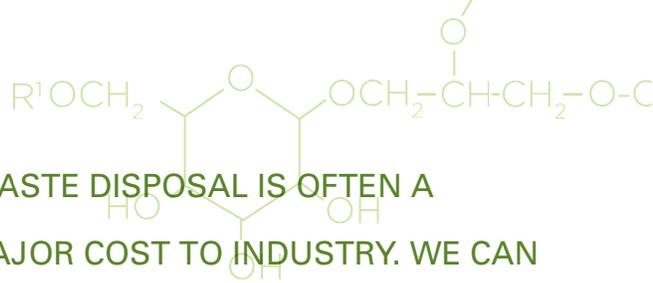


LOUISIANA ALLIGATOR

LAFAYETTE CONVENTION & VISITORS COMMISSION



Top: Chemical engineering graduate student Satish Patil takes a sample of algae grown under fluorescent light. Patil built the reactors, which are used in a Madison Hall laboratory. Above: Srividya Ayalasomayajula filters oil from alligator fat.



‘WASTE DISPOSAL IS OFTEN A MAJOR COST TO INDUSTRY. WE CAN TAKE THAT WASTE AND TURN IT INTO A PRODUCT THAT HAS VALUE.’

DR. MARK ZAPPI, DEAN OF THE COLLEGE OF ENGINEERING



Chemical engineering student Bridget Meaux measures the amount of methane being produced by fermenting sewage sludge.

start feeding on nitrogen, the oil globules become bigger and bigger.”

Patil is also exploring ways to extract the oil, including using ultrasonic waves to break open the cells, and using solvents to remove the oil through a chemical reaction.

ZAPPI SAID WHEN RESEARCHERS CAN “TAKE SOMETHING out of the waste stream and convert it to energy, they know they’re on the right track. Waste disposal is often a major cost to industry. We can take that waste and turn it into a product that has value.”

He and his team are taking samples of sewage sludge from the Lafayette Utilities System’s wastewater treat-



LUS WASTEWATER POND

ment plants to explore the potential to make fuels and other products. Oil can be harvested from the sludge for biodiesel or green diesel. The sludge can also be used as a fuel source in a gasifier, a facility that burns biological

matter to produce synthesis gas, or syngas (See related story on page 28 for more information.)

Bridget Meaux, a chemical engineering undergraduate, has conducted experiments to measure the amount of methane produced by sewage sludge and other materials. To take those measurements, she uses a small bioreactor, a glass vial topped with an air-pressure gauge. “We built these bioreactors to find out how much gas is being produced. Whatever’s in there, it will release gas under airtight conditions,” she said. Bacteria digest the biological material, producing methane.

Meaux has worked with algae, sewage sludge and other ingredients. “We added chicken blood, old meat, chicken litter. It was disgusting, but it created more gas,” she observed.

“We also added vitamin solutions to the reactors. Just as the function of a human body is improved and enhanced with vitamins, so are the bacteria’s.”

ONE OF THE MOST PROMISING SOURCES OF ALTERNATIVE fuel is algae. The microorganisms produce lipids, natural oils that can be converted into biodiesel and green diesel.

Dr. Barbara Benson said algae “don’t require much. They need sunlight and water, carbon dioxide and trace nutrients to grow.” They aren’t picky about water conditions either. Algae are found in saltwater, freshwater and brackish water.

Benson and her students are cultivating and evaluating multiple strains of algae, measuring and analyzing their growth rates and levels of oil production.

“I was originally interested in algae as a source of pharmaceuticals and nutritional supplements. When I came to UL Lafayette, Dean Zappi steered me in the

STUDENTS CREATE VEHICLE FOR SERVICE LEARNING

UL Lafayette students are preparing to hit the road to educate others about sustainable living. The RUN-bus, a modified school bus, will serve as a mobile classroom for demonstrations of clean energy, energy-efficient building strategies and community-based food production. It will include seating, cooking and sleeping facilities, and a 12-foot-square, foldout stage.

UL Lafayette student Chance Gabehart organized the Resourceful University Network, a non-profit student group devoted to environmental awareness, in 2008. "We were looking for a fun way to network with other people with the same interests. During one of our meetings, someone suggested a bus that could run on used cooking oil."

Gabehart purchased a used bus for \$1,500 and donated it to the non-profit group. "We wrote three grants, none of which were funded, but we learned a lot in the grant-writing process. It forced us to solidify our ideas," he said. Gabehart is a senior majoring in general studies, with a focus on liberal arts and a minor in business.

Dr. Barbara Benson, an assistant professor of environmental science in the Department of Renewable Resources, became the group's faculty liaison last year. She wrote a successful \$12,655 grant, funded by the University of Louisiana System's service learning program. RUN also has received more than \$15,000 in donated matching contributions from community sponsors, Benson said.

Students have been involved in every step of the process. More than 100 of them have contributed to the project. Some received course credit for designing components of the exhibition vehicle.

"Industrial design students worked out the plans for the interior and the aesthetics of the exterior of the bus. Mechanical



Chance Gabehart, founder of the Resourceful University Network

engineering students designed the fold-out stage and civil engineering students developed plans to elevate the roof," Benson said. The bus will also include solar panels.

Students at Louisiana Technical College, who are following designs created by UL Lafayette students, are modifying the bus. Students at the Teche Area Campus in New Iberia raised the roofline and created the framework for the stage, which will fold out from the side of the bus. Students at the Evangeline Campus in St. Martinville prepared the exterior of the bus for painting. The project is expected to be complete by this summer.

The RUNbus will be used in a variety of settings, including schools, university campuses and community events. It will also be available to

transport UL Lafayette students to competitions and conferences.

"Our students have shown creativity in their work on this project. With the RUNbus, they will be able demonstrate practical, affordable strategies to solve real-world problems, while highlighting local resources," Benson said. ■

GULF OF MEXICO DEAD ZONE



direction of alternative fuels and I got real fired up about that," Benson said.

She brings real-world experience to her classroom and laboratory. In the 1980s, she worked for the Louisiana

Department of Natural Resources, where she oversaw one of the state's coastal management programs. She also worked for the Louisiana Department of Environmental Quality, as a program manager for its Hazardous Waste Division.

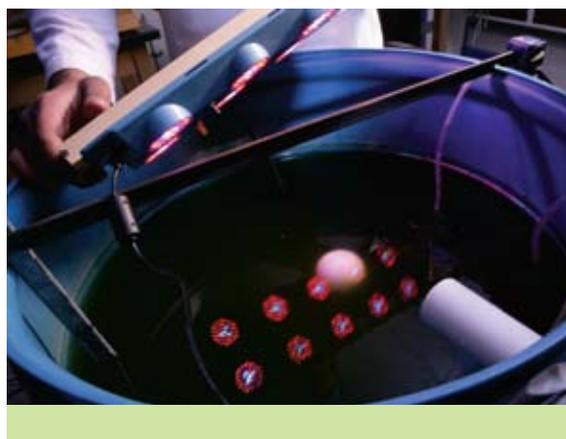
In 2003, she earned a doctoral degree from Louisiana State University in civil engineering, with an emphasis on ecological engineering. "I ended up doing my dissertation on growing algae," she said.

At UL Lafayette, she's growing and testing algae collected in the water of the Gulf of Mexico's dead zone, which forms at the mouth of the Mississippi River each spring and grows throughout each summer. In the spring, water flowing from streams and rivers to the gulf is overloaded with nutrients from agricultural runoff, wastewater treatment plants, septic tanks and industrial waste.

The excess nutrients cause an overgrowth of algae, which bloom then die. They sink to the bottom, where they decompose, robbing the water of oxygen. Without oxygen, the water cannot support fish, shrimp



Above: Bryant Meyer, a senior studying natural resources and environmental quality, checks a sample of algae being grown in sugar-mill wastewater in an incubator that uses LED lighting. Right: This algae bioreactor, made from a 55-gallon drum, is used to study how LED light affects algae growth at various water depths.



and other species.

Benson is interested in dead zone water because “it is like wastewater. It’s very high in nitrogen, phosphorus and carbon dioxide.” She hopes to develop wastewater remediation processes, using algae to improve water quality, while producing oil.

Benson used samples of algae and water taken from the dead zone and cultured them in the lab. “We were impressed with the levels of growth of biomass, and they

also produced a decent amount of lipids.”

She’s looking more closely at a type of algae found in the dead zone, cyanobacteria, or blue-green algae.

“It’s an amazingly adaptable organism,” she said. Like most algae, cyanobacteria grows in light. But it also grows in darkness. When it does, it increases oil production and also produces ethanol.

“So, there’s a possibility you could create a mixed scenario. Cultivate them phototrophically for a while, to encourage growth, then grow them under stressed conditions to get the lipid content and ethanol production you want,” Benson said.

She also plans to study the growth of algae in wastewater generated during sugarcane processing. “A certain amount of sugar is left behind in the waste stream. We want to know which strains of algae grow best in that type of wastewater.”

The most cost-efficient way to grow algae commercially is in open ponds. Harry Daultani, a graduate student in chemical engineering at UL Lafayette, is investigating the potential for growing algae indoors, under LED lighting.

“If you’re growing algae under a full-spectrum light, you’re wasting energy, because algae doesn’t need the full

spectrum to grow. They mostly need red and blue light,” he explained.

Light-emitting diodes use minimum energy and can be designed to emit light at specific frequencies, or colors.

In the algae lab, Daultani lowers a modified measuring stick into a blue plastic, 55-gallon drum, an algae bioreactor. A series of softly glowing red and blue lights are positioned across the top of the tank.

The light shining down in the water fades, or attenuates. Daultani uses light sensors, positioned inside the tank, to measure the strength of the light at different levels.

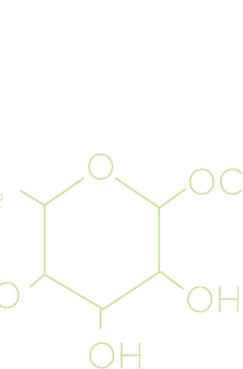
“I’m looking at light dynamics, how the light behaves in the reactor and how the algae respond to the light.” Daultani is collecting data to design a large-scale, cost-effective reactor.

UL Lafayette is conducting research for Aquatic Energy LLC, testing solvents for algal oil extraction. The company, based in Lake Charles, La., is developing technology and facilities to turn freshwater algae into fuel and food.

Aquatic Energy operates pilot facilities in Cameron, Calcasieu and Allen parishes. “We’ve been selecting our algae strains, domesticating them, getting them to go

LOUISIANA IS THE BEST AMONG ALL THE STATES FOR ALGAE PRODUCTION, BECAUSE OF ITS CLIMATE AND THE PRESENCE OF REFINERY AND DISTRIBUTION FACILITIES.’

DAVID JOHNSTON, CEO, AQUATIC ENERGY



through our system in just the right way,” said CEO David Johnston.

“Louisiana is the best among all the states for algae production because of its climate and the presence of refinery and distribution facilities. With the existing aquaculture industry, you have the right climate and the right environment. So that makes it very advantageous to grow algae.”

“There’s also a great advantage in having an area where all the sciences and the engineering can be done very readily for renewable fuels.”

UL Lafayette has provided “great support” in developing extraction technology for the company, Johnston said. “Probably the greatest strength of the research team is the understanding of commercial extraction and conversion of biofuels.”

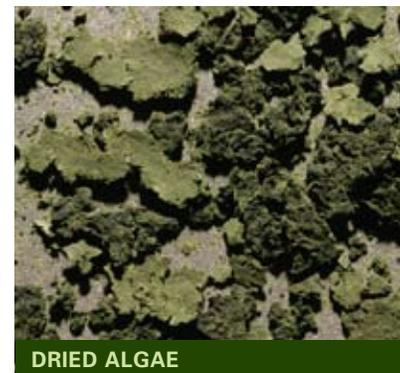
One of the challenges in harvesting oil from algae is the extraction process. Because algae have resilient cell structures, crushing or pressing the cells does not sufficiently release the oil. Instead, a chemical extraction process, using a solvent, is required.

Aaron Graham, a master’s student in chemical engineering, has been working with algae grown by Aquatic Energy. The company sends samples of algae paste to the lab, where it’s dried and prepared for experimentation. Graham has been testing various solvents, including hexane and isopropyl alcohol, along with high pressure and temperature, to release the oil from the algal cells.

“We wanted to keep an industrial focus for this project, so we were using chemicals that are cheap and relatively easy to use,” Graham said.

Johnston said the company’s goal is to develop a “drop-in fuel,” compatible with existing industry infrastructure. He envisions “an integrated industry where you’re growing the algae on site, harvesting and drying it, creating algal oil and algal meal through the extraction process, then sending the algal oil to a refinery.

“Our work with UL Lafayette is helping us build a new generation of biofuels that plays well to the existing energy industry here in Louisiana.” ■



DRIED ALGAE



Top: Mollie Dugas, a sophomore studying chemical engineering, and Kiran Pathapati, a graduate student in chemical engineering, refine and analyze a sample of tall oil, a paper manufacturing byproduct. The tabletop unit is a small-scale refinery that breaks oil down into fuel and other chemicals for analysis. Bottom: Chemical engineering graduate student Aaron Graham places a sample of dried algae into an oil extractor that uses chemical solvents. Graham compares the effectiveness of various solvents in removing oil from algae.

Winning Ways

Cajuns recruit accomplished head basketball coach

BOB MARLIN, UL LAFAYETTE'S NEW head basketball coach, is focused on success in the classroom as well as on the court.

He spent the past 12 years as head coach at Sam Houston State University in Huntsville, Texas. During his tenure, the Bearkats compiled a 225-131 record, earned three conference championships and made two appearances in the NCAA tournament.

"We won the most games over a 12-year period in the Southland Conference but we also had the most student-athletes on the academic all-conference team. We also finished among the top three teams in our league seven out of eight years. So, we were very consistent," Marlin said in a recent interview.

That's the kind of program he intends to build at UL Lafayette.

"As a coach, I have three goals for my players. I want them to be the best students they can be, the best people they can be and the best basketball players they can be," he said.

In March, the National Association of Basketball Coaches named Marlin Coach of the Year in his division.

In April, he received the 2010 Skip Prosser Man of the Year Award. That award was estab-

lished in 2008 to honor successful basketball coaches who are known for their moral integrity – on and off the court. Prosser was head coach at Wake Forest University when he died in 2007. He was the only coach in NCAA history to lead three schools to the NCAA Tournament in his first year of coaching their teams.

Before accepting UL Lafayette's offer, Marlin was considered for the top coach-

'As a coach, I have three goals for my players. I want them to be the best students they can be, the best people they can be and the best basketball players they can be.'

BOB MARLIN

ing spot at three other schools: Auburn University, the University of Houston and the University of Texas at El Paso.

UL Lafayette hired a consulting firm to assist with a search to replace Robert Lee, its head basketball coach for the past six years. Lee's employment contract was not extended this year. An advisory committee helped evaluate candidates for the position.

"When we had the opportunity to meet Coach Marlin, we were convinced he was the coach to lead our program," said David Walker, UL Lafayette's athletic director. "But Bob Marlin was no longer the best-kept secret in college basketball. Several universities saw the same qualities in him that we saw and the fact that he chose to be at UL makes this even more special."

A native of Tupelo, Miss., Marlin earned a bachelor's degree in physical education from Mississippi State University in 1981. He holds a master's degree in health and physical education, with a minor in guidance and counseling, which he earned at the University of Louisiana at Monroe in 1983.

Marlin was a graduate assistant coach at ULM before moving to Houston Baptist University, where he spent six seasons as an assistant from 1983-89. After a year at Marshall University in Huntington, W. Va., he accepted his first position as a



Bob Marlin was named UL Lafayette's 13th head basketball coach in late March.

head coach at Pensacola Junior College.

Marlin's accomplishments there, including a national championship, helped him move to the Southeastern Conference. He was an assistant coach at the University of Alabama from 1995 until 1998, when he became head coach at Sam Houston State.

Marlin is the 13th head basketball coach in UL Lafayette's history.

When he took the reins of the Ragin' Cajun program March 24, his first priority was assembling his coaching staff. Marlin chose Neil Hardin, Darby Rich and Nikita Johnson as assistant coaches. Hardin and Rich worked with Marlin at Sam Houston State University. Johnson comes to UL Lafayette from Louisiana Tech.

Marlin said the assistant coaches immediately began to evaluate team members, including three new recruits. "We've got a good nucleus but it's still a bit of a puzzle. If we plug in the right guys, I feel like we could have a strong team in the coming season. We're trying to build a solid foundation, so we don't want to just have a great season this year, then drop off the radar. We want to build a strong program and be consistent," he said.

UL Lafayette's sports facilities are a plus in recruiting. "We have outstanding facilities. The Cajundome is a great arena and the indoor practice facility gives us the opportunity to practice day or night," Marlin observed.

He described the Southland and Sunbelt conferences as "comparable leagues," with one notable exception.

"The Southland Conference is a Texas-Louisiana league, while the Sunbelt encompasses teams all the way from Denver to Miami, so the travel's a lot more extensive."

As he prepares for his first season as a Ragin' Cajun head coach, Marlin said he'll stay focused on the approach he's developed during his career.

"At the end of the day, a coach is an educator. We help the student-athletes in the classroom and on the court. We help them to be better people. The reason I coach is because of the relationships you develop with people. And certainly, some of the most important people are your players.

"We have a core philosophy that never changes and that's fundamental basketball, teamwork, playing hard defensively and sharing the basketball. Sticking to the fundamentals will give us the best chance to be successful." ■

CAREER HIGHLIGHTS

2010 Skip Prosser Man of the Year Award
2010 District 23 National Association of Basketball Coaches' Coach of the Year
1993 Kodak/NABC National Coach of the Year
1993 *Basketball Times* Coach of the Year
Coached three Academic All-Americans
Coached 31 Academic All-Conference players

ACCOMPLISHMENTS AT SAM HOUSTON STATE UNIVERSITY

Three Southland Conference championships (2000, 2003, 2010)
Two NCAA Division I national tournament appearances (2003, 2010)
Most NCAA Division I victories in one season – 25 (2009-2010)
Most NCAA Division I road victories in one season – 17 (2009-2010)
Best NCAA Division I non-league record – 12-1 (2007-2008)
Longest SHSU NCAA Division I winning streak - 11 games (2010)
SHSU teams have broken 41 NCAA Division I school records
SHSU players have broken 27 school records

WHAT OTHERS ARE SAYING:

"Bob Marlin is a program builder. The job he did at Sam Houston State was remarkable and a big reason why all of his coaching peers admire him. He is a great fit for the passionate Ragin' Cajuns fan base. They will admire how his teams play."

FRAN FRASCHILLA
ESPN basketball analyst

"Bob Marlin is one of the best coaches in America that not many people may know."

JAY BILAS
CBS/ESPN College Basketball Analyst

"Bob Marlin is a hard worker who is very organized. He communicates well with players. He has a real knack for recruiting quality players and then getting them to do what he wants them to do. He's done a tremendous job at Sam Houston State. Not only has his program been successful on the court, he has created excitement for college basketball in the community. Bob is not a 'rah! rah!' guy. He is a thorough, methodical coach who dots the Is and crosses the Ts and does a great job."

DAVE HOBBS
Former head coach, University of Alabama

"Marlin has won everywhere he has been. He recruits quality people. His teams are always well-coached. When you play Bob's team, you better be ready. You have to beat them. They are not going to beat themselves."

BILL SELF
Head coach, University of Kansas

Spirited Composition

Fight song penned by 1950s songwriting team



Hilma LaBauve in 1952

UL LAFAYETTE'S FIGHT SONG is a tune with staying power. The sports anthem that debuted in 1950 still gets fans pumped up at games and tailgating parties.

Hilma LaBauve Levis is the song's originator. In a recent interview from her home in Santa Fe, Texas, the 1953 grad shared the story of how she and her late brother, Jack LaBauve, created the composition.

In the fall of 1950, Levis was an energetic 19-year-old sophomore studying education at SLI and reporting for *The Vermilion*, the student newspaper. "I jokingly say that I minored in lower elementary education and majored in extracurricular activities," she said. Levis embodied school spirit. She was a member of Delta Sigma Delta



Jack LaBauve

sorority; the Red Jackets, an all-female pep squad; and SLI's Mixed Chorus.

LaBauve, a 1941 graduate of SLI, had recently joined its faculty. "His expertise was arranging music. He was hired as the arranging teacher in the Music Department. He also taught brass instruments and percussion," Levis said.

The Student Council announced a contest to create an original fight song, offering a \$100 savings bond as the prize. "At the time, we were using the Yale University fight song, which had been written by Cole Porter, who was one of its students," Levis said. Yale and SLI shared a common mascot, the bulldog.

SLI students had borrowed the Ivy League version, "Bull-dog! Bull-dog! Bull-dog! Bow, wow, wow, Eli Yale!," substituting "S-L-I!" at the end of the lyric line. "It was catchy and it was fun, but we needed an original song," Levis said. "I had a little tune in my head," she recalled. That tune had been

developing since she was a student at Logansport High School in Logansport, La., where her brother served as band director.

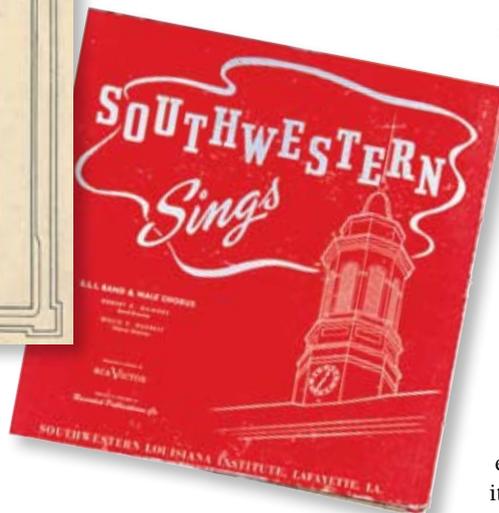
Several band members were also football players. "During spring scrimmage, the band was short on musicians. So, even though I wasn't a music student, my brother would have me fill in," Levis recalled.

She learned to play the glockenspiel, or bells. "He would bring it home for me to practice on, so

ORIGINAL FIGHT SONG LYRICS

Fight on, Bulldogs, fight on to vic'try
For the red and white.
We all sing of triumph and glory
For our boys tonight.
You will hear the bark of the Bulldogs
Soaring to the sky
Hustle up and rustle up
And fight on to vic'try, S-L-I!

The fight song was included on a 1951 RCA Victor album recorded by the SLI Band and Male Chorus.



I could play it in the band. That's when I found this little tune. I would play on the bells and I came up with the melody.

"I'd never mentioned it to my brother before. But when the contest was announced, I hummed it for him.

"He wrote the music down on some staff paper, then he played it on the piano. We made some adjustments here and there and it sounded pretty good."

LaBauve transformed his sister's simple melody into a full-band arrangement. "He wrote parts for all the instruments and the manuscript for the director.

"We got it in at the last minute. A few days later, I got a call from the student body president, Winston Fontenot, who said that the song was very good and that I was among the finalists."

Although the arrangement was solid, the brother-sister team had overlooked a key ingredient: lyrics. Fontenot told her he thought the entry would have a better chance of winning if it had words, Levis recalled with a laugh. She turned to war-time songbooks for inspiration and was drawn to the words "victory," "triumph" and "glory."

Levis' composition was among 11 entries, which were narrowed to four. The morning of Tuesday, Dec. 19, 1950, the contest was held during general assembly in Earl K. Long Gymnasium.

"The students voted and I won," Levis said. "Everybody clapped and cheered. They asked me to come up on stage with the band and direct the band as they played the fight song. I didn't really know what I was doing, but that was kind of exciting."

Levis turned her winnings into a gift for her brother. "He had just starting teaching, so I cashed in the bond and bought him a desk. I thought, 'If he hadn't helped me with the song, I wouldn't have won.' I wanted him to include his name on the entry but he wouldn't do it. He said, 'It's your song.'"

LaBauve died in 2006. After serving in the U.S. Army during World War II, he returned to Louisiana, where he earned a master's degree in music education from LSU. He retired from UL Lafayette in 1977.

Levis retired in 1997 after teaching elementary school in Texas. She said she's proud of the contribution she and her brother made.

"The music is still there. It's nice that everyone seems to have enjoyed it for almost 60 years." ■

Ragin' Cajuns To Face OSU in Televised Game

Louisiana's Ragin' Cajuns® have a 12-game schedule this fall that includes a Friday night contest against Oklahoma State to be broadcast on ESPN2.

It's the second consecutive season that the Cajuns play a team from the Big 12 Conference. They defeated the Big 12's Kansas State last year, 17-15, at Cajun Field.

The Oklahoma State game on Oct. 8 will also be played on the Cajuns' home turf.

UL Lafayette's first home game is Sept. 11, when the team faces the Arkansas State Red Wolves. It's the earliest Sun Belt Conference game in school history.

UL Lafayette has been bowl-eligible in four of the last five seasons.

 www.ragincajuns.com



SEAN MANUEL

Football fans set a Cajun Field attendance record Sept. 5, 2009, when 41,357 of them turned out to watch the Cajuns defeat the Southern Jaguars 42-19.

LOUISIANA'S RAGIN' CAJUNS® 2010 FOOTBALL SCHEDULE



Sept. 4	University of Georgia	at Athens, Ga.
SEPT. 11	ARKANSAS STATE*	CAJUN FIELD
	10th Annual Herbert Heymann Football Classic	
SEPT. 25	MIDDLE TENNESSEE*	CAJUN FIELD
Oct. 2	North Texas*	at Denton, Texas
OCT. 8	OKLAHOMA STATE	CAJUN FIELD
Oct. 16	Troy University*	at Troy, Ala.
OCT. 23	WESTERN KENTUCKY*	CAJUN FIELD
	65th Homecoming	
Oct. 30	Ohio University	at Athens, Ohio
Nov. 6	University of Mississippi	at Oxford, Miss.
Nov. 13	Florida Atlantic*	at Boca Raton, Fla.
NOV. 20	FLORIDA INTERNATIONAL*	CAJUN FIELD
Nov. 27	UL Monroe*	at Monroe, La.

• Sun Belt Conference Games

Gridiron Chapter

Camaraderie continues after Ragin' Cajuns hang up their cleats

AS A FORMER MEMBER OF LOUISIANA'S Ragin' Cajuns® football team, Marty Cannon understands the power of teamwork.

He and other former players are harnessing that positive force into the Gridiron Chapter of the UL Lafayette Alumni Association. It's one of several alumni groups based on members' shared interests or experiences, such as the College of Nursing Alumni Chapter or Alumni Band Chapter.

Cannon is a former offensive lineman and four-year letterman who graduated in 1999.

"Some of my best memories from college are of my football teammates. We had some great times and they are some of the best friends that I've ever known. We've stayed in contact," he said in a recent interview.

Peter Batton and Paul Norton formed an independent nonprofit organization, the Gridiron Alumni Club, in 2003. Batton played football at UL Lafayette from 1982-86; Norton played from 1986-90.

"Some coaches at UL asked Peter to organize former players to help with some equipment purchases. We wanted to unify former players and encourage them to support the team," Cannon said.

Earlier this year, the Gridiron Alumni Club joined the Alumni Association as a chapter.

"I've been a member of the Alumni Association since I graduated, so I know the benefits of membership and I like being connected to the university. Our membership was growing each year and we wanted to connect with the Alumni Association so we could do even more to support the team. By becoming an official chapter, we were also able to show our support for the university in a more formal way," Cannon said.

Dan Hare, executive director of the Alumni Association, said he's grateful for the Gridiron Chapter's leadership. "Our alumni chapters and clubs are volunteer driven," he said. The association provides staff support for clubs' and chapters' activities and development.

Members of the newly formed chapter are eager to expand its size by inviting former team managers, trainers, coaches and support staff to join the Alumni Association. "We're starting to pull people in from across the country. We're letting them know that we have an alumni chapter that is doing more tailgating activities, more reunion-type activities," Cannon said.

The Athletic Network has helped find former players who live around the country and around the world. It identifies, locates and communicates with former athletes and associated groups.

Over the past seven years, Gridiron Chapter members have donated about \$25,000 for athletic equipment for the football team.

The group hosts an annual Bill "Blackjack" Landry Memorial Golf Scramble at Acadian Hills Country Club in honor of an equipment manager who served in the university's Athletics Department for 32 years before his death in 1998. "... he was a very special man. He was also one of UL's greatest fans," Cannon said.

The chapter provides meals twice a year for the football team, coaches and support staff.

Chapter members get together to tailgate during football season. "A couple of years ago, we had 60 years of UL Lafayette football represented at one of our tailgating parties. That was incredible," Cannon said.

For information about joining the Alumni Association, phone (337) 482-0900 or send e-mail to alumni@louisiana.edu



Members of the new Gridiron Chapter include, from left, Kevin Guilbeau, punter, 1993-96; Marty Cannon, offensive lineman, 1994-98; and Robby Waguespack, offensive lineman, 1990-93.

OCEANNA TRZCIAR-CATIES

1950

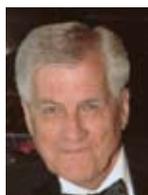
TOMMY O. HARRISON JR. manages a farm and timber estate that spans three parishes and more than 500 acres. He received a bachelor's degree in agricultural animal husbandry from SLI and a master's degree in education from Northwestern State University. Harrison got the nickname "Lefty," while pitching for the SLI Bulldogs baseball team. He was later a pitcher for minor league teams in Maine, Texas and Louisiana for four years. He served four years in the U.S. Air Force as a non-commissioned officer for the Special Services Department. Harrison retired in 1983 as superintendent of Grant Parish schools, where he previously served as a principal, coach and teacher. Harrison and his wife, Paula, live in Montgomery, La. They have a son, Gilbert, and a daughter, Jennifer.

1959

The Florida State Council of the Knights of Columbus, District 38, recently honored SLI graduate **RICHARD DIETZ** for 60 years of service. He is a member of Bishop Verot Council No. 5845, in Canova Beach, Fla., which he helped establish in 1966. A veteran of the Korean War, he served four years in the U.S. Air Force, completing his service in 1955. In 1990, Dietz retired after working for 31 years at NASA's Kennedy Space Center. He holds a bachelor's degree in electrical engineering. He and his wife, Carmen, have six children: Sonja, Jeffrey, Rick, Christopher, Janelle and Franz.

1961

ROLAND GUIDRY was inducted into the Air Commando Association's Hall of Fame. A retired colonel



in the U.S. Air Force, he was recognized for his involvement in hostage rescue missions, top-secret intelligence gathering and for his service in the U.S. Air Force Special Operations Command. Guidry has worked as a real estate broker, developer and property manager since 1986 and is principal broker at Pat Guidry Agency Inc. He is a certified real estate instructor. Guidry holds a bachelor's degree in electrical engineering from USL, a master's degree in astronautical engineering from the U.S. Air Force Institute of Technology and a master's degree in business administration from the University of West Florida. He and his wife, **PATRICIA ANNE BOUTTE, '63**, live in Destin, Fla.

1968

GLEN JEANSONNE is a professor of history at the University of Wisconsin-Milwaukee. He has written or edited 14 books, including a recent biography, *Changing Times: The Life of Barack Obama*. He holds a bachelor's degree in history from USL and earned a master's degree and doctorate in history from Florida State University. From 1973 to 1975, Jeansonne taught Louisiana and U.S. history at USL, and was associate director for the Center for Louisiana Studies. He has received several teaching and research awards from the University of Wisconsin-Milwaukee. Jeansonne has two children, Leah and Hannah. He and his wife, Lauren Priegel, live in Milwaukee, Wis.

1970

NANCY CRAWFORD is senior vice president of Medical Staff Services

for Woman's Hospital in Baton Rouge, La. She is chair of the American Hospital Association's Section for Maternal and Child Health. Its members evaluate health information and make policy recommendations for the national organization. She is treasurer of the Council of Women and Infant Specialty Hospitals. Crawford volunteers and participates in civic and professional organizations including Capital Area United Way and the Community Partnership Committee. She holds a bachelor's degree in health information management.

1972

BARRY F. BERTHELOT was recently named executive vice president and director of organizational development for IberiaBank Corp. He previously served as president of the Acadiana Market for JP Morgan Chase. He also served as president of Bank One of Lafayette and of First National Bank of Lafayette. He is a former chief administrative officer for Lafayette Parish and former director of administration and finance for the City of Lafayette. Berthelot holds a bachelor's degree in business administration from USL and a master's degree in public affairs from Northern Michigan University. He and his wife, Rebecca, have five children, Ross; Luke; Hayes; **BENJAMIN, '98**; and Jerome.

1978

ANGELLA CASTILLE is included in the 2010 issue of *The Best Lawyers in America* for her contributions in international trade and finance law. She is partner and



vice chair of international practice at Baker and Daniels, a legal and consulting firm based in Indianapolis, Ind. Castille serves as chair of the international section of the Indiana State Bar Association. She attended law school at Freie Universität Berlin. She holds a bachelor's degree in French from USL and a *juris doctor* from University of Notre Dame Law School. She and her husband, Scott Sutton, have two sons, Nicholas and Alexander.

1979

STEVE OATS was elected chair of the Louisiana Wildlife and Fisheries Commission for 2010. He has served on the commission for the past three years. Oats is a partner at Oats and Hudson law firm, which has offices in Lafayette, Baton Rouge and New Orleans. He holds a bachelor's degree from USL and a *juris doctor* from Tulane University. He is married to **SYLVIA MARIAN MINEO, '78**.



1900-1921

Southwestern Louisiana Industrial Institute

1921-1960

Southwestern Louisiana Institute

1960-1999

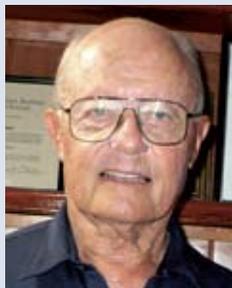
University of Southwestern Louisiana

1999-PRESENT

University of Louisiana at Lafayette

ALUMNI PROFILE: DR. MILTON CORMIER '48

Alum Makes Glowing Contribution to Science



Dr. Milton Cormier, '48, was a pioneer in the development of one of the most powerful tools in science: glow-in-the-dark genes. The bioluminescent proteins are used in genetic studies and medical research as markers in living cells. The glowing proteins can be taken from one organism and inserted into another. So, scientists can literally see how genes are expressed or perhaps detect tumor tissue without surgery.

After joining the University of Georgia faculty in 1958, Cormier established a research laboratory at UGA and was a founder of the school's Biochemistry Department. In 1985, Cormier published the first example of cloning a gene with coding for a bioluminescent protein.

Dr. J. David Puett, UGA's Regents Professor of Biochemistry and Molecular Biology, said Cormier influenced major research in his field. "Many of his trainees became professors in major universities ... his research has withstood the test of time, being at the forefront of a growing field that has continued to advance science."

One of Cormier's former colleagues, Dr. Douglas Prasher, was the first to clone green fluorescent protein using techniques developed in Cormier's lab. GFP is widely used in genetic studies and medical research. In 2008, three scientists, Drs. Osamu Shimomura, Roger Tsien and Martin Chalfie, earned the Nobel Prize in chemistry for the discovery and development of GFP.

Cormier holds a bachelor's degree in chemistry from UL Lafayette. He earned a master's degree in biochemistry from the University of Texas, Austin and a doctorate in microbiology from the University of Tennessee.

Cormier retired in 1993 and was named a distinguished research professor emeritus of biochemistry at UGA. In 2007, he published his autobiography, *My Journey*.

He and his wife, Dolores, live in Sun Lakes, Ariz. The couple have three children, Milton **Joseph Cormier Jr.**, '80; Wil Cormier; and Mark Cormier.

1982

OWEN T. CHOATE flies MD-88 planes for Delta Airlines. He is a check airman, qualified to certify other pilots. Choate flew military cargo planes during Operation



Desert Shield and Operation Desert Storm and has been a transport pilot in the U.S. Air Force for 21 years. He participated in humanitarian missions, delivering food and supplies and providing airlift rescues in Russia and Africa. Choate holds a bachelor's degree in business administration. He and his wife, **JULIE PINKERTON**, '82, live in Summerville, S.C. They have three sons: Adam, Thomas and Matthew.

1985

RANDALL MANN is director of mar-

keting and sales for Acadian Monitoring Service. He and his wife, **STEPHANIE ANN HANAGRIFF**, '86, created Advice Marketing in 1992. He is a private pilot who provides volunteer marketing services for charity events such as the Sertoma Cajun Air Festival and the Acadiana AirFest. He also has served as chairman of *Le Festival de Mardi Gras à Lafayette* for 17 years. He holds a bachelor's degree in public relations. Mann and his wife have a son, Michael Tyler, and a daughter, Emily. They live in Lafayette.

1987

TROY D. TAYLOR was recently promoted to colonel in the U.S. Marine Corps Reserve and chosen as staff judge advocate for the 4th Marine Aircraft Wing at the U.S. Marine Forces Reserve in New Orleans. He is chief counsel for NASA Shared Services Center at the Stennis Space Center. Taylor received a bachelor's degree in business administration from

USL and *juris doctors* from the University of New Orleans and Loyola University. He also earned a master of laws from George Washington University National Law Center. He and his wife, Dawn, have two sons, Nicholas and Christian.

1989

MICHELLE BACQUE WILSON, who holds a bachelor's degree in mass communication, supervises 23 employees at Fox Sports Network Engineering and Operations in The Woodlands, Texas. She manages the production of commercials, programs and promotions for 20 national television networks. She and her husband, Jason, have a daughter, Ava Elise.

1990

RICHARD P. ALBERT is owner and principal of Albert Architecture and Urban Design, which is based in New Orleans. Since

2001, the firm has specialized in new construction and historic preservation. Albert earned a bachelor's degree in architecture. He and his wife, Amanda, live in New Orleans.

After graduating with a bachelor's degree in sociology, **MARY I. HICKS** spent two years teaching English in Japan. She returned to the United States and earned a master's degree in education from the University of New Orleans. Hicks ran the Critical Languages Program at UNO, which included languages that were not commonly taught in the university's curricula. She has served as president, vice president and as a board member of the National Association of Self-Instructional Language Programs. She also has served on the board of the New Orleans Citizen Diplomacy Council. She is married to Scott Smith.

1994

SHAWNE HUVAL TAYLOR serves on the Louisiana Math Fellows Advisory Panel. The 21-member panel includes seven mathematics educators representing each



school level – elementary, middle and high school. They work with the Department of Education to increase students' readiness for college and careers. Taylor teaches seventh and eighth grade mathematics at Cecilia Junior High School. She holds a bachelor's degree in elementary education from USL. She earned a master's degree in education and post-master's 30 plus certification in education from UL Lafayette. She and her husband, Chad, have a son, Braelon.

1997

KACEE SCHEXNAYDER THOMPSON is vice president of business development at The Cartesian Company, a real estate and financial solutions business in Lafayette. She also serves on the board of the Lafayette Land Revitalization Authority, a non-profit organization that restores and redevelops abandoned property. She holds a

bachelor's degree in English. She and her husband, **ERIC SCHEXNAYDER, '98**, have three children: Ben, Ryan and Mary Louise.

Attorney **LEE WHITE** was recently



appointed to the board of directors for Downtown Dallas Inc., a downtown development organization.

He is a partner

at Jackson Walker LLP in Dallas. He has been named a "Texas Super Lawyer-Rising Star" by Thomson Reuters, a professional review organization, for three consecutive years. He holds a bachelor's degree in accounting from USL and a *juris doctor* from Paul M. Hebert Law Center at LSU. He and his wife, **DR. SHARON ANDREWS, '87, '94**, live in Dallas.

1999

MILAURO BAUGHN SPELMAN owns



the Reading Remediation and Speech Language Pathology Center, where she provides speech and language therapy.

She is also the lead facilitator of Social Bridges, a social cognition program used to teach social skills to children with communication deficiencies. She is nationally certified by the American Speech-Language-Hearing Association and holds a Florida teaching certification focused in speech and language impairment. She earned a bachelor's degree in communicative disorders from the University of Central Florida and a master's degree in speech language pathology from UL Lafayette. Spelman and her husband, Jason, live in Oviedo, Fla.

2000

In January, **STEPHEN C. GAUBERT** established Gaubert and Smith law firm in Lafayette with his business partner, **RICHARD E. SMITH, '80**. Gaubert holds a bachelor's degree in general studies from UL Lafayette and a *juris doctor* from Southern University Law Center. He has been selected to participate in Leadership

A Look Back



TERRI FENSEL

1993

Lady Cajuns first baseman Alyson Habetz stretches for a catch in 1993. The team went to the College World Series for the first time that year. It returned in 1995 and 1996. UL Lafayette's softball program celebrates its 30th anniversary this year.

Lafayette, a program dedicated to the advancement of community issues. Gaubert and his wife, Melissa Topham, live in Lafayette.

2003

ROGER J. TIMBER plays the role of



Benny in the HBO drama series, "Treme," about life in New Orleans after Hurricanes Katrina and Rita. He appeared in

"Brazil," an episode of the television series, "Law & Order," which aired in March. Timber also appeared in two films released in 2009, "The Bad Lieutenant: Port of Call New Orleans" and "I Hope They Serve Beer In Hell." Timber holds a bachelor's degree in performing arts.

2005

CORY J. DUGAS holds a bachelor's

degree in general studies. Since 2009, he has served as advertising manager for HDB & Associates, an in-house marketing and advertising agency for Eyemart Express LTD. He and his wife **JENNIFER JAMISON DUGAS, '04**, live in McKinney, Texas.

IN MEMORIAM

SHIRLEY HOFFPAUIR CRAWFORD, '38, died June 20, 2009, at the age of 100. She held a bachelor's degree in education from SLI and taught in Acadia Parish for more than 32 years. She was a member of the Retired Teachers of Acadia Parish and the Ebenezer Home Demonstration Club. Crawford was preceded in death by her husband of more than 50 years, George W. Crawford, and their daughter, **ELEANOR FRANCES CRAWFORD COLEMAN, '68**. She is survived by her daughter, Kayren Ann Mingus; four grandchildren; and four great-grandchildren.

WILLARD AVINELL FAVRE, '54, died Nov. 23, 2009, in Baton Rouge, La. He was 79. In 1959, he joined the Louisiana State Division of Administration. He retired in



1986 as director of state accounting. He also maintained a private accounting business until his death. Favre served in the U.S. Army from 1954 to 1956. He was an assistant scoutmaster with the Boy Scouts of America and a member of the Order of the Arrow. He also conducted volunteer research for Magnolia Mound Plantation Museum in Baton Rouge. Favre earned a bachelor's degree in accounting at SLI. Survivors include his wife, **KATHERINE ELAINE BELLARD, '55**, and four children, Willard A. Favre Jr.; Alexandra Farve Smith; Rebecca Favre Lipe; and AnnKatherine Favre Watkins.

ALUMNI INFORMATION FORM

If you enjoy reading about where your former classmates are now and what they're doing, consider this: They'd like to read about you, too. Please fill out the form below and mail it back to UL Lafayette or go to www.louisiana.edu/louisiane to submit the information online.

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OR THE SEMESTER YOU LAST ATTENDED THE UNIVERSITY

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PROFESSIONAL DUTIES

ACCOMPLISHMENTS

SPOUSE'S NAME

FIRST MIDDLE LAST MAIDEN NAME

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AND MAJOR, IF A FORMER USL STUDENT

CHILDREN

(IF ANY ARE UL LAFAYETTE STUDENTS OR USL GRADUATES, PLEASE INDICATE)

CURRENT DATE

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MICHAEL PAUL TRAHAN died Dec. 27, 2009, at the age of 22. He was pursuing a bachelor's degree in musical education with a minor in jazz studies. He played trumpet in the UL Lafayette Symphony Orchestra, Wind Ensemble, Big Band and Pride of Acadiana Marching Band. Trahan taught private lessons and served as an instructor at area band camps. He also was a studio musician who recorded with local bands, such as Feufollet. He is survived by his parents, Monique Goutierrez Trahan and Paul Trahan, and his brother, **JOSHUA RYAN TRAHAN**, a sophomore at UL Lafayette.

DR. DEAN F. KEELEY died Feb. 11, 2010. As a U.S. Marine private first class in Iwo Jima, Keeley shielded two fellow Marines when a hand grenade exploded in their foxhole. After two years of recovery, he was honorably discharged as a fully disabled veteran. He also received a Purple Heart. Keeley graduated *magna cum laude* from the University of Illinois with a bachelor's degree in chemistry. He began teaching at USL after receiving a doctorate in chemistry from Florida State University in 1957. He received the UL Lafayette Foundation's Distinguished Professor Award in 1995. That same year, he was part of 50th anniversary ceremonies at the National Cathedral and the U.S. Marine Corps Memorial, which honors the 50,000 troops who served in Iwo Jima. Keeley collaborated with the U.S. Department of Energy on a 12-year project involving geopres-

sured-geothermal energy. He also worked with physicists at the Acadiana Research Laboratory on a particle accelerator project. He was instrumental in developing a 3-D computer-based instruction and research facility in UL Lafayette's Hamilton Hall. Keeley retired in 2001. He is survived by his wife, Mary Ruth Altepetter; daughter, Mary Patricia; and brother, Thayne Robert.

DR. FRANS AMELINCKX died March 28, 2010. He was 78. A native of Belgium, he served in the Belgian Army during the Korean conflict. He and **DR. CAROL BERNIECE CEDAR**,



'87, '95, were married in Venezuela in 1959. They moved to the United States, where he earned a bachelor's degree in education from Northern State College and a master's degree and doctorate in French literature from the University of Iowa. He taught at the Universities of Iowa and Nebraska before becoming head of USL's Department of Romance Languages in 1983. He served as professor of modern languages and received the UL Lafayette Foundation's Distinguished Professor Award in 1989. He retired in 2002 and was named professor emeritus of Francophone Studies. Survivors include his wife, Carol, and three children: **ALAN LEE AMELINCKX**, '95, '02; **Andréa Amelinckx**; and **ANDREW K. AMELINCKX**, '93.

Alumni Directory Gets Update

Over the next few months, University of Louisiana at Lafayette alumni may receive postcards, e-mails or phone calls from Harris Connect. That's a company working with the UL Lafayette Alumni Association to update its alumni directory.

Dan Hare, the association's executive director, urged all alums to respond. "The directory is a valuable resource and its success depends on how many people participate. It just takes a few minutes to stay in touch," he said.

For more information, contact the Alumni Association at alumni@louisiana.edu or (337) 482-0900.

ACADEMICS

- UL Lafayette is a selective admissions university.
- The university offers 78 undergraduate degree programs.
- There are 27 master's degree programs and one post-master's certificate program.
- Doctor of Philosophy degrees are offered in applied language and speech sciences, biology, cognitive science, English, Francophone studies, mathematics, computer science and computer engineering. A joint doctor of education degree is offered in educational leadership by UL Lafayette and Southeastern Louisiana University.
- About 1,200 students are graduated each fall and spring.
- UL Lafayette has 10 colleges and schools:
 - College of the Arts
 - B.I. Moody III College of Business Administration
 - College of Education
 - College of Engineering
 - College of General Studies
 - College of Liberal Arts
 - College of Nursing and Allied Health Professions
 - Ray P. Authement College of Sciences
 - Graduate School
 - University College



ATHLETICS

- Louisiana's Ragin' Cajuns® compete in NCAA Division I, the highest level of collegiate athletics.
- Louisiana's Ragin' Cajuns® sports:
 - Football
 - Baseball
 - Softball
 - Basketball
 - Track and Field
 - Golf
 - Tennis
 - Volleyball
 - Soccer



NOTEWORTHY

- The University of Louisiana at Lafayette is one of the top 100 public research universities in the nation. That's according to a report by The Nelson A. Rockefeller Institute of Government. Only UL Lafayette, LSU in Baton Rouge and LSU Health Sciences Center are cited in the study as top public research universities in Louisiana.
- An analysis of National Science Foundation research and development expenditures by public universities in Louisiana in 2008 ranks UL Lafayette as the third highest, with a total of \$58.6 million. LSU Baton Rouge is first, LSU Health Sciences Center in New Orleans is second and Pennington Biomedical Research Center is fourth.
- A skylight designed by TEAM BeauSoleil was included in *Popular Mechanics* magazine's "14 Best New Technologies for Greener Homes" this spring. It was used in the Louisiana BeauSoleil Solar Home, which was designed and built by UL Lafayette engineering, architecture and business administration students and faculty advisors. The skylight shades the home's transitional porch while solar thermal collectors threaded through the metal provide hot water for home use. The BeauSoleil Home won two top awards in the U.S. Department of Energy's 2009 Solar Decathlon in Washington, D.C.



ECONOMIC IMPACT

- Total spending impact of \$755 million
- Every dollar of state funding invested in UL Lafayette generates an \$8.62 return.
- \$50+ million in new external research funding
- 2,100 employees



- For the third year in a row, undergraduate engineering students from UL Lafayette placed in the top 10 at an Institute of Electrical and Electronics Engineers robotics competition this spring. UL Lafayette's team placed third out of 27 school teams. Its task was to build an autonomous robot that could transport expended nuclear fuel rods on a designated course.
- The Computation and Visualization Enterprise, a new interdisciplinary consortium of UL Lafayette faculty members, is bringing supercomputing and 3-D visualization to more academic research projects. Its fellows will collaborate on projects that can benefit from technology offered by the Louisiana Immersive Technologies Enterprise in University Research Park. This approach could speed up conventional research processes.

Student Focus

UL Lafayette Foundation's award criteria emphasize superior teaching

SOME TEACHERS LEAVE AN INDELIBLE mark by challenging and inspiring their students. The UL Lafayette Foundation honored four such influential educators this spring.

Dr. Suzanne Fredericq, professor of biology, and Brian Kelly, professor of print-making, received its Distinguished Professor Award. Geoff Gjertson, associate professor of architecture, and Dr. Lisa Graley, a lecturer in the English Department, were presented with its Dr. Ray P. Authement Excellence in Teaching Award.

"These awards shine a spotlight on faculty members who are exemplary in their

work, who inspire their students and their colleagues," said Julie Bolton Falgout, executive director of the UL Lafayette Foundation. The awards are presented each April at a banquet and awards ceremony.

This is the first year the Foundation honored two professors and two teachers. Previously, three Distinguished Professor Awards and one Excellence in Teaching Award were typically given.

Falgout said the change reflects the value and importance of teaching. "UL Lafayette faculty members have earned the reputation of being committed to student success. Both of these awards honor that commitment."

The Distinguished Professor Award was established in 1965. The Excellence in Teaching Award, which began in 1992, was renamed in 2008 in honor of former UL Lafayette President Dr. Ray P. Authement.

Honorees receive a stipend and their names are inscribed on plaques that are permanently displayed in Edith Garland Dupré Library.

INSPIRED BY NATURE AND THE ARTS

Dr. Suzanne Fredericq

Dr. Suzanne Fredericq has been fascinated with nature since she was growing up in Belgium, her native country.

"As a child, I loved to play with animals, and then as an adolescent, I had a passion for bird-watching, for hunting fossils and for looking up the names of every plant and animal I came in contact with," the UL Lafayette biology professor said during a recent interview.

This early interest led her to the State University of Ghent in Belgium, where she pursued an undergraduate degree in zoology with a specialty in marine invertebrates. She began studying marine worms,



Dr. Suzanne Fredericq examines algae taken from Cypress Lake on campus.

DENNY CULBERT

which led her to marine algae, or seaweeds.

"I wanted to learn more about the algae to better understand the worms. The more I became fascinated with those algae, the more I realized that they were the organisms I wanted to keep on studying for the rest of my life. They pushed the worms out of my life."

Fredericq received the UL Lafayette Foundation's 2010 Distinguished Professor Award.

She joined UL Lafayette's faculty in 1996 after completing post-doctoral work at the Museum of Natural History at the Smithsonian Institution in Washington, D.C. She was attracted to the Biology Department's research and the university's close proximity to the Gulf of Mexico.

"Some people get a runner's high from running a marathon. I get a rewarding feeling every time I look at a red algae and every time I understand something new about it," she said.

Fredericq is an international expert in her field. She's been invited to give lectures from Japan to Mexico and has published more than 80 papers in her career.

She has directed the dissertations of nine doctoral students. All of them remain collaborators with her. Recently, a former student from Brazil returned to Lafayette for a short visit to work with Fredericq on completing two manuscripts. In August, she'll join another former student, now a faculty member at a Rhode Island university, on an algal collecting trip in Panama.

"It gives me so much pleasure that all nine were able to stay in the field of phy-cology, the study of algae, and that they all have become highly regarded as experts in their field," she said.

Fredericq's work is not limited to the laboratory. She also teaches a freshman biology course.

"Suzanne has taught hundreds of students in our freshman-level series of classes aimed at non-majors where she has been highly successful," said Dr. Glen Watson, head of the Biology Department. "In addition, her course in Marine Botany aimed at senior biology majors and graduate students is well-attended and well-received by her students."

In her life outside academia, Freder-



Professor Brian Kelly, left, works with student Matt Bell in UL Lafayette's printmaking studio.

DENNY CULBERT

icq is a fan of the arts. Her late husband, Eugene J. Martin, was a prolific and well-known painter.

"I am drawn to the visual in biology and also in the arts," she said. "I love looking at great art hanging in museums and art galleries, no matter the style or period."

So, it's no wonder that she is smitten with the intricate shapes and hue of red algae.

PROFESSOR FOSTERS COLLABORATIVE LEARNING

Brian Kelly

Professor and printmaker Brian Kelly doesn't mind getting his hands dirty.

"I've always been a hands-on person. I'm a hands-on teacher. Sometimes that requires you to be in the muck with the student. I'm not going to walk away from a student who's having trouble," he said in recent interview.

A visitor to the printmaking studio is likely to find Kelly working alongside his students. "One of the things that drives me is the fact that this university is student-centered," he said.

Kelly received the UL Lafayette Foundation's Distinguished Professor Award this year.

Professor Chryl Savoy, head of UL's Visual Arts Department, said he has helped

create "a superior learning atmosphere" for students and faculty.

"He is 100 percent enthusiastically interested in his students and is totally driven by their abilities to learn, to develop, to grow. His constant willingness to work alongside his students in the learning process is inspiring to them as well as to his colleagues," she said.

Kelly's role within the department has come full circle. He joined the faculty in 1999 to teach printmaking and was named department head in 2003. Kelly returned to the printmaking studio in the fall of 2009.

He was just 34 years old when he became department head. Gordon Brooks, dean of the College of the Arts, said Kelly was ready for the challenge. "This was an unusual appointment for a newly tenured faculty member, but he brought the same qualities in his administrative work as he brought to his teaching and creative activity," Brooks said.

As department head, Kelly oversaw successful re-accreditation of visual art and design programs through the National Association of Schools of Art and Design. He also obtained more than \$300,000 in grants.

Kelly helped expand Marais Press, the department's printmaking press established in 1991. Since 1999, he has invited professional artists to collaborate with UL Lafayette students, creating limited

editions of the artists' work. Proceeds from the sale of prints are reinvested in the press, used to pay expenses related to visiting artists and to fund student art scholarships.

Each year, five to 12 artists spend one week working in the studio. Kelly said UL Lafayette is one of only a handful of universities in the United States that conducts a professional collaborative program.

"It's an opportunity to expand students' knowledge and experience," he said. Students learn about the visiting artist's approach and method, interact with the artist and carry out the printing process.

"We'll have a whole class come in and they'll watch as we're making this print. The students see the results of collaboration. It reinforces the decision they've made to pursue a career as an artist. They see someone who's taken that path, someone who's successful."

Since 1999, the program has produced collaborations with more than 80 artists. "When we bring artists into the studio, we make the environment flexible and adaptable to their needs. But we also try to expose them to as much new information, technology and methodology as we can," Kelly said.

MASTER BUILDER

Geoff Gjertson

Two days a week, Geoff Gjertson welcomes visitors to UL Lafayette's BeauSoleil Home, next to Fletcher Hall. The sustainable solar house, designed and built by students, earned two awards in Washington, D.C., in the 2009 Solar Decathlon: the Market Viability Award and The People's Choice Award. UL Lafayette competed against 19 universities from around the world in the contest sponsored by the U.S. Department of Energy.

Gjertson, an associate professor of architecture, was faculty advisor for the two-year project. He received the UL Lafayette Foundation's 2010 Dr. Ray P. Authement Excellence in Teaching Award.

"My involvement with the BeauSoleil home really taught me when it is appropriate to stand back and let the students take the risks. The projects that students learn the most from are those in which they have true ownership."

Gjertson described the BeauSoleil home as a laboratory. "We are still learning from it," he said.

"We put it here on campus so

that students can experience it over the next several years and learn from it." Engineering students, for example, are monitoring the home's solar electrical system and automated systems, including lighting, heating and cooling.

Gordon Brooks, dean of the College of the Arts, said Gjertson has "a long history of excellence in teaching students how to learn through project-based and service-based learning.

"One of our greatest challenges as educators is preparing students not only how to survive, but how to thrive and how to serve. Geoff is a master teacher who knows how to develop service-based projects that not only teach architecture, but challenge students to be good citizens."

Gjertson, who joined the faculty in 2000, maintains a private architectural practice. "It's important for me to stay engaged in the profession. Carrying out my own work helps me grow as a teacher," he said.

His philosophy of teaching is based on his belief that an architect should be able to swing a hammer. "In making something, you to learn how to design something. That concept goes all the way back to the beginning of the profession. The term 'architect'



Architecture Professor Geoff Gjertson, center, meets with students Jason Lantier, left, and Carson Donham inside the BeauSoleil Home.

DENNY CULBERT

means ‘master builder.’ ”

Gjertson helped establish the UL Lafayette Building Institute, a design/build studio in which students participate in real-world projects. Through the institute, students have helped restore an historic Acadian home and improved facilities of the Acadiana Outreach Center and the Boys and Girls Club. “We wanted to make the institute a more central part of the curriculum, so now it is no longer an elective. It is part of our undergraduate and graduate programs,” Gjertson said.

Students gain hands-on experience, not only in construction, but in aspects of architectural practice such as team collaboration, conflict resolution, financial management and client communication.

The BeauSoleil Home is also a project of the Building Institute.

“The culmination of everything we have been doing is service learning. We provide community outreach, teaching people about sustainable design techniques and strategies, so that people can use them in their own homes.”

Gjertson said he thrives on teaching because “every day is different. I learn from my colleagues when we are working with a group of students”

HUMANITIES ‘AMBASSADOR’

Dr. Lisa Graley

After Dr. Lisa Graley earned a degree in journalism from Marshall University, she got a job as a newspaper reporter in her home state of West Virginia. Over the next four years, she served as a reporter, page designer, photographer and managing editor. But journalism wasn’t a career she wanted for a lifetime.

“There was something in my heart that kept pulling me back to literature. That was my first passion,” she said in a recent interview.

So, in 1992, Graley left West Virginia and journalism and moved to Louisiana, where she earned two master’s degrees at McNeese State University in Lake Charles



Dr. Lisa Graley is coordinator of UL Lafayette’s Interdisciplinary Humanities Program.

and a doctorate at UL Lafayette.

Since 2002, she has been a lecturer in UL Lafayette’s English Department and its Interdisciplinary Humanities Program. She has also served as coordinator of the humanities program since 2002, overseeing scheduling and course creation, and recruiting faculty.

She has taught a variety of courses, including honors classes, survey courses, creative writing workshops and lower- and upper-level interdisciplinary courses. Many have intriguing titles, such as “The Fallen Woman in the Nineteenth Century,” “Plagues and Poxes,” and “Jacob’s Ladder: Angel Encounters in the 20th Century.”

“I’d love to take any of these courses,” stated Dr. James McDonald, head of UL Lafayette’s English Department, in a letter recommending Graley for the Dr. Ray P. Authement Excellence in Teaching Award this year. “She brings to these courses significant knowledge of, curiosity about, and zeal to do research on literature, art, film, history, music and culture (and often other fields such as psychology and religion) over several centuries and across numerous national borders.

“Dig into her syllabi and other materials for each class, and you’ll see rich and carefully thought-out sets of questions for class discussions and provocative writing assignments ... ”

McDonald said he is impressed by

the breadth of the courses Graley teaches. “Many teachers are strong teachers in one or two general areas but it is rare for faculty to excel while teaching so many different kinds of subjects.”

He noted that Graley is popular among students. He described her as “an encouraging, student-centered teacher.

“I see this especially in her comments on student papers. Her comments are always encouraging, always positive, and always very specific about what is working in an essay or short story and what is not working,” he wrote.

Graley said there is something thrilling about seeing students catch on to the material she is teaching. She views her role as an ambassador who shows students the relevance of humanities in their lives. She sometimes fosters creativity by asking students to complete art or music projects, as well as writing assignments.

Graley credits Dr. Darrell Bourque, UL Lafayette professor emeritus of English and Louisiana’s poet laureate, as the mentor who helped shape her involvement with literature and the humanities.

From 2003 until 2008, Graley was editor of *Interdisciplinary Humanities*, a journal that specializes in essays by teachers, for teachers.

She recently received a grant to complete work on a book of short stories set in West Virginia. ■

DENNY CULBERT



TRAVIS GAUTHIER

In 1940, Southwestern Louisiana Institute students held a dance on campus. It was so successful that revenue from ticket sales exceeded expenses. Bob Dugas, '48, left, was president of the freshman class that year and Harold Comeaux, '47, right, was president of the sophomore class. They decided to use the extra proceeds to commission a neon Southwestern sign, which was originally installed at the university's north gate and later moved to Earl K. Long Gym. Dugas and Comeaux have attended Ragin' Cajun football games together since 1963.



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