Getting the Green Light

The University of Iowa

Sustainability moves forward at Iowa

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Sustainability: The ability to meet our needs without compromising the ability of future generations to meet theirs.

A University power plant burns carbon-neutral oat hulls to generate steam. Nearly one ton of food waste from campus residence halls is sent to a composting bin instead of the landfill every week. UI researchers study pollutants in air over the Arctic and left behind by food-water back home in Iowa.

And starting in the fall of 2009, undergraduates from any discipline will be able to enroll in a new certificate program focusing on sustainability. These are just a few of the many ways that the University of Iowa is thinking green as it strengthens its focus on sustainability campus-wide. No area of the University is unaffected, from operations to research to academics.

Sustainable concepts aren’t new to campus, but they became a formal part of its mission on Earth Day 2008, when UI president Sally Mason announced, “Sustainability must and will become a central priority of all aspects of our University enterprise.”

Under her direction, the University established an Office of Sustainability to facilitate and promote sustainability efforts on campus. In December, Liz Christiansen, formerly the deputy director of the Iowa Department of Natural Resources, became its first director.

“The concept of ‘sustainability’ is a huge umbrella,” she says. “A lot of issues fall under it, but what it really comes down to is sustainability: Liability now and generations from now. I think it is incredibly important that institutions of higher learning are leaders in sustainability issues. Universities are incubators of innovative thought, and society turns to universities to solve these critical issues.”

That push begins by raising the University in a sustainable way, conserving energy, reducing carbon emissions, managing waste, and using green products like recycled paper and hybrid cars.

It also extends to the classrooms and the lab.

“We are asking questions like, ‘Are we preparing students to be good, effective citizens? Are we educating them about what sustainability is, and how and why we should achieve it?’” says Jonathan Carlson, senior associate to the president of the University and chair of the University Sustainability Steering Committee. “We also think it’s important to keep up with the campus and fields that are emerging as society becomes more concerned about sustainability issues, such as wind energy and engineering.”

So the University has created a Certificate in Sustainability, and is encouraging faculty from all disciplines to look at how sustainability issues tie in with their subject matter. It also plans to add five new tenured-track faculty lines dedicated to supporting interdisciplinary sustainability efforts.

University faculty explore sustainability issues in research labs, too. One example is the College of Liberal Arts and Sciences faculty, as John Ladd, associate professor of chemistry, is developing more sustainable, longer-lasting batteries (see story on page 6). Elsewhere in the University, researchers study renewable energy, sustainable water systems, and more.

Students, faculty, and staff are taking sustainability off campus, too. Jerry Schoon, for example, professor of civil and environmental engineering and occupational and environmental health, is chairing a state advisory council on climate change.

“We’re not just doing research for its own sake, but for the sake of the country and the world,” Carlson says. “Our faculty members don’t spend all their time in the laboratory or library; they’re working beyond the University, trying share their knowledge and insights with policy makers.”

—Anne Kapner

For more on sustainability efforts at the University, see stories on pages 4-7.

Drums thunder and colors whirled April 13 in the Main Lounge of the Iowa Memorial Union as dancers and drum groups from across the Midwest performed and competed at the University of Iowa Powwow. The event, owned by the Illini American Indian Student Association after a four-year hiatus, celebrated American Indian culture through dance, music, food, arts, and crafts. More than 1,300 attended the festival.

Liz Christiansen, pictured here with her electric car, was hired in December 2008 as the University’s director of the Office of Sustainability. The office was created under the direction of UI President Sally Mason to promote sustainability policies and practices across campus.

For more on sustainability efforts at the University, see stories on pages 4-7.
Wrestlers’ Championship: A True Team Effort

The women’s wrestling team collected in second straight national team title at the 2003 NCAA Championships in March. Though they only scored 85.5 points, adging runner-up Ohio State by 4.5 points, to record the school’s 22nd NCAA team title. That is the closest margin of victory in the team’s 33-year history by any title by two points, and only the second time in Ohio State history that the club won the NCAA title without an individual champion. Iowa also accomplished that feat in 1978. It is also the first year since 1998 that the Hawkeyes have not crowned an individual champion. This year, the 2003 season winning two straight NCAA and Big Ten titles. The Hawkeyes posted a perfect 24–0 dual meet record, going 8–0–8 in Big Ten duals.

Sale: Nature’s Antibispersonal? A UI researcher has discovered one potential route we might use in a better meal. Kim Johnson, who holds appointments in psychology and integrative physiology in the College of Liberal Arts and Sciences and the School of Pharmacy in the Carver College of Medicine, and colleagues found that when rats are deficient in sodium chloride (commonly known as salt), they shy away from activities they normally enjoy, like drinking water or engaging in a novel activity. This suggests that a lack of sodium is linked to a decrease in activity, which could have implications for their brain.

The UI researcher believes its not a huge depression because several previous studies have found the same thing and has a lot of potential for new activity. “We’ve been using different groups to determine if they’ve found their way to the food,” he says. “Their answer is a rewarding strategy.”

Tippie MBA Finance No. 1

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More Than Meets the Eye

Food cleanup goes underground

Food recovery at the University was quite viable during the summer of 2002. Ventilation tubes snaked out of buildings, and recovery workers towe away damaged drywall and warped flooring at a forensic pace. All at once, a little more than half of the amount of food that was grown at the university went away without reaching the plate. The university’s food recovery program was a success for both the environment and the university’s bottom line.

But what if we could do even more? What if we could use the food left over at the end of the day at any of the university’s dining halls to feed the homeless?

The University of Illinois’ food recovery system is designed to pick up food from the canteens and dining halls at the end of the day and transport it to a central location where it is sorted and packaged for distribution to local shelters.

The system works like this: When food is left over at the end of the day, the staff at the canteens and dining halls will package it in containers and send it to a central location. The containers are then transported to the homeless shelter where they are ready to be served as a meal.

The food recovery system is a win-win for both the university and the community. The university is able to reduce waste and save money, while the homeless shelter is able to provide nutritious meals to those in need. It is a great example of how universities and communities can work together to make a positive impact on the environment and on the lives of those in need.
Creating Solutions
Both Leká and Ladd are working with the U.S. Research Foundation on patents related to their research, which ultimately could benefit the University and the world beyond. “I have a friend, Alanah Fitch at Loyola University in Chicago, who works in Africa, where there is virtually no power grid,” says Ladd. “Alanah says it would markedly improve the lives of many people if they had a battery system to power a 40-watt bulb for one hour a day. If our work can change the energy distribution of the plant, we can help the U.S. move from dependence on foreign oil to domestic, renewable energy sources, let’s do it.” —David Hess, UIC

Researchers explore earth-friendly innovations large and small

While it’s become fashionable to think green, University of Iowa researchers have been doing so for years. While they’ve undertaken research efforts to make sustainability possible, “Faculty and staff across the University, from English to civil and environmental engineering, are engaged in leading-edge research on topics related to sustainability,” says Jordan Cohen, the University’s interim vice president for research. “Several UI interdisciplinary research centers— including the Center for Global and Regional Environmental Research, the Center for Health Effects of Environmental Contamination, and the Nanoscience and Nanotechnology Institute—conduct research that illuminates environmental problems, points solutions to those problems, and promotes the betterment of our environment and public health.”

Andrew Kasuk and John Ladd are two such UI researchers. Kasuk, professor of industrial engineering in the College of Engineering, uses data mining to maximize the capture of wind energy. Ladd, associate professor of chemistry in the College of Liberal Arts and Sciences, is exploring catalysts that could increase battery life several fold. While the scale of their research components varies greatly, they share a similar goal: using renewable resources to help create energy self-sufficiency.

A mighty wind
Anyone who’s driven through Iowa in the last few years has seen the proliferation of wind turbines dotting the rural landscapes. In 2018, the American Wind Energy Association reported that Iowa is second in the U.S. in wind power-generating capacity, behind Texas and ahead of California. And Iowa doesn’t just produce wind power, it also creates the turbines used to collect it. According to Kasuk, there are six wind energy companies in the state, including the second and third largest turbine equipment manufacturers in the world.

All of this activity provides the perfect laboratory for Kasuk, an industrial engineer who for years has used data to improve outcomes in medical settings. A student’s interest in analyzing and modeling data for efficiency in the UI Power Plant increased Kasuk’s awareness of the energy industry. Kasuk and his students expanded their efforts to further wind energy.

Today, Kasuk is in a font of information on the enormous turbines and ways to increase the energy they produce. His research uses information on wind speed, turbine rotation, and other factors to “smooth out” the variability of wind shifts and reduce vibrations so that turbines can react more efficiently and sustain less wear and tear during high-speed winds, thus extending the lifetime of the turbine components.

Additional research combines wind farm data and weather data to predict the productivity of particular farms, enabling the power grid to know when and from where it could expect to receive power. “This will change the perception of the industry, helping suppliers to plan for times to employ wind or other power sources,” says Kasuk. “The data proves that wind has a natural, predictable rhythm and that wind energy cannot be ignored.”

Tiny but mighty
While it rests at the other end of the size spectrum, Ladd and her group’s work on magnetic catalysts for power sources is creating enormous results. Their research to improve the life of alkaline batteries came about as much research does: by chance.

“We were working on a different project and discovered we were getting very big currents,” says Ladd. “We decided to think about ways to exploit those currents.”

Ladd, who’s been engaged in this research since 1995, first increased power to fuel cells by adding microparticles of “crushed rust.” Ultimately, her group found that adding micromagnets to manganese dioxide, which is the major fuel source in alkaline batteries, increased battery capacity by 30 to 40 percent or more.

“We’re introducing micromagnets into the electrode structure and creating higher currents,” Ladd says. “In the very best case, we can double the capacity of an alkaline battery. And it’s not complicated or expensive: it can be done for as little as a penny or two per battery.”

In addition to being much less expensive than lithium ion and lead-acid batteries, Ladd says that manganese dioxide is environmentally benign and domestically available.

“Fuel cells rely on platinum and re- thorium, which come from South Africa and Siberia,” she says. “But manganese dioxide and its magnetic materials are easily mined in the United States.”

Embracing Our Environment

Left: Graduate student Perry Metzger assembles a manganese dioxide and electron micrograph of a polymer matrix holder as part of his studies with John Ladd, associate professor of chemistry, on increasing the life of alkaline batteries by magnetic modification.

Below: Students in a Wind Power Management class visit a turbine for an up-close look at the turbines they’ve studied in class.
Earthly Concerns

University campus’s conservation efforts continue and expand

As a member of the Chicago Climate Exchange, The University of Iowa is committed to reducing its greenhouse gas emissions by 6 percent by 2010. The University also has committed to building all new construction, including the new buildings currently under way, to at least a silver LEED (Leadership in Energy and Environmental Design) standard. Christensen says in the future, existing buildings may be retrofitted for “optimal conservation.”

Recycling and composting have become central to University operations, too. About 30 percent (by weight) of waste is recycled. This includes nearly one ton of food scraps per week, which are composted as the result of a student-proposed residence halls project.

But it’s Iowa’s longstanding, alternative transportation programs that earned the highest grade—A—from the College Sustainability Report Card, an independent evaluation of campus operations conducted by the office of the Sustainable Endowments Institute. The Caribbean system provides 5.7 million miles annually, discounted community bus passes are available to the University community, a 30-year-old employee van pool program saves hundreds of thousands of gallons of gasoline each year, and the University supports bicycling on campus by funding bike programs and providing bicycle parking spaces.

Because of the size of the University, policies like these can make a big impact, says Christensen.

“This is a huge institution,” he says. “We have 34,000 employees, 50,000 students. We’re like a small city.

And when the University implements sustainable policies, everyone becomes a part of the efforts.

“These are exciting times at The University of Iowa,” says Don Guckert, associate vice president and director of Facilities Management. “Sustainability efforts are bringing together students, faculty, staff, alumni, and community partners to solve difficult challenges, explore new frontiers, and protect the University of Iowa as a leader in sustainability.”

——Anne Karasz

Mixed Greens

Courses campuswide connect students to sustainability

Most students who sign up for English Professor Doris Witt’s Food Studies and Popular Culture class don’t begin the semester with sustainability on their minds. Once they start analyzing books, movies, and videos that address topics like subsidies for corn farmers, “junk food,” the restaurant industry, and Food Network programming, though, the topic is unavoidable.

“We start talking about food, but move into sustainability issues in part because that’s what the conversations are out in society,” Witt says.

“The goal is not to ensure that they come out with a particular attitude,” she adds, “but to get into these conversations that sustainability is something they want to be thinking about, and help them think about how the debates play out in popular culture.”

The 3-semester-hour class is just one of many at the University that wave sustainability issues into topical discussions in areas like art, anthropology, engineering, and law.

While several disciplines at Iowa are well known for their work in sustainability, the University is working to make the topic an integral part of the academic experience for everyone.

“We need to provide all students across the campus the opportunity to be involved in this issue, and learn about this issue, and do it in depth,” says Jonathan Carlson, senior associate to the president of the University and chair of the UI Sustainability Steering Committee. “Sustainability is not just the issue of the day. We’re going to be talking about it for the next 5 or 10 years.”

At last count, the University offered more than 200 courses that touch on sustainability issues.

Many of these courses are in the sciences. The College of Engineering tackles sustainability issues in many of its civil and environmental engineering courses, and you’ll hear plenty of sustainability discussions in the College of Liberal Arts and Sciences’ biology, environmental sciences, geography, and geoscience departments.

But there are plenty of options in other disciplines, too. A few examples:

The art department offers a course in sustainable architecture; in anthropology, students can study the link between religion and environmental ethics; and there’s an economics class that analyzes production, distribution, and consumption of sustainable and renewable natural resources.

In fall 2009, the University will pull together those diverse offerings under a new certificate program. Undergraduates who complete 24 semester hours of course work drawing from four broad categories—changing environments and human health, energy, climate, and the built environment, the power of culture and society, and ethics, economics, and public policy—will earn the Certificate in Sustainability.

The interdisciplinary aspect of the certificate is one of its biggest strengths, says informal associate professor for academic administration Barbara Fickerton.

“There’s no single course that can fully communicate the connectivity that we want to teach the students,” she says. “We think it’s important for students to understand what technology innovations can provide as means to solutions for sustainability problems, as well as understand non-technological fixes for change, such as our social structure, or economic structure. It takes a certain scientific education to understand these matters, but a humanities education to articulate why it happens, and persuade people to your opinions about it.”

Fickerton believes sustainability education at Iowa will continue to grow. Future options may include a stand-alone certificate, more courses for graduate students, distance-learning opportunities, seminars for first-year students, and a sustainability-themed living-learning community for undergraduates in the residence halls.

“Newly, we’ll get the response from people that sustainability is just another education fad, but that’s not true,” Fickerton says. “The need for economists to talk to engineers to talk to writers to talk to and educate people—that’s not going to go away, because these issues are not going to go away.”

See a partial list of sustainability courses at The University of Iowa on the College of Engineering’s web site at http://sustainability.engineering.uiowa.edu/curriculum/.

——Anne Karasz
Staging a Comeback

The Jeffrey Ballet's 2020 River to River tour took the Jeffrey to Council Bluffs, Des Moines (top, center), Muscatine, and Cedar Rapids (below) for the outdoor performances.

The Jeffrey Ballet's 2020 River to River tour took the Jeffrey to Council Bluffs, Des Moines (top, center), Muscatine, and Cedar Rapids (below) for the outdoor performances.

W hen times are tough, you learn who your friends are. Soon after the flood of 2011 extensively damaged the University of Iowa Hancher Auditorium/Viman Music Building complex, UI arts administrators heard from both the Jeffrey Ballet and the Civic Center of Greater Des Moines, wondering if there was anything they could do to help. The result was a benefit performance by the Jeffrey Ballet on Sept. 11, 2009—the night before the Iowa/Iowa State football game in Ames—in the Civic Center, followed by a reception with the Jeffrey dancers. Proceeds of ticket sales will be shared by Hancher and the School of Music.

The program will be “Kittenzone” by Jeffrey co-founder Gerald Arpino; two works that cel- ebrate the music of Richard Rodgers—“...smile with my heart” by UI alumna Lar Lubowitch and “Carousel (A Dance)” by Christopher Wheeldon; and “Age of Innocence” by New York City Ballet soloist-turned-choreographer Edward Liang, to music by Philip Glass and Thomas Newman.

“I’ll never forget the success of our evening in Des Moines on June 25, 2017, when the Jof- frey Ballet performed in the Western Gateway Park during our River to River tour,” says Chuck Stewart, Hancher’s executive director. “It only seemed appropriate that we bring the Jeffrey back to Des Moines for another memorable evening. This is a wonderful opportunity for Hancher, the School of Music, and the University due to the generosity of the Jeffrey Ballet and the Civic Center of Greater Des Moines. It is a true celebration of the arts in Iowa.”

Collaborations between Hancher, the UI Dance in Performing Arts, and the Jeffrey Ballet began with the Jeffrey’s first Hancher performance in 1974, which were accompanied by an orchestra organized by School of Music faculty. The School of Music has provided live music for the Jeffrey Ballet on several visits to Hancher, most notably for the world premiere performances of Robert Joffrey’s Nutcracker in 1974. Residences by the Jeffrey II Dance in the 1980s were hosted in collaboration with the division’s Department of Dance, which escaped major flood damage. Joffrey companies have presented more than 125 performances in Hancher, or around the state of Iowa through Hancher’s sponsorship. The most ambitious collaboration with the Jeffrey came in the summer of 2007, when beautiful weather welcomed the company to Iowa for the River to River tour of five outdoor performances in celebration of Hancher’s 50th anniversary.

Hancher’s reputation as a creative center began with the Jeffrey Ballet, when the University commissioned James Kudelka’s The Heart of the Matter in the 1983-84 season. Its stunning success launched Hancher into an era of artistic entrepreneurship that has included more than 700 works in music, drama, and dance.

The collaboration is best known for two large-scale Hancher-commissioned productions that were both artistic successes and important elements of the Jeffrey’s national through tough financial times: the Robert Joffrey productions of The Nutcracker in 1974 and Bililboa in 1975, America’s first full-length rock ballet, featuring music by Prince and movement by four contem- porary choreographers.

The late Gerald Arpino, who co-founded the company and was its artistic director for many years, successfully summed it up: “Without Iowa, there would be no Jeffrey Ballet.” And now, partly because of the ballet’s friendship and generosity, there may again be a Hancher Auditorium and a Music Building at The University of Iowa.

For ticket information, call the Civic Center of Des Moines, 319-246-5101.

Hancher and the School of Music get boost from Joffrey and friends

The Jeffrey Nutcracker premiered in 1974, previously featured a corps of Iowa children, who then accompanied the Jeffrey to Washington, D.C., to perform with the company in a facsimile run at the Kennedy Center. Each return of The Nutcracker has provided an opportunity for another group of Iowa children. The Iowa “alumni” of the Jeffrey Nutcracker now total more than 350.
Speaking Out

Professor challenges assumptions based on language and demeanor

University of Iowa students who take a class from Vernice Ashaunt Young often remark on their surprise that the youthful professor grew up in the Chicago housing projects. That’s because his demean- or and speaking style don’t match what they associate with someone who comes from the ghetto, Young says.

“People often read me as middle class,” he says. “I am middle class now, but when I was reading my work, they’re amazed. They cannot believe that’s my background.”

Young, an assistant professor who holds joint appointments in rhetoric and African American studies, uses this example and others from his life to encourage students, educators, and others to confront assumptions about race, class, language and performance. The election of the country’s first black president has increased interest in the African American experience in the United States, which Young views as the growing swellings in classes he teaches. At Iowa, African American studies was founded in 1973 in the College of Liberal Arts and Sciences, and was one of the first in the country to offer a master’s degree in the field (see box, right).

Young’s work explores the African American ex- perience post–Jim Crow, often focusing on how black speaking styles and demeanor shape perceptions and treatment.

“We don’t separate people by the color of their skin anymore, but by the way they speak and act,” he says, explaining that first phenomenon is the wear and tear of separate-but-equal laws in the United States.

In his work, he draws on experiences from his own life, saying he often felt that he had to downplay his African American characteristics—the loud voice, his tendency to talk about race—in order to be taken seriously in the classroom. At the same time, African Americans challenged his blackness and masculinity because he was a serious student.

But it doesn’t have to be that way, Young says. In a book he published in 2007, Your Average Negro: Performing Race, Literacy, and Masculinity, Young argues that African American vernacular should not be abandoned in schools. The standard practice of urging black students to abandon the language they speak at home, which he terms “code-switching,” forces them to check their identity at the school door and leads to anxiety and failure, Young says.

Instead, he urges educators to understand the social and cultural forces that influence black students’ dia- toms, and to embrace those in their teaching.

“Education is making African American rhetoric sort of a foreign language, and it is it,” he says. “When students think they have to learn a different language, they resist that because they understand how closely it is related to language. The thing I want teachers to understand is that students don’t have to change their language styles so drastically to succeed— and they shouldn’t have to.”

The book weaves his research with personal stories, including observations from his time as a teacher and principal in the Chicago Public School District.

Young grew up in the Henry Horner Homes on Chicago’s west side. His mother and influential teachers pushed him to do well in school, and he did, earning three advanced degrees: master’s in performance studies and educational administration and a doctorate in English.

In addition to teaching undergraduates in African American studies and rhetoric, Young draws on his the- atrical background, traveling around the country giving performances based on his book.

He also has three books in the works. In a forthcoming book, Exaggerated Anxieties: Gender and Racial Anxiety Among the Black Malefide Clan, Young uses Barack and Michelle Obama in his narrative to highlight how prominent African Americans must change their demeanor in order to be accepted by the mainstream. He points to the 2008 campaign, when Michelle Obama, for instance, emphasized aspects of her black rhetorical style after being criticized as too direct.

Having the Obamas in the spotlight will create more interest in the issues that he studies, Young says. But having a prominent African American in power could create more problems, he says.

“Now that we have a black man in the White House, and people are going to say, ‘you all have arrived, and we don’t need to talk about race anymore,’” he says. “Unfortunately, a lot of people are going to agree. People committed to ethnic studies are going to be called upon to make a case for why we do what we do.”

— Maolalay (Kris) Smith

New energy in African American studies

Iowa’s African American Studies Program is nearly 50 years old. But a mix of accomplished scholars and young faculty, a curriculum that stretches from classical novels to hip hop, and a blend of academic rigor and one-on-one mentoring have brought it new vitality.

Founded in 1965, Iowa’s program went on to offer the nation’s first master’s degree in the field. Today it provides a multifaceted view of history and culture, introducing some students to African American life while prompting others to see their own lives from new angles.

In addition to classes offered by University faculty, a two-years-semina seminar brings in African American scholars from around the nation.

“Even if you’re African American, it chal- lenges you to think beyond what you’ve been told or seen in the media,” says Quintessa Claytor (Ph.D.), a third year student from Des Moines earning an African American studies minor.

Recent graduates have parlayed their experience into jobs with Teach for America, social policy think tanks, businesses, and even pro-sports teams.

The program draws faculty from many, but with particular strength in areas like English, journalism, theatre arts, and rhetoric, it’s developing a focus that reflects Iowa’s literary reputation.

“A program that embodies a passionate exchange of ideas is the most exciting thing a University of Iowa,” says Michael Hall, an assistant professor of English and African American studies. “That’s what they’ll find here.”

A Buggy Birthday for Lakeside Lab

Students young and old won’t be the only ones swelling Iowa Lakeside Laboratory this summer. The Big Bugs exhibit by sculptor Daniel Rogers will be on display at the biological field station in northwest Iowa to commemorate the lab’s centennial—and organizers hope to attract other visitors as well.

The gargantuan insect sculptures made of all natural materials will loom over the 147-acre campus near West Okoboji Lake July 1 through Oct. 4. Also part of the centennial celebration will be a public lecture series on July 14, featuring tours and science demonstrations, as well as a reunion for lab alumni, faculty, and staff
d.; and a.

Lakeside Lab, one of the nation’s first biological field stations, was founded as a private summer field station in 1925 by Iowa-University of Iowa professor Thomas MacMillan, who later became UI president. Today, the lab is owned by the State of Iowa and operated by the Board of Regents, State of Iowa.

The lab’s focus has evolved over the past 10 years, says executive director Peter van der Linden.

“In Lakeside’s early years, the focus was on inventorying and documenting the flora and fauna of our region,” he says. “Now the emphasis is on understanding the interrelationships among living things and their environment—ecology.”

Designated as a Regents Resource Center, Lakeside Lab serves graduate and undergraduate students from the same universities and offices summer course work in the biological and physical sciences to students from around the world.

The field-oriented classes range from one- to four-week courses and include Preventive Aque, Prairie Ecology, Global Climate Change, and the Ecology and Systematics of Diatoms, among others.

In addition to its academic and research com- munity, the lab serves the states through water- quality monitoring and analysis, and provides educational programming for the general public, including day camps for children, monthly discussions on environmental topics, and weekly faculty lectures. A writers-in-residence program invites professional writers to live on the campus and conduct workshops and readings.

A new side mission, notes van der Linden, also has emerged to combat nature-deficit disorder.

“There is concern that children are losing their connection with nature because they spend too much time indoors with TV, computers, and video games, and this contributes to obesity, depression, and other problems,” he explains.

“Lakeside’s summer camps and family programs provide a hands-on experience that engages children directly with nature, establishing ties and interests that can last a lifetime. We also collaborate with local agencies to host an annual early-learning conference, which attracts pre- school and day-care providers in the area to connect children with nature.”

The centennial of the— the Big Bug exhibit—combines art and science and appeals to people of all ages, van der Linden adds.

The Lakeside Lab campus is open to the public year-round, although admission is free. More for information, see www.lakesidelab.org.

— Sara Entzminger

12 THE UNIVERSITY OF IOWA Speculator SPRING 2020

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Photo by Tom Gabbert

Lakeside Lab is open to the public year-round, although admission is free. More for information, see www.lakesidelab.org.
UI Graduate College Alumna Wins Nation’s Top Dissertation Award

University of Iowa alumna Jessica Hertz has won the nation’s most prestigious honor for doctoral dissertations, the Council of Graduate Schools (CGS) Distinguished Dissertation Award. Hertz, who earned her doctorate in psychology in 2007, won an award for her dissertation “Fostering ‘Resilient Names’,” a study of how children learn language. Hertz’s study was selected above all other social science dissertations completed nationally from July 1, 2006, to June 30, 2008.

Hertz’s work means that Iowa has garnered more national awards than any other institution, public or private. With this year’s award, Iowa racks up five wins and surpasses Yale University, which has four winners.

The selection of the national prize was: Michael Chang, English, most outstanding dissertation in English literature; Sujata Massey, English, the humanities; 2008; Susan Brehm, Psychology, most outstanding dissertation in the humanities, 1997; Matthew P. Anderson, physiology and biophysics, most outstanding dissertation in the biological sciences, 1993; and David Lawless, music, most outstanding dissertation in the humanities, 1984. All of the UI nominees have been finalists in the national dissertation competition.

Activist, Nov. 1 Survivor Remembered

In April, the University honored the life and memory of Mya Rohlin-Sisson, the lone survivor of the Nov. 1, 1999, shooting on the UC campus. Rohlin-Sisson, 40, died on Dec. 21, 2009.

As a student, Rohlin-Sisson was a work-study student at the Women’s Resource and Action Center (WRAC), chair of the UI Lecture Committee, and an active member of several groups promoting human rights. The shooting left Rohlin-Sisson paralyzed from the neck down. After moving to Berkeley, Calif., in 1998, she started the UC community outreach organization, arranged home stays for the students and helped her life advancing the rights of the disabled.

The events in her honor included a photo exhibition at the WRAC, a community outreach event held by members of the Rohlin-Sisson family and the student group, an engaging exhibit of a one-hour documentary film, Mips of the Killing Time. Information about the film is available at myasfilm.com.

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Activist, Nov. 1 Survivor Remembered

In April, the University honored the life and memory of Mya Rohlin-Sisson, the lone survivor of the Nov. 1, 1999, shooting on the UC campus. Rohlin-Sisson, 40, died on Dec. 21, 2009.

As a student, Rohlin-Sisson was a work-study student at the Women’s Resource and Action Center (WRAC), chair of the UI Lecture Committee, and an active member of several groups promoting human rights. The shooting left Rohlin-Sisson paralyzed from the neck down. After moving to Berkeley, Calif., in 1998, she started the UC community outreach organization, arranged home stays for the students and helped her life advancing the rights of the disabled.

The events in her honor included a photo exhibition at the WRAC, a community outreach event held by members of the Rohlin-Sisson family and the student group, an engaging exhibit of a one-hour documentary film, Mips of the Killing Time. Information about the film is available at myasfilm.com.
Effects of Smoking Linked to Accelerated Aging Protein

A university study has made a compelling case for the idea that smoking is a major contributor to accelerated premenopausal aging and cardiovascular disease. The study results point to possible therapeutic targets for smoking-related diseases.

The investigation found that a key protein that is lost in a woman's skin, collagen, is decreased in smokers with emphysema, and this decrease harms lung cells that normally heal wounds. While people know that smoking is bad for health, not many mechanisms by which smoking damages the body are fully understood, says Tore Nydegger, assistant professor of internal medicine at the University of Medicine.

“Smoking can accelerate the aging process and shorten the lifespan by an average of more than 10 years. We focused on what happens in the lungs because the territorial aging effects, including atherosclerotic disease and cancer, are seen in people with Wistar's disease and people who smoke,” says Nydegger. The study findings appeared in the Feb. 6, 2007, issue of Reappraisal and Critical Care Medicine.

Gene Finding May Lead to Male Contraceptive

A newly discovered genetic abnormality could be the key to development of an effective male contraceptive, according to Michael Hildemann, a professor of oncology in obstetrics and gynecology at the Dartmouth College of Medicine.

“We have identified CAP25 genes that is involved in concomitant male infertility in humans, a finding which could lead to future infertility therapies that replace the gene or the protein,” Hildemann says. “But perhaps even more important, this finding could have implications for male contraceptives.”

The research team, which included scientists from Iran, discovered the male infertility gene while studying the genetics of families from Iran, where there are population groups with relatively high rates of disease-causing gene mutations. Although the team's research focuses on identifying genetic causes of diseases, collecting genetic information from this population allowed the researchers to identify two families in which male infertility that was not part of a syndrome appeared to be inherited.

Summer Jobs May Help Prevent Suicidal Tendencies in At-Risk Teens

A University of Iowa study found that when a friend of a friend attempts suicide, teens are more likely to seriously consider doing so. But friends of the school are less likely to suicidal if they have summer jobs.

In fact, summer employment is more of a deterrent than holding a job during the school year, according to research by Rob Baller, associate professor of sociology in the College of Liberal Arts and Sciences, who co-authored the study with Kelly matthews, a senior in sociology at the University of Iowa City Veterans Affairs Medical Center.

“Summer employment is thought to be beneficial because it creates a social extern while reducing isolation and substance abuse, and it does not conflict with school work in the way a job does during the school year,” Baller says.

University Museum's Artworks Return to Iowa

A partnership between the University of Iowa Museum of Art (UMA) and the Figge Art Museum in Davenport, Iowa, means that modern masterworks from the UMA, the majority of which have been in storage since their evacuation from Iowa in 1964, will once again be accessible to the public. In March, staff restored in the Figge more than 20 paintings from the UMA collection; here Sean ONeill (left), executive director of the Figge, takes with Pamela White, interim director of the UMA, as workers install Basilirikos (right). While conversations continue about a new home for the UMA, the university will use the Figge and campus venues to exhibit a portion of its collection. Also, nearly 30 works on paper from the UMA collection will be available for view and classroom study in the UMA Libraries Special Collections (by appointment).

School Buses Among Sites in Study to Travel in Iowa

University of Iowa researchers recently proposed scheduling school buses at parents' eyes: school buses are among the safest forms of road transportation in the U.S.

Professors of psychology and public health in the College of Public Health, as well as researchers at the University of Iowa, are among the team of researchers who created a study of school bus crashes in a study published in Accident Analysis and Prevention.

In a recent study, there were about 13,000 students in the United States were involved in school bus crashes in a year, which accounted for about 12% of the school bus crashes. At least 13 people were injured or killed in school bus crashes in a single year. The study found that passengers in school buses were more likely to be in the front of the buses and were more likely to be injured in school bus crashes.

A Breath of Fresh Air

A team of University of Iowa researchers received a grant from the U.S. Environmental Protection Agency to conduct a four-year study to identify some of the most hazardous pollutants in urban and rural U.S. cities.

The project will develop techniques to identify harmful particle matter and sources in urban areas, according to Charles Stanley, assistant professor of chemical and biological engineering in the College of Engineering.

“The objective is to bring together expertise from atmospheric particle matter experts with the modeling of the air quality impact,” Stanley says.

“In the past, studies of the health effects of air pollution have relied on air quality monitor data that is limited to one sample a day, and sometimes the monitors are located distant miles away from the individual with the health effect,” he says. “We intend to demonstrate several advanced techniques for combining measurements and simulations into a hybrid product that can be useful to public health scientists.”

Grant Aims to Keep Kids Interested in Science

More Iowa students will improve their science literacy thanks to a four-year, $4.8 million U.S. Department of Education grant awarded to a team of University of Iowa and Iowa State University researchers. Brian Hanch, science education professor in the College of Education, will serve as principal investigator in the College of Education, with semiconductor expert and professor in the College of Engineering, and Mack Shelley, UI professor of political science and statistics, to field test the approach of the Science Writing Hume—research that helps students learn about and use scientific arguments.

About 37,000 fourth- through eighth-grade students in all urban and rural Iowa elementary schools from across the state will be asked to pose questions, make claims, and defend their claims with evidence—an argument structure that Hands down doesn't currently exist in most schools. For example, students might use these tools to explain the conditions in which plants thrive.

The researchers from the college will directly address the critical need for science literacy and improved science education—and also cultivate in students the logic and problem-solving skills sought by a wide range of employers.

Love, Attraction Win Out in Mate Preference

Men are increasingly interested in educated women and less concerned about beauty, according to a recent UI study, which found that women are increasingly interested in a man who wants a family and less concerned about whether he's always Mr. Nice Guy.

Since the 1970s, researchers have been asking college students to rank a list of characteristics they'd prefer in a mate. Christina Whelan, visiting associate professor of sociology, and graduate student Christin Banerjee analyzed results of a 28.8 survey of more than 1,100 undergraduates at five universities, including Iowa, comparing the results to past mate-preference studies.

Today's young adults rank love and attraction as most important; a few generations ago it may not even have been in the top three. Male respondents in the 1970s who were never married and dated about 20% of whom had wide skills in the kitchen and chemistry but very little performance intelligence. Now, guys look for love, brains, and beauty. Emotional maturity, dependability, character, and ambition ranked as the top three characteristics in women wanted in a man. Today, women put love at the top, followed by dependability and emotional stability.

Inflammation Linked to Calcium Signaling Gene

Inflammation following a heart attack has been associated with worse outcomes for the patient. A new study led by Iowa researchers has found an unexpected link between the inflammation in heart muscle following a heart attack and a previously known enzyme called calcium-aldehyde dependent protein II, or Cagl II.

The findings also reveal the involvement of an immune system gene—complement factor II—that has been linked to a variety of different inflammatory diseases. The study, led by College of Liberal Arts and Sciences, is published online in the Journal of Clinical Investigation, suggests that Cagl II inhibition may be a therapeutic target in heart disease, but by previously unknown pathways.

Hancher-Voorman-Clapp and Art Building Slated for Replacement

The Board of Regents, State of Iowa, has approved The University of Iowa's request to replace several flood-damaged facilities at new sites on higher ground.

At its April meeting, the board unanimously accepted recommendations to relocate Hancher Auditorium, Voorman Music Building, and Clapp Recital Hall. The original Art Building complex will also be rebuilt in a new building. The buildings have been closed since last summer.

University planners have suggested possible sites for Hancher-Voorman-Clapp, expressing interest in keeping the buildings central to an arts campus complex. The university will provide more information about building sites at the Regents’ June meeting.

The Federal Emergency Management Agency (FEMA) gave the University and the Regents the option of repairing the campuses in place or moving them to new sites. Under either scenario, FEMA would cover 90 percent of building costs.

The recommendation to relocate took into account costs, as well as potential future flooding, problems insecting buildings on flood plains, and expansion opportunities. Rebuilding and reconnecting the buildings is projected to cost about $25 million—$27 million for a new Hancher-Voorman-Clapp and $5 million to replace the Art Building. The University would fund approximately $3.5 million.

Private gifts from alumni and friends will fund a major role in rebuilding the plans, and the University and UI Foundation are in the early planning stages for a fundraising campaign designed to benefit the entire arts campus.

Hancher continues to program music, dance, theater, and other events at alternate sites throughout the community, while many arts programs have moved to an alternate facility. Studio Arts, a reconstituted former Menards store,

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