New 3-D photonic crystals have both electronic and optical properties

By Liz Ahlberg

Photonic crystals are made that can control or manipulate light in unexpected ways thanks to their unique physical structures. Photonic crystals can induce unusual phenomena and affect photon behavior in ways that traditional optical materials and devices can’t. They are popular materials of study for applications in lasers, solar energy, LEDs, metamaterials and more.

However, previous attempts at making 3-D photonic crystals have resulted in devices that are only optically active—that is, they can direct light—but not electrically active, so they can’t turn electricity to light or vice versa.

The Illinois team’s photonic crystal has both properties.

“We’ve discovered a way to change them simultaneously,” said Erik Nelson, a former graduate student in Braun’s lab who now is a postdoctoral researcher at Harvard University. “Erik, Nick and I developed a way to control light in ways that are very unique—to control the way it’s emitted and absorbed or how it propagates.”

To create a 3-D photonic crystal that is both electronically and optically active, the researchers started with a template of tiny spheres packed together. Then, they deposit gallium arsenide (GaAs), a widely used semiconductor, through the template, filling in the gaps between the spheres.

The GaAs grows as a single crystal from the bottom up, a process called epitaxy. Epitaxy is common in industry to create flat, two-dimensional films of single-crystal semiconductors, but Braun’s group developed a way to apply it to an intricate three-dimensional structure.

“The key discovery here was that we grew single-crystal semiconductor through this complex template,” said Braun, who also is affiliated with the Beckman Institute for Advanced Science and Technology and Siebel PHOTONIC CRYSTAL.

Stronger social safety net decreases stress, childhood obesity

By Phil Ciciora

Social safety net programs that reduce psychosocial stressors for low-income families ultimately lead to a reduction in childhood obesity, according to research by a UI economist who studies the efficacy of food assistance programs on public health.

Craig Gunderson, a professor of agricultural and consumer economics, said food stamps and other programs can help people reduce stress in different ways, which will also have the effect of reducing childhood obesity.

“Although there have been many different ways to reduce obesity, what we’ve found is that stress is a leading cause of obesity among children. So if there’s any way we can reduce stressors from a policy standpoint, that will also have the effect of reducing obesity.”

Reducing stress. Social safety net programs that reduce psychosocial stressors for low-income families also ultimately lead to a reduction in childhood obesity, according to research by UI agricultural and consumer economist Craig Gunderson.

In this issue

For Faculty and Staff, University of Illinois at Urbana-Champaign

Inside Illinois

SEEN

Childhood Obesity

Enzymes exposed
Illinois researchers have identified enzymes in the honey bee’s gut that allow it to detoxify pesticides used to kill mites.

For video: http://go.illinois.edu/smoothievideo

Stinky pest
Farmers are being urged to be vigilant about scouting their fields for brown marmorated stink bugs.

Smooth move
Busse-Evans dining hall cook Willie Green, right, is the last man in line in the smoothie bucket brigade Aug. 29, with student supervisor Kyle Goethals pouring. The effort resulted in a world record, certified by the Guinness Book of World Records. The idea of a 330-gallon smoothie—consisting of 960 pounds of yogurt, 600 pounds of strawberries and 105 gallons of pineapple juice—was hatched by Housing’s Dining Services to add some excitement to the annual New Student Convocation. Dozens of dining services workers joined the effort, led by Dawn Aubrey, Scott Rossen and Peter Testory. The event took about six months to plan. The giant smoothie served about 8,000 students at Memorial Stadium. Kirsten Ruby, assistant director of housing for Marketing, said the event was such a success workers may try to repeat the feat. “The bug for setting records may have indeed hit the staff and discussions are under way about what next year’s record might be,” she said.
Brand-conscious consumers take bad news to heart

By Phil Cicora
Business and Law Editor

Consumers with close ties to a brand respond to negative information about the beloved brand as they do to personal failure — they experience it as a threat to their self-image, according to a new study by a UI marketing expert.

Tiffany Barnett White, a professor of business administration, says consumers with a high self-brand connection maintained favorable brand evaluations even when presented with negative brand information, suggesting that the reluctance of brand-conscious consumers to lower their self-image might be driven more by a motivation to protect the self.

"When companies get consumers motivated about their products, they are just as motivated to protect the brand as they are themselves," White said. "At the end of the day, it's about the self than the brand. When people can self-affirm through other means, they're not defensive at all."

According to the study, co-written by Yinghui Cheng, of Hong Kong Baptist University, and Lan Nguyen Chaplin, of the Villanova School of Business, brands become highly self-relevant, or self-connected, so much so that consumers will defend their self-connected brands much as they would defend themselves from personal failure.

" Consumers are highly resistant to brand failure to the point that they're willing to rewrite history," White said, the Bruce and Anne Strohm Faculty Fellow at Illinois. "It not only explains why so many Toyota customers ignored the negative brand information in the aftermath of the highly publicized recalls, it also accounts why you're quick to defend the company and why they would want to re-write history in a more positive way."

White says the research is scalable to brands in different industries.

"It's not just Coke versus Pepsi, Toyota versus Honda, or Apple versus Microsoft," she said. "Self-brand connections can extend into multiple markets. People may even think, 'I don't have any self-brand connections.' Well, pretty much everyone. It turns out that those self-brand connections are rather ubiquitous."

It can even extend to preferences for professional recommendations, although you don't have to be a rabid Chicago Bears or Pittsburgh Steelers fan for those to register.

"In some cases, it can actually be a pretty subtle connection," White said. "And even when teams muddle through losing seasons (or in the case of Chicago Cubs fans, 100-plus years of losing seasons), the effects still hold."

"People are always motivated to have a positive self-evaluation," White said. "They want to think of themselves positively, and they want others to think positively of them."

So when the Cubs are a mess, fans think of other ways to bolster their self-concept as Cubs fans. They talk about what a great ballpark Wrigley Field is during the summer. For real fans, they're re-painting the picture of their love affair with the Cubs brand. Otherwise, it's just that the Cubs have failed. It's that they, as fans, have also failed."

"But in those cautions that brand-conscious consumers do have their limits. An Apple aficionado, for example, might be turned off by working conditions in the factories in China that churn out iPhones and iPads."

"That could actually sever a consumer's sense of self-brand connection," White said. "They could say, 'Look, if that's what they're about, then that's not something I want to be a part of.'"

According to White, the big lesson for businesses is that the consumer's sense of self-brand connection, no matter how strong, is disposable at a moment's notice. They're not defensive at all.

"It's not just Coke versus Pepsi, Toyota versus Honda, or Apple versus Microsoft," she said. "Self-brand connections can extend into multiple markets. People may even think, 'I don't have any self-brand connections.' Well, pretty much everyone. It turns out that those self-brand connections are rather ubiquitous."

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"There is no (university) policy at all that addresses email or electronic communications," Corn said Aug. 29.

SEC members paid specific attention to three sections of the policy affecting the email use of faculty and staff members, students and for educational activities.

The policy would require professors ensure that any sharing of educational records with students is done through a university-unique email address and that no faculty, staff members or students are redirected to third-part email accounts. The policy would provide some leeway in "personal use" issues — where employees may engage in a minimal level of personal communication.

Corn said the student-verification issue is important because it ensures the reci pient of student information is qualified to receive it.

The only way to change that scenario would be to "force the students to use an @ Illinois account," he said, which hasn't been proposed.

He said the third-party email issue, or "noncompliance," becomes relevant in the event an employee in charge of important information leaves the university or dies — leaving business and personal emails in an unretrievable domain.

"The university has no access to it," he said. "The entire business of the university could be sitting in a private account. (Your university email) is your official account — you should really use it."

"We handed off to her a substantial amount of information," Corn said. "I'm not sure that any of them are able to attend the year's opening meeting of the full senate. She's not scheduled to officially take over as chancellor duties until Oct. 1.

"The transition is going well, but I wouldn't want to be in Phyllis Wise's shoes because right now she is doing two jobs," Easter said.

Easter said he had met with Wise and given her some input in the SEC budget, but didn't think he had made similar presentations this year to senate and other university academic committees.

"It involved a number of people from throughout the campus," he said. "We got quite a bit of feedback, we made quite a few revisions."

He's asking the senate to make a positive recommendation to the chancellor, who will ultimately decide the policy, and said a finalized version could still be changed to address specific senate concerns.

"I know I had a steep learning curve coming into this position," Easter said. "We handled off to her a substantial amount of information, but I think she's fully prepared to become engaged."

Richard Wheeler, interim provost and vice president of academic affairs, said his interactions with Wise had been "very encouraging" and he felt she was committed to the university.

"The age of the interim is coming to an end," he proclaimed. "She plans to be a fully empowered CEO/chancellor when she arrives."

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On the Job

David Stoppkotte has been an instrument and measurement technician with the College of Veterinary Medicine for 11 years, moving earlier this year from the pathology department to the college’s facilities group, which is basically taking care of the whole building. I get to work on a lot of different equipment, which adds a challenge that I’m also involved with the ESCO (Energy Services Co.) project going on here at Vet Med, which is helping convert the building to be more energy efficient.

What did you do professionally before coming to the UI?
I was in the Navy for 20 years and was a maintenance chief working on jets. I made the jump from tactical jets to microscopes. I started the job here in 1991, then went to Parkland for two years to study electronics. One of the professors there recommended me to my future boss in Life Sciences.

What part of your job do you excel at?
My specialty is microscopes. I found I have a knack for working with them and I love doing it. When I was with Life Sciences I worked with more classrooms directly — I would probably work on 1,000 or 1,500 microscopes a year. The new ones are more complicated, but I like that because it’s a challenge. A few years ago I was asked to make a video for students on how to properly use a microscope. The students had to concentrate on so many other things that they really haven’t received proper scope training. They made it required viewing, so I guess it helps.

Why microscopes?
I’ve asked myself the same question and I’m not sure if I have an answer. Even though I have big hands I have an aptitude for working on small and delicate items. I also can see the challenge of putting the mechanics with the optics and then making it all work.

What’s the biggest challenge in your line of work?
The big, wonderful challenge is some of the equipment is very old, so there’s a lot of mystery and troubleshooting. There aren’t a lot of schematics available, so when I first started (at the UI) I was totally clueless. I had seen a microscope in pictures but had never worked on one. After working on so many, you pick things up over the years. There is some equipment, like MRI’s that I don’t even endeavor to repair. I’m lucky because I know my limitations. If you mess something up (at Vet Med) it can be highly expensive to replace.

What’s the most common occurrence in microscope repair?
In certain portions of the pathology classes, students have to use immersion oil, which increases resolution. There’s a knack to using this oil that the students really don’t have the time to get that knack; they’ve got lots of other pressure and things to worry about. Let’s just say it can be messy and it’s hard to clean off. How do you approach a problem you’ve not previously encountered? I usually just go to where the problem has been reported and observe. Some problems are so ultra-simple that it’s best just to rule those things out before getting to the more complicated possibilities. As a Navy maintenance chief I had to know of all the systems and it’s a lot like that here. But even today, some of the equipment at Vet Med I have no idea what it is or what it does. If I have a problem, a lot of times I’ll get up at 2 or 3 a.m., grab a cup of coffee and Mull it over. I’ve even resolved things in my sleep.

How often do you give in and call for help on a complicated problem?
Most of the companies have a manual that you can download. When in doubt, read the manual. The problem is, some user manuals are obsolete in just a few years. On some of this equipment I have to look online for the parts. It’s all part of the fun.

Is your electronics aptitude innate or learned?
My father was probably the best repair guy I’ve ever seen. He was able to fix everything. I started getting interested in fixing things around 10. My first experience was taking the lawn mower apart. My dad said I did a real good job taking it apart, then he showed me how to put it back together. After that, I picked up like this research.

New sensors streamline detection of estrogenic compounds

By Diana Yates
Life Sciences Editor

Rese... When incubated in human cells, the fluorescent signals gradually increasing in strength up to 24 hours. “And also the sensitivity is pretty high,” he said. “Of course it depends on the compound that you’re testing, different compounds will have different affinities. But for a truly estrogenic compound, we can detect at the nanomolar level, a very low level.”

These are the first such sensors to work in human cells without costly additional chemical steps, he said. The new sensors will help researchers and clinicians quickly and efficiently determine whether a food, drug or chemical substance interacts with estrogen receptors in human cells, Zhao said.

The National Science Foundation funded this research.
Faculty hiring hitting a strategic upswing

By Mike Helenthal
Assistant Editor

I officials are moving forward on a plan designed to reverse a four-year downward faculty-hiring trend caused by financial constraints.

Last year the university hired 46 new tenure-stream faculty members, while in the 2008 and 2009 academic years it hired 75 and 63 respectively.

This year’s numbers won’t be finalized until October, but administrators say the level of hires will surpass recent totals. In addition, 133 tenure-stream faculty searches have been approved for next academic year, a number that exceeds recent search totals.

“It’s going to be a busier recruiting year for us,” said Vice Provost Barb Wilson. “We’ve approved more hires and more searches than we have in a while.”

Wilson said much of the recent decline in faculty numbers was orchestrated, as individuals opted for the retirement-incentive plan designed to reverse a four-year downward faculty-hiring trend caused by financial constraints.

The current hiring program is made possible because of all the cost-saving efforts across campus, including units thinking more strategically about their needs, Wilson said.

“All our collective hard work has allowed us to be a little more aggressive in filling in gaps that had developed in our faculty,” she said.

Wilson said the jump in approved faculty searches would be bolstered through two campus-level hiring programs.

One, the new Illinois Strategic Excellence Hiring Program, is funded by the Office of the Provost and designed to attract leading scholars in key areas of strength for the campus through national searches.

The program is expected to augment the already existing Faculty Excellence Program, but it focuses more on attracting faculty who can foster multi-disciplinary research teams across campus, rather than just filling needs of a specific college or unit.

“We know we can build on our strategic strengths and there are holes in certain areas we need to fill,” Wilson said in July when the new program was announced.

The Strategic Excellence Hiring Program focuses on hires in four areas:

- Information, technology and society
- Human health and wellness
- Energy and sustainability
- Culture, communication and global issues

Wilson said that 18 proposals have been submitted from across the campus. She predicts six to eight “strategic and significant” hires each year for the next several years through the effort.

The Office of the Provost also just brought back the Targets of Opportunity Program, which was put on hold last year while it was evaluated for effectiveness.

The program provides campus-level funds earmarked for recruiting exceptional faculty members from underrepresented groups.

“The good news is that units across campus have benefited greatly from this program and faculty and administrators were eager to see it continued,” Wilson said.

The recently released program puts even greater emphasis on using the normal search process to recruit talented faculty underrepresented groups.

“We now have an explicit goal to recruit roughly 30 tenure-system faculty a year through this program and we have incentivized such hiring in new ways,” she said.

Units can still apply for TOP funds by targeting individuals outside of a search, the most common use of the program in the past.

“We want to reward units that are incorporating diversity goals and efforts into their normal search processes,” she said.

NEW faces 2011

Ronald L. Jacobs
a professor of human resource development in the department of education policy, organization and leadership and the director of the Office of International Programs in the College of Education

Education: Ph.D. (instructional systems technology), Indiana University; M.Ed. (educational media and technology), University of Toledo; B.F.A. (film arts), Ohio University.

Research interests: Learning and performance issues in the workplace. He does research and development projects related to a training approach called structured on-the-job training.

Courses teaching: Teaching HRE 490, “System Theory Applied to Human Resource Development,” a course on how system theory is applied to the field of human resource development.

Why Illinois? “At this point in my career, I was looking for the next professional challenge,” Jacobs said. “My new position at Illinois provides me the opportunity to join a highly productive group of faculty in human resource education, and also to assume a leadership role in the college as director of the Office of International Programs. The combination of these opportunities, in addition to being at another highly prestigious academic institution, made my decision all the easier.”

“Dr. Ronald L. Jacobs is a top-ranked scholar and international leader in the field of human resource development,” said James Anderson, the head of the department of education policy, organization and leadership.

“Under his leadership, the HRD program at Ohio State has been ranked No. 1 by U.S. News & World Report for many years. His appointment greatly enhances our program’s reputation and standing in the field nationally and internationally. His engagement in international workforce education with particular emphasis on Korea, China and the Middle East strengthens the department and college’s international research and development agenda.”

Brad Tober
an assistant professor of graphic design in the School of Art and Design in the College of Fine and Applied Arts

Education: M.A. (design), York University, Toronto; B.F.A. (graphic design), Savannah College of Art and Design; B.A. (mathematics), University at Buffalo, Buffalo, N.Y.

Courses teaching: ART 103, “Art – Foundation, Design I” and ART 299, “Special Topics in Art”

Research interests: Interactive visual communication technologies, data visualization, information design, algorithmic abstraction and experimental design approaches. His recent work on an interactive and experiential form-creation tool explores both computational graphic design processes and the role of emerging technology in design practice.

“We were struck by the way he bridges the gap between design and programming,” said Nan Goggin, the director of the School of Art and Design. “During his interviews, our students really responded to his discerning comments on their work at their critique session with him. I think we’ll see some really interesting research from him.”

Why Illinois? “Not only was I attracted to the diverse and extensive resources of the university as a whole, I was very excited about the chance to accept a position where I would have the opportunity to contribute something unique to and desired by my department,” Tober said. “The hiring process also afforded me insight into the curiosity of my new colleagues – something that I anticipate will play a role in Illinois being a productive work environment for myself.”

photo by L. Brian Stauffer
No mail on Saturday?

A Minute With ...™

No mail on Saturday? Economist Seung-Hyun Hong

The U.S. Postal Service is looking to close about 3,700 post offices as early as January. Is this a good move?

By Liz Ahlberg

Building blocks for simple synthesis of complex molecules

Assembling chemicals can be like putting together a puzzle. UIUC chemists have developed a way of fitting the pieces together to more efficiently build complex molecules, beginning with a powerful and promising antioxidant.

Led by chemistry professor Martin Burke, the team’s research was featured in a cover story in the chemistry journal Angewandte Chemie.

Burke’s group is known for developing a synthesis technique called iterative cross-coupling that uses simple, stable chemical “building blocks” sequentially joined in a repetitive reaction. With more than 75 of the building blocks available commercially, pharmaceutical companies and other laboratories use ICC to create complex small molecules that could have medicinal properties.

“There’s pre-installed functionality and stereochemistry, so everything is set in the building blocks, and all you have to do is couple them together,” said graduate student Seiko Fuji, the first author of the paper.

However, ICC has been limited to only molecules with one type of polarity. Now, the group has developed reverse-polarity ICC, which allows a chemist to optimize the ICC process to match the target molecule’s electron distribution. The reversal in polarity enables a whole new class of building blocks, and researchers can synthesize molecules more efficiently and even construct molecules that standard ICC cannot.

For example, in the paper, the group used the new method to make synechoxanthin, a molecule first isolated from bacteria in 2008 that shows great promise as an antioxidant. Studies suggest that synechoxanthin allows the bacteria to produce it and thrive in highly oxidative environments.

“We as humans experience a lot of oxidative stress, and it can be really deleterious to human health,” said Burke, who also is affiliated with the Howard Hughes Medical Institute. “It can lead to diseases like cancer and attherosclerotic and neurodegenerative disorders. Evidence strongly suggests that synechoxanthin is a major part of the bacteria’s solution to this problem. We’re excited to ask the question, what can we learn from the bug? Can it also protect human cells?”

Studies on the activity of synechoxanthin have been limited by the difficulty of extracting the molecule from bacterial cultures. Burke’s group successfully developed a method from a mere three types of readily available, highly stable, non-toxic building blocks. Thanks to the ease of ICC, they can produce relatively large quantities of synechoxanthin for study as well as derivatives to test against the natural product.

“Because this building-block-based design is inherently flexible, once we’ve made the natural product, we can make any derivative we want simply by swapping in one different building block, and then using the reverse-polarity ICC to snap them together,” Burke said. “That’s where synthetic chemistry is so powerful. Oftentimes, the cleanest experiment will require a molecule that doesn’t exist, unless you can piece it together.”

Researchers can also use the method to synthesize molecules that have been “tagged” with a fluorescent or radioactive dye to make it easier to study the molecule and its activity. For example, Fuji next plans to synthesize both synechoxanthin and its apolar derivative with tags so that NMR imaging can reveal its location and orientation within a cell’s membrane, possibly providing clues to its activity.

“After we have all these molecules in hand, we’re really excited to test the antioxidant activity of them in a model membrane,” Fuji said.

The National Institutes of Health and the Howard Hughes Medical Institute supported this work.

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Narcissism may benefit the young, researchers report

By Diana Yates
Life Sciences Editor

We all know one, or think we do: the person whose self-regard seems out of proportion to his or her actual merits. Popular culture labels these folks “narcissists,” almost always a derogatory term. But a new study suggests that some forms of narcissism are— at least in the short term—beneficial, helping children navigate the difficult transition to adulthood.

The study appears in the journal Social Psychological and Personality Science.

“Most people think of narcissism as a trait that doesn’t change much across the lifespan,” said postdoctoral researcher Patrick Hill, who conducted the study with UI psychology professor Brent Roberts. “But a lot of recent studies have shown that the developmental trajectory of narcissism goes upward in adolescence and what we call emerging adulthood— the late teens and early 20s, and then typically declines.”

This reduction in narcissistic traits coincides with a decline in their usefulness, the researchers found. Hill and Roberts surveyed 368 undergraduate college students and 439 of their family members to get a picture of the narcissistic traits of the students and of their mothers. (There were enough mothers but not other relatives in the study to provide a robust sample size for analysis.)

“We looked at three different forms of narcissism,” Hill said. The first, an inflated sense of leadership or authority, is the belief “that you know a lot and people should come to you for advice,” he said. The second is “grandiose exhibitionism,” being pompous, wanting to show off, and having an exaggerated sense of one’s capabilities and talents. The third is a sense of entitlement and a willingness to exploit others for personal gain.

In the study, young people who were high in the leadership and grandiose exhibitionism forms of narcissism were not generally judged to be neurotic, but they and their narcissistic mothers were more likely to be viewed as low in “agreeableness.” These negative judgments, particularly of older adults, “could have quite interesting negative ramifications for people’s circumstances in middle and old age if they retain this rather grandiose sense of self,” Roberts said. “This study continues a line of research that shows that there is a fundamental developmental shift in both the amounts of narcissism that people have and also in the meaning of it as people age,” Roberts said. An exaggerated belief in one’s own capabilities and prospects may help young people “navigate adolescence and the turmoil involved in trying to find a sense of identity,” he said. Later in life, however, those same traits “appear to be related to less life satisfaction and a poorer reputation.”

Novel lighting up the literary atmosphere

By Dusty Rhodes
Arts and Humanities Editor

A novel by UI creative writing professor Alex Shakar already was generating glowing reviews even before it was released Aug. 23.

Vogue called the novel “wonderfully corrosive satire” and included “Luminarium” among a mere half-dozen late-summer recommended reads. The Chicago Tribune said the book “fizzes with ideas, social concerns, and metaphysical splendor” and called it “encompassing, car- ing, provocative, and funny.” Publisher’s Weekly, in a starred review, called Shakar’s prose “sharp and hilarious,” concluding that “this radiant work leads you from the unreal to the real so convincingly that you begin to let go of the distinction.”

Published by Soho Press, the novel follows high-tech entrepreneur Fred, whose identical twin and erstwhile co-CEO lies comatose in a research hospital. Fred’s quest for spiritual comfort takes him from an experimental treatment in the neural studies department at New York University to an Orlando military/entertainment complex on a journey that the Tribune said “astutely dramatizes moral and spiritual dilemmas catalyzed by the frenetic post-9/11 cyber age.”

Charting the transformation of the night, from fear to embrace

By Craig Chamberlain
Social Sciences Editor

Darkness truly ruled the night in the Europe of 1500. People feared almost everything about the hours after sunset, says UI historian Craig Koslofsky.

Artificial light was limited and the night was a time of real and imagined danger, of evil, demons and suspect activity, a "primal force" over which people had little control, Koslofsky says. Cities teemed with nightlife, but all of it was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectable men, and especially was suspect, and "not a place for respectable women, to ever respectful
Stink bugs a threat to farmers, smelly guests for homeowners

By Sharita Forrest
News Editor

The brown marmorated stink bug – scientific name Halyomorpha halys – has been found in four Illinois counties and could be a major threat to fruit, vegetable and agronomic crops if it proliferates.

First detected in Cook County last fall, several brown marmorated stink bugs were found in moving boxes at a Kane County homeowner in January. Residents in Champaign and McLean counties found single specimens in May, said Kelly Estes, state survey coordinator with the Illinois Cooperative Agricultural Pest Survey Program at the UI.

“We’re really just starting to find them in Illinois,” Estes said. “Detection is key. We want to monitor where they’re at so we can document their spread.”

Native to China, Japan, Korea and Taiwan, the brown marmorated stink bug was first detected in the U.S. in Allentown, Pa., in 1998. Since then, the bug has migrated to 33 states, including all states east of the Mississippi River, and has been seen as far north as Wisconsin and Minnesota and as far west as California and Oregon.

The voracious insect feeds on more than 300 crops, including fruits, vegetables, soybeans, corn, cotton, ornaments and woody trees. Unlike many other insects, however, the brown marmorated stink bug feeds all through the growing season.

The bugs use their piercing and sucking mouthparts to penetrate immature soybean pods and corn husks and feed on developing seeds and corn kernels. Sunken, discolored areas on fruit, with corky areas beneath the skin, may indicate that brown marmorated stink bugs have been feeding.

With no natural predators in the U.S. and a tolerance for insecticides, the brown marmorated stink bug poses significant management challenges for farmers. In the mid-Atlantic states, populations of the insects have grown explosively over the past several years, causing “serious economic injury to the peach, apple and Asian pear” crops during 2009. The bugs ruined about half of Pennsylvania’s peach crop last year.

Pyrethroids – synthetic insecticides that are chemically similar to naturally occurring insecticides derived from chrysanthemums – have been used, but results have been mixed, said Michael Gray, a professor of crop sciences and an assistant dean in the College of Agricultural, Consumer and Environmental Sciences at Illinois.

“In many cases, the necessary residual activity and effectiveness have been lacking, requiring additional treatments,” Gray said. “In some instances, use of older chemicals, such as organophosphate insecticides, has resulted in better control. There are obvious tradeoffs, including potential negative environmental consequences and human health and safety concerns with the use of organophosphates.”

The bugs pose no danger to humans, other than emitting a foul odor when crushed or sucked up by a vacuum cleaner. Caution around basements, light fixtures and trim may prevent the bugs entering through basements, drop ceilings and attic.

“More than likely, homeowners will be the ones to find them,” Estes said. “As crops and plants start to turn brown in the fall, these insects are going to look for a place to over-winter, and they’ll move into houses, garages and barns and just become a real pain to homeowners.”

Although the brown marmorated stink bugs are very similar to the brown stink bugs (Euschistus servus) already found in Illinois, Estes said the brown marmorated bugs are slightly larger, about two-thirds of an inch long, have bodies that are netted brown and shaped like shields, and have black and white bands on the edges of their abdomens, white stripes on their antennae and faint white banding on their legs.

Farmers are urged to be especially vigilant this season scouting out stink bug species, including the redshouldered (Thysanolaena fallax) already found in Illinois and the redbanded (Pocidromus gutulata) Westwood stink bugs. Redbanded stink bug populations have been found in several states, including Arkansas, Missouri and Tennessee, with economic infestations reported in Louisiana. So far, there has been no official confirmation that either of these species has migrated to Illinois.

“We’re always looking for them,” Estes said. “If somebody thinks they have one, they are more than welcome to send me a photo or even a specimen to look at. I’ve received several (specimens) this summer, but none of them have been brown marmorated stink bugs, thank goodness.”

Specimens, in crush-proof containers such as pill bottles and check boxes, can be sent to Estes at the Illinois Cooperative Agriculture Pest Survey, 1816 S. Oak St., Champaign, IL 61820. Email photos to kcook8@illinois.edu for preliminary screening.

**ON THE WEB**

[www.inhs.illinois.edu/research/CAPS/](http://www.inhs.illinois.edu/research/CAPS/)

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**PHOTONIC CRYSTAL, CONTINUED FROM PAGE 1**

with the Frederick Seitz Materials Research Laboratory at Illinois.

“Gallium arsenide wants to grow as a film on the substrate from the bottom up, but it runs into the template and goes around it. It’s almost as though the template is filling up with water. As long as you keep growing GaAs, it keeps filling the template from the bottom up until you reach the top surface.”

The epitaxial approach eliminates many of the defects introduced by top-down fabrication methods, a popular pathway for creating 3-D photonic structures. Another advantage is the ease of creating layered heterostructures. For example, a quantum well layer could be introduced into the photonic crystal by partially filling the template with GaAs and then briefly switching the vapor stream to another material.

Once the template is full, the researchers remove the spheres, leaving a complex, porous 3-D structure of single-crystal semiconductor. Then they coat the entire structure with a very thin layer of a semiconductor with a wider bandgap to improve performance and prevent surface recombination.

To test their technique, the group built a 3-D photonic crystal LED – the first such working device.

Now, Braun’s group is working to optimize the structure for specific applications. The LED demonstrates that the concept produces functional devices, but by tweaking the structure or using other semiconductor materials, researchers can improve solar collection or target specific wavelength for metamaterial applications or low-threshold lasers.

“From this point on, it’s a matter of changing the device geometry to achieve whatever properties you want,” Nelson said. “It really opens up a whole new area of research into extremely efficient or novel energy devices.”

Researchers at Illinois, led by Paul Braun, a professor of materials science and engineering and of chemistry, have demonstrated the first optoelectronically active 3-D photonic crystal.
Illinois researchers testing the water for bioenergy crops

By Liz Ahlberg
Physical Sciences Editor

Many energy researchers and policy advocates are excited about the prospect of gaining more efficient large-scale biofuel production by using large grasses like miscanthus or switchgrass rather than corn. They have investigated the yields, land use, economics and more, but one key factor of agriculture has been overlooked: water.

“While we are looking for solutions for energy through bioenergy crops, dependence on water gets ignored, and water can be a significant limiting factor,” said Praveen Kumar, the Lovell Professor of civil and environmental engineering at the U of I. “There are many countries around the world that are looking into biofuel energy, but if they are adopting these (large grasses) into their regular policy, then they need to take into account the considerations for the associated demand for water.”

Kumar led a study, published this week in the Proceedings of the National Academy of Science Early Edition, detailing effects to the hydrologic cycle of large-scale land conversion, both now and as growing conditions change in the future. Early Edition, detailing effects to the hydrologic cycle of large-scale land conversion, both now and as growing conditions change in the future.

Thirsty foliage Bioenergy crops such as switchgrass and miscanthus have very dense foliage which has a different effect on hydrology than traditional agricultural crops. They lose more water through transpiration, causing them to pull more water from the soil, thereby reducing both soil moisture and runoff.

Miscanthus and switchgrass have a very different above-ground foliage structure from corn – more surface area and much denser growth. This is good for maximizing the amount of biomass that an acre of land can produce, but it also increases water use. Miscanthus and switchgrass intercept light and rain differently from corn, and lose more water through transpiration, causing them to pull more water from the soil. The result of large-scale adoption would be a reduction in soil moisture and runoff, but an increase in atmospheric humidity.

“All these together account for the changes in hydrology, just from land-use change,” said Kumar, who also is affiliated with the department of atmospheric sciences. “Then, if you impose further – higher carbon dioxide in the atmosphere, higher temperatures and changes in rainfall patterns – they add further modulation to the water use pattern.”

Kumar’s group used a sophisticated model it developed to study crops’ time sensitivities to temperature and carbon dioxide changes in the atmosphere. The model incorporates the acclimation response of plants to changing climate. Using their predictive model, the researchers found that the net water use will increase further as a result of rising temperatures and carbon dioxide. Higher levels of carbon dioxide alone make the plants more water-efficient, since their pores are open less time to absorb carbon dioxide. However, rising temperatures counteract this effect, as the plants will transpire more while their pores are open, losing more water than they save.

This additional water loss compounds the increase in water usage from land conversion. In the U.S. Midwest, rainfall should remain sufficient to meet water demand, according to Kumar. However, areas that rely on irrigation could find they have less water to meet higher demands, which could increase the net cost of large-scale land conversion and put pressure on already stressed water resources.

“If we’re going to solve energy problems through bioenergy crops, there are collateral issues that need to be considered,” Kumar said. “Water is a significant issue. It’s already a scarce resource across the globe, and the need for it is only going to increase. The cost of that should be factored in to the decision making.”

Graduate student Phong V.V. Le and former postdoctoral researcher Darren Drewry (now at the Max Planck Institute in Germany) were co-authors of the paper.

The National Science Foundation and the Vietnam Education Foundation supported this work.

UI and KTH Royal Institute of Technology form alliance

The chief executive officers of the U of I and KTH Royal Institute of Technology in Stockholm have agreed upon a long-term strategic alliance designed to benefit students and faculty members at both institutions. The agreement on academic and research cooperation seeks to serve and engage the civic communities and economic interests of Sweden and the state of Illinois.

KTH and the U of I are among the world’s pre-eminent public research universities. Faculty members and administrators from the two institutions have identified a broad range of common research areas and educational activities, as well as public engagement and corporate relations efforts. UI Interim Vice President and Chancellor Bob Easter and Peter Gudmundson, the president of KTH, envision a sustained partnership with substantial benefits for the two universities.

“Our emerging strategic partnership with KTH is a key component of our broader international engagement,” Easter said. “We’re also looking forward to leveraging KTH’s existing relationships and shared research initiatives with Stockholm University and Karolinska Institutes to broaden this alliance. This will create a consortium of outstanding institutions with considerable strengths over a wide range of academic disciplines.”

“This long-term cooperation with the renowned University of Illinois is an important cornerstone of KTH’s continuing international development,” Gudmundson said. “At the same time, the Stockholm region is one of the most technologically innovative in the world, and our extensive research and education network can help strengthen the U of I’s programs.”

The cooperation with KTH and engagement in Sweden compose the flagship project of the new Illinois Strategic International Partnerships initiative. The initiative seeks to develop a network of sustained, multidisciplinary linkages with peer institutions around the world to benefit the core missions of research, education, public service and economic development among all partners.

More information about the initiative and INSPIRE – the Illinois-Sweden Program for Educational and Research Exchange – may be found online.

ON THE WEB
http://ilint.illinois.edu/partnerships/ISIP.html
http://inspire.illinois.edu

Ad removed for online version
Study: Gangs, violence rob inner-city kids of physical activity

By Sharita Forrest
News Editor

Many of the adults living in Chicago’s South Lawndale neighborhood are first-generation immigrants, raised in Latin American communities where people feel close to nature, leave their doors wide open to their neighbors and the outdoors is an extended space for socializing with the community.

However, the fear of crime has dramatically changed that in South Lawndale, also known as Little Village. One mother’s rules, posted on the refrigerator for reference when her children are home alone in the apartment, include the admonition, “Never go outside.”

The largest Hispanic neighborhood in metropolitan Chicago, Little Village is an area plagued by high crime rates and gang violence. Although the community comprises only 4.4 square miles, police recorded 2,625 crimes there during 2006, including 1,222 thefts, 268 robberies, 22 criminal sexual assaults and 11 murders.

Monika Stodolska and Kimberly Shinew, professors in the department of recreation, sport and tourism, a unit in the College of Applied Health Sciences at the UI, have conducted several studies with Little Village residents, examining recreational patterns among Latinos, how they use parks and trails, and the impact of culture on physical activity.

To explore how children’s recreational activities are constrained by the neighborhood’s crime, the researchers surveyed and interviewed Latino students at two of the neighborhood’s middle schools – John Spry Elementary Community School and Gerald Delgado Kanoon Magnet School – and two of its high schools – Community Links High School and World Language Academy High School – between May and December 2010. The children that participated in the study ranged in age from 11-18.

“What was unique about our study was that we looked through the eyes of the children and were able to tap into their perceptions of crime, how they experience it, what they miss in their community and how they try to protect themselves,” said Stodolska, who is the director of the University Research Laboratory at Illinois and led the study. “We looked at different environments where kids could be involved in physical activity or use public resources, including parks, streets and alleys, schools and the surrounding areas. The crime rates in those areas were just alarming.”

“Most of the adolescents had witnessed people being assaulted and killed, gang shootings, fights, carjackings, drug use and gang activity in the area,” according to the report, which the researchers furnished to officials at the schools and in city government. “Their family members and friends were threatened with violence frequently. Children recounted being shot while playing soccer in front of their school, being beaten by gang members while walking to school, and being fearful of gang members wanting to join their basketball and soccer games.”

The few parks available in the community are locked at night, and many children said they avoided them or were forbidden by their parents to use them.

Residents also were cut off from enjoying a nearby pool and other facilities because they had to cross gang boundaries to get there.

“A lot of children mentioned that it became very dangerous to stay around school after 3 p.m.,” Stodolska said. “The high schools organize a lot of interesting after-school activities but children don’t want to participate because they don’t want to travel through the territory after dark.”

Fear of crime precluded some children from participating in any leisure activities outside their homes.

Children viewed the areas surrounding their homes as being safer, and when they did play outdoors, younger children favored games such as tag that wasn’t site-specific, could be played close to home and could be easily moved to safer locations if danger loomed.

Kids felt safest in facilities such as the Boys and Girls Club, where activities were indoors, organized and supervised by adults and monitored by security cameras.

Children were pretty much in agreement about what might be done to help them feel safer participating in recreational activities – more police patrolling the streets, the parks and the schools after hours – and more security cameras monitoring activity.

Older children’s recreational activities were constrained more than younger children’s because the older youth were more aware of crime and its consequences; they also were more likely to be targets of serious crimes because gang members viewed them as threats, Stodolska said.

As with the previous studies, the researchers found that Latino children who were more assimilated to U.S. culture engaged in less physical activity and outdoor recreation and had less healthy eating patterns than their peers.
Exploring a health care system of the future

By Mike Helenhali
Assistant Editor

What doctor could have envisioned an era of nearly limitless patient information, in which treatments are based on exacting patient subsets culled from obs
sion, nonstop observation?
Hippocrates, for one, followed by a host of doctors and scientists over time who lacked one tool that would have turned their visions into diagnostic reality: computer technology.

In a new book he co-wrote, Bruce R. Schatz, a professor and the head of medical informatics at the University of Illinois at Urbana-Champaign, follows the process of diagnostic observation throughout history – then applies those same investigative concepts to the technology of today in a call for a health-system revolution. Published by Springer, “Healthcare Infrastructure: Health Systems for Individuals and Populations,” is part of a series on health informatics.

“The contribution of the book is to describe the effective match between the major problems of medicine and the major solutions of engineering, laying out the available structures in such a way that the pathway is clear,” said Schatz, also a faculty member in the UI Institute for Genomic Biology and in the department of computer science.

“The book is the culmination of Schatz’s 10 years of developing graduate course work for the university’s colleges of Medicine and of Engineering. In addition to his own work, the book includes research and observations from a host of graduate students and gradu
ate assistants from across several academic fields. UI professor and practicing surgeon Dr. Richard B. Berlin is the co-author.

While many of the technologies needed to make Schatz’s “health care system of the future” already exist, none yet have been merged to make his vision of a worldwide, interconnected health information-gathering and -observing system a reality.

His hope is the book will form those links necessary between medical and engineering science, or from the medicine side such as medicine and public health,” Schatz said. “We especially hope that systems design-ers in industry will study it carefully, including both information systems and health sys-
tems professionals. It should also be essential reading for policy staffs in government, since the new system must be done more for the imminent transition to a technol-
ogy-based health care system takes place.

He said the natural evolution to paperless records is a positive development – but in his vision it will take time, investment and a new way of thinking to change the status quo – barriers Hippocrates would surely have recognized.

“The research is to be health care using existing technologies in appro-priate ways,” Schatz said. “People are widely in despair think-
ing there is no hope, but this is not true,” Schatz said. “There is a solution to health care infrastructure consisting broadly of health and deeply of medical informa-
tion, which is recorded through personal sensors, analyzed on supercomputers, commu-nicated by internetworks and accessed through personal computers,” he says in the book.

The book is more prescient now – as the debate over health care has taken cen-
ter stage in the United States – than it was 10 years ago when Schatz was completing his groundbreaking work on the potential applications of Web browsers and digital libraries.

Schatz is unsure how long it will be be-
fore the new system transition to a technol-
ogy-based health care system takes place. He said the technology is otherwise occupied with a different chemical.

The evidence also suggests that honey bees were “preadapted” to detoxify pyre-thrin pesticides, Berenbaum said. Pyre-
throids are similar in structure to naturally occurring defensive compounds, called pyre-thrin, produced by some flowering plants. Honey bees have likely had a long history of contact with pyrethrins, which are found even in some flowers in the daisy family. It appears that the same enzymes that helped the honey bees detoxify the pyre-
thrin in nature may also help them toler-
ate this relatively new pesticide exposure.

The new findings should enhance efforts to develop mite control methods that are even less toxic to bees, Berenbaum said.

One of the keys to Schatz’s health-sys-
tem overhaul is the ability for patients to monitor themselves and post results online, steps that could presumably provide more statistical information for research-
ers to analyze and allow doctors to monitor progress without inordinate office visits or procedures. Schatz envisions patients using mobile phones to self-monitor.

What is needed is a vast backbone, a health care infrastructure consisting broadly of health and deeply of medical information, which is recorded through personal sensors, analyzed on supercomputers, communicated by internetworks and accessed through personal computers,” he says in the book.

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ate assistants from across several academic fields. UI professor and practicing surgeon Dr. Richard B. Berlin is the co-author.

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This suggests that these honey bee cy-
tochromes P450s are not particularly spe-
cialized,” Berenbaum said. “That raises the possibility that a nontoxic dose of tau-
fluvalinate may become toxic if an enzyme that is principally involved in its detoxifica-
tion is otherwise occupied with a different chemical.”

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Small changes produce big results for dancers

By Dusty Rhodes
Arts and Humanities Editor

A new book co-written by UI dance professor Rebecca Nettl-Fiol presents what at first glance seems like a counterintuitive concept for people whose work necessarily requires movements large enough to be seen by the back row of a theater. The book shows dancers they can dramatically improve their artistry through the Alexander Technique – a system of tiny, subtle movements of dance and Alexander Technique. The book, published by the UI Press, shows dancers they can dramatically improve their artistry through the Alexander Technique.
School of Art and Design
Register now for Saturday Art School
Prospective students may now register for the fall semester of Saturday Art School, a community art school taught by art education undergraduate and graduate students and faculty members in the School of Art and Design. Registration ends Sept. 9 or when classes are filled.

Classes will meet at the Art and Design building beginning Sept. 17 for nine Saturdays, followed by an exhibition of student work Nov. 28-Dec. 3 in the Link Gallery of the Art and Design building. The exhibition concludes with an open house from 10 a.m.-noon Dec. 3.

Cost for classes is $79 per student, ages 4 years 6 months through 18 years. Elementary classes meet from 9 to 10:30 a.m. or 11 a.m. to 12:30 p.m. Students in grades 6 to 8 and high school meet from 9 a.m. to noon in a studio format.

The fall curriculum offers new media experiences as well as opportunities to improve traditional media skills. Classes are offered for pre-kindergarten, kindergarten, grades 1-3, grade 4-5, grades 6-8 and high school (grades 9-12). For more information, visit http://artschool.illinois.edu or contact Melissa Madsen at 217-333-0855 or email art-enrichment@illinois.edu.

Center for Advanced Study
Poetry readings to be Sept. 13, 14
The Center for Advanced Study will kick off its 2011-2012 initiative, Sovereignty and Autonomy in the Western Hemisphere, with poetry readings Sept. 13 and 14.

Ines Hernandez-Avila (Nex peor/Tejana) and Heid Erlich will read at 4 p.m. on Sept. 13 in Spurlock Museum’s Knight Auditorium.

Hernandez‐Avila is a professor of Native American Studies at the University of California at Davis, where she also directs the Chicana/Latina Research Center. Erlich, a member of the Turtle Mountain Band of Ojibway, is a professor of American literatures and cultural studies, with emphasis on indigenous literatures and social movements.

His teaching and research focus on contemporary Latin American literatures and cultural studies, with emphasis on indigenous literatures and social movements. He is the author of four poetry collections and is the 2009 winner of the all-girls school who was beaten to death by her students. The incident was one of the first to ignite the Cultural Revolution in China.

Gary G. Xu, a UI professor in East Asian languages and cultures, will introduce the film and lead a post-screening discussion on opening night. An encore screening will be at 7 p.m. Sept. 8 at the Champaign Public Library with EACL postdoctoral student Mei-Hsuan Chiang leading a post-screening discussion.

Other films in the series:

“Bhutan – Taking the Middle Path to Happiness,” an Emmy award-winning film about the Himalayan kingdom (Oct. 4 at Spurlock; Oct. 11 at the Urbana Free Library)

“Who Killed Chea Vichea?” about the unsolved murder of the president of Cambodia’s free-trade union (Nov. 3 at the Champaign Public Library; Nov. 8 at Spurlock)

“Wings of Defeat” presents the seldom-heard stories of surviving kamikaze pilots, now in their 80s, who flew suicide missions for Japan in World War II. (Dec. 8 at the Urbana Free Library)

AsiaLENS offers free public screenings of recent films addressing issues of contemporary life in Asia, organized by the Asian Educational Media Service in collaboration with the Spurlock Museum. All AsiaLENS screenings start at 7 p.m. with introductions by local experts who lead audiences in post-screening discussions.

AEMS is a program of the Center for East Asian and Pacific Studies at the UI. Complete information on the AsiaLENS series can be found online.

For more information, call 217-333-9597 or email aems@illinois.edu.

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Premier guitar festival kicks off at Krannert Center Sept. 8

A n assortment of the globe’s greatest musicians and guitar manufacturers will perform next weekend (Sept. 8 – 10) at Ellnora: The Guitar Festival. This biennial mixed-genre event will feature more than 30 performers drawing from guitar traditions rooted in the U.S., Canada, China, England, Spain and Mali.

Most events will take place on the UI campus at Krannert Center for the Performing Arts. The festival includes nine individually ticketed events, plus at least a dozen free shows. Festival passes also are available.

This year’s Ellnora roster is headed by Luther Dickinson, a member of the North Mississippi Allstars and The Black Crowes, and one of Rolling Stone’s “new guitar gods.” Dickinson has been selected to serve as the festival’s artist-in-residence and will collaborate on stage at 4 p.m. Sept. 9 with Grammy and W.C. Handy Award-winning contemporary bluesman Alvin Youngblood Hart and pedal steel guitarist Robert Randolph. Randolph is one of Rolling Stone’s 100 Greatest Guitarists of All Time, as are English folk-rockerlegend Richard Thompson and Sonic Youth member Lee Ranaldo, who also will perform at Ellnora.

Grammy-nominated guitarist Adrian Belew will deliver the keynote address at 3 p.m. Sept. 9. Described by Frank Zappa as the musician who “reinvented the electric guitar,” Belew has played with King Crimson, the Talking Heads, David Bowie and Nine Inch Nails. He will discuss his life in music, the incubation of his sound while living in Champaign-Urbana, and the nature of artistic exploration.

“Living in C-U was a very creative time for me,” Belew said. “I loved being in a community based on education and youth, and to perform at Krannert Center, a place that has always been synonymous with excellence, will be a pleasure.”

Belew also will present a free open-air performance of his newest solo show, “Painting with Guitar,” at 8:30 p.m. Sept. 10 in the center’s outdoor Amphitheatre. The movie “e” for orchestra, showcasing film-based projects: Bill Frizzle, who will perform the stirring score to Bill Morrison’s film “The Great Flood”; and Marc Ribot, who will accompany the bittersweet 1921 Charlie Chaplin film “The Kid.” Ribot also will lead a Cuban music tribute in a free set with his band Los Cubanos Postizos.

The festival, which bears the name of its visionary founder, Ellnora Krennert, was originally known as the Wall to Wall Guitar Festival before being rechristened Ellnora in 2009. The event is organized by Krannert Center director Mike Ross and his staff, in collaboration with curator and artistic advisor David Spelman, who also is founder/director of the New York Guitar Festival.

Local food vendors will be set up in a tented area on Krannert’s west terrace for the opening night party on Sept. 8, and throughout the festival. Krannert’s interior café will be transformed into a coffeehouse. The Studio Theatre, at the north end of the center, will serve as the official festival store, with guitars, guitar paraphernalia, and meet-and-greet sessions with the artists.

A full schedule is available online. Tickets are available on the Krannert Center website.

ON THE WEB ellnoraguitarfestival.com
krannertcenter.com

A report on honors, awards, appointments and other outstanding achievements of faculty and staff members

EDUCATION

Hua-Hua Chang, a professor of psychology and of educational psychology, has been elected President of the Psychometric Society for 2011-12. The society is an international nonprofit professional organization devoted to the advancement of quantitative measurement practices in psychology, education and the social sciences.

FAA

Ronald M. Romm, a professor of trumpet, has been honored by the International Trumpet Guild with its highest honor, the ITG Honorary Award. The award recognizes individuals who have made extraordinary contributions to the art of trumpet playing through performance, teaching, publishing, research and/or composition. Romm will be honored at the organization’s next conference in May 2012. The guild is dedicated to promoting communication among trumpet players around the world and to improve the artistic level of performance, teaching and literature associated with the trumpet.

LAS

Harry C. Triandis, a professor emeritus of psychology, has won a Career Contribution Award from the Society for Personality and Social Psychology. The award honors a scholar who has made major theoretical and/or empirical contributions to social psychology and/or personality psychology or to bridging these areas. Recipients are recognized for distinguished scholarly contributions across long and productive careers. Triandis will receive the award at the society’s annual meeting in January in San Diego. The society is the largest organization of social and personality psychologists in the world.

SOCIAL WORK

Alicia Beck, an assistant dean for advancement in the School of Social Work, will receive the Central Illinois Business magazine’s Forty Under 40 award. Beck was selected based on her achievements, leadership ability, expertise in her field and community involvement. Beck and other award recipients will be featured in the October issue of the magazine and honored at a luncheon.

UNIVERSITY LIBRARY

Paula Kaufman, the Juanita J. and Robert E. Simpson Dean of Libraries and university librarian, has been selected as the Illinois Academic Librarian of the Year for 2011 by the Illinois Association of College and Research Libraries. Kaufman will receive the award at the Illinois Library Association awards luncheon during the association’s annual conference in Rosemont, Ill. The award is sponsored by the Consortium of Academic and Research Libraries in Illinois and includes a $500 award.

Kaufman’s nominators cited “her extraordinary leadership in Illinois, her vision and strategic thinking for the future of libraries, and the generosity with which she shares her inspirations” as among the reasons that she should receive the award.
Carr Reading Series begins Sept. 14

By Dusty Rhodes
Arts and Humanities Editor

A n author described by *The New York Times* Book Review as “a writer for all readers” will open the annual Carr Reading Series. Rolando Hinojosa-Smith – who earned his doctorate at the UI in 1969 and is the Ellen Clayton Garwood Professor of Creative Writing at the University of Texas in Austin – is best known for “Klail City Death Trip,” which tells the stories of the residents of a fictional Lower Rio Grande Valley county in a series that so far numbers 15 volumes. Besides novels, Hinojosa-Smith also writes short stories, poetry and essays, in English and in Spanish. His work has been the subject of theses in six foreign countries, and his “Klail” series is the topic of an entire graduate-level course at his school’s rival institution, Texas A&M University.

Hinojosa-Smith will read on Sept. 14. All readings are free and open to the public, and will take place at 4:30 p.m. at the Authors Corner in the Illini Union Bookstore.

The Carr Reading Series will continue with Dean Rader, whose debut poetry collection, “Works & Days,” won the 2010 T.S. Eliot Poetry Prize. He’s also the author of three scholarly books, most recently “Engaged Resistance: American Indian Art, Literature and Film From Alcatraz to the NMAI,” published this year by the University of Texas Press. Rader is a professor at the University of San Francisco, where he recently received the school’s Distinguished Research Award. Rader will present a reading on Sept. 28.

The series continues on Oct. 17 with humorist John Warner, editor-at-large for Msweeney’s Internet Tendency and author or co-author of four books, including “My First Presidentialcy: A Scrapbook by George W. Bush” and “Fondling Your Muse: Infallible Advice From a Published Author to the Writerly Aspirant.” His first novel, “The Funny Man,” is scheduled for publication Sept. 27 by Soho Press. Warner graduated from the UI with a bachelor’s degree in creative writing in 1992.

Two authors will read on Oct. 19. Andrew Ervin, whose literary criticism has appeared in the New York Times, Chicago Tribune, Philadelphia Inquirer and San Francisco Chronicle, will read from his first novel, “Extraordinary Renditions,” published in 2010. Andy Frazee, who has won awards for his poetry and is now a postdoctoral fellow, teaching business communication at the Georgia Institute of Technology, also will read. Both Ervin and Frazee received master’s of fine arts degrees at the UI.

The Carr Reading Series is made possible by a gift from Robert J. and Katherine Carr. Hinojosa-Smith’s appearance is sponsored by the English department’s Latino Studies. Rader’s reading also is supported by American Indian Studies.

Elizabeth D. Barnes, 87, died Aug. 22 in Rogers, Ark. Barnes was retired from the UI Library. Memorials: Shar- ing and Caring of Benton County, P.O. Box 2668, Bentonville, AR 72712.

Margaret Rose “Peggy” Miner, 80, died Aug. 23 at Provena Covenant Medical Center, Urbana. Miner was a telephone operator at the UI. Memorials: Champaign County Humane Society, 1911 E. Main St., Urbana, IL 61802-2857.

Margy Ellen McKeon, 81, died Aug. 14 at Carle Foundation Hospital, Urbana. McKeon retired from the UI as a supervisor in the Purchasing Division after 28 years.


Lola Genevieve Myers, 92, died Aug. 18 at Heartland Healthcare Center, Paxton. Myers was a registered nurse at the UI.

Artice Theresa Sibley, 78, died Aug. 24 at Carle Foundation Hospital, Urbana. She was a cook at the UI for 11 years.


Memorial Service A memorial service for Anita Feller will be at 1 p.m. Sept. 9 on the third floor of the Levis Faculty Center Fell er, who had been a lecturer in the department of accountancy since 1990, died July 31.

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sociated with news and information and all sorts of loose-lipped political and theological talk,” Koslofsky said. As a result, some rulers attempted to close them down.

But this conversational culture, early in the Enlightenment, also chipped away at many of the fears and beliefs still associated with the night, Koslofsky said. “All the things that are intensely associated with darkness in Western culture are becoming a little less scary,” he said.

Where did those fears and negative associations go? Koslofsky sees some evidence that they were in some ways transferred to race, as the African slave trade intensified around 1650 and race grew ever more important in European efforts at colonization. That’s a connection he hopes to explore in his next book.
New research offers pointers to keep exercise resolutions

By Diana Yates
Life Sciences Editor

Sticking with an exercise routine can be tough, but there are strategies to help you overcome the obstacles that invariably arise. A key to success is having the confidence that you can do it, researchers report.

A new study explores how some cognitive strategies and abilities influence this “situation-specific self-confidence,” a quality the researchers called “self-efficacy.”

“You can apply the concept of self-efficacy to every single health behavior you can think of in many ways that really is what gets us through the day, gets us through the tough times,” said UI kinesiology and community health professor Edward McAuley, who led the research. “People who are more efficacious tend to approach more challenging tasks, work harder and stick with it even in the face of early failures.”

Those lacking self-efficacy often won’t even try to start a new routine, or will quit at the earliest sign of difficulty, McAuley said. “Almost 50 percent of people who begin an exercise program drop out in the first six months,” he said.

All is not lost, however, for those with low self-efficacy, McAuley said. Research has shown that there are ways to increase your confidence between tasks or goals. Remembering previous successes, observing others doing something you find daunting and enlistings others’ support can increase self-efficacy, he said.

In the new study, published in the American Journal of Preventive Medicine, McAuley and his colleagues were interested in the role self-regulatory strategies such as goal-setting, time management, self-monitoring and recruiting others for support increased study subjects’ participation in the program.

Participants were then randomly assigned either to a stretching, toning and balance program or a walking program that met three times a week for a year. Their self-efficacy was assessed after three weeks in the program.

The researchers found that some abilities and strategies did increase participants’ adherence to the exercise programs. Two executive function skills—the ability to multitask and to inhibit undesirable responses—significantly contributed to adherence by increasing self-efficacy, the researchers found. And more frequent use of self-regulatory strategies such as goal-setting, time management, self-monitoring and recruiting others for support increased study subjects’ participation in the program.

Other studies have shown that aerobic exercise such as walking improves brain function in older adults. Thus, participation in an exercise program is likely to enhance cognitive functions that raise self-efficacy, positively reinforcing a person’s ability to pursue his or her exercise goals, McAuley said.

McAuley also is a part-time faculty member of the Beckman Institute for Advanced Science and Technology. Collaborators on this study from the UI department of kinesiology and community health were postdoctoral researcher Sean Mullen and students Amanda Szabo, Siobhan White, Thomas Wójcicki, Emily Mauley, Neha Gothe and Erin Olson. Collaborators from the Beckman Institute were graduate research assistant Michelle Voss, postdoctoral researcher Kirk Erickson (now at the University of Pittsburgh), former doctoral student Ruchika Prakash (now at Ohio State University) and Beckman Institute director Art Kramer, who is a professor of psychology.

The National Institute on Aging funded this research.

CHILDHOOD OBESITY, CONTINUED FROM PAGE 1

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plemental Nutrition Assistance Program, or otherwise reduce its availability to people, that would increase the amount of stress that low-income families would face, which would then subsequently lead to increases in obesity,” he said.

According to Gundersen, programs such as SNAP play a vital role in the social safety net as well as in efforts to end obesity. “I really cannot stress how great of a program SNAP is,” he said. “It’s a fantastic program, and I think it can do a lot to help in our fight against obesity as it’s currently constructed.”

But there have been calls to restrict what SNAP recipients can purchase. For example, New York City recently proposed prohibiting children from purchasing sports drinks with their SNAP benefits. Gundersen views this development as setting a “dangerous precedent.”

“Ultimately, placing restrictions on what people can buy only discourage them from participating in the program because it stigmatizes the benefits,” he said. “The best way to reduce obesity isn’t to introduce more restrictions, but to expand SNAP as it’s currently structured.”

Since SNAP allows families to purchase more healthy foods than they would otherwise be able to, any further restrictions or cutbacks to the program would have a twofold effect, Gundersen says. “Reducing access to SNAP would increase stress, which leads to increases in obesity, but it also means that families wouldn’t be able to afford healthy foods and would subsequently have to purchase less healthy foods,” he said. “When thinking about these sort of policy considerations, we have to think about who bears the brunt of these cutbacks, because not only could they lead to more obesity, but also to more inequality.”

Gundersen says that while many families who are facing tough times may not be eligible for SNAP, which is only available to those below 130 percent of the poverty line, private food assistance networks can also play a key role in helping reduce food scarcity stress.

“People know that if they’re short on funds at the end of the month, they can go to their local food pantry and get some food,” he said. “So a lot of people may be ineligible for SNAP but are still facing a very stressful financial situation. Food banks really help those people, which in turn lowers stress and, by extension, obesity.”

As many families face financial hardship as a result of the sluggish economy, Gundersen says that public policymakers need to be aware of the relationship between stressors and childhood obesity, which has only become more pronounced as income-inequality has grown over the last three decades.

“If present trends of income inequality are maintained, and if people are stressed by this – and there is some evidence to suggest that they are, to the extent that it’s your position versus others in society, and not your absolute level of income – that, too, could lead to more obesity,” Gundersen said.

The study, published in the journal Obesity Reviews, was co-written by Duhita Mahatmya, Steven Garaszy and Brenda J. Lohman, all of Iowa State University.

The research was supported by the U.S. Department of Agriculture.