Those who perform in Foellinger Great Hall say ‘hear, here!’

By Dusty Rhodes
Arts and Humanities

The sound was softer than a whisper, but it carried farther than one might have imagined.

The music was exquisite, the acoustics were magnificent, and the hall was a sight to behold.

In a city known for its architecture and its blend of old and new, the Foellinger Great Hall is a testament to the beauty of music and its ability to bring people together.

Despite its size, the hall was intimate and warm, with every note being crisp and clear.

The musicians were clearly engaged, and the audience was equally impressed.

As the music reached a crescendo, the hall filled with an energy that was both electric and serene.

It was a moment that will be remembered for years to come.

The Foellinger Great Hall is a true treasure of the city, and its acoustic perfection sets it apart from other venues.

It is a place where music can truly come to life, and it is a testament to the power of art to bring people together.

The Foellinger Great Hall is a true gem, and it is a place that should be visited by anyone who appreciates music in all its forms.
Illinois partners with Coursera to offer online courses

By Mike Helenthal
Assistant Editor

The UI will offer seven online courses as part of an agreement announced July 17 with commercial online provider Coursera. The agreement establishes a partnership with the company’s nationwide massive open online course platform.

The Urbana campus was among a dozen universities announcing the partnership, the second such announcement by Coursera online course platform. The Urbana campus is working with the company to launch 43 free, non-credit courses through partnerships with various academic units.

The UI’s courses, each offered for five to 10 weeks, are in physical and earth sciences, economics/finance and computer science, and will be offered as early as Sept. 10. Summer offerings for 43 free, non-credit courses through partnerships with various academic units.

Two months ago, Urbana Chancellor Phyllis M. Wise formed a faculty committee to study a possible Coursera partnership. The committee presented its report to the chancellor July 16. Because of a contractual deadline, the agreement to participate in Coursera was signed before this discussion but after the SEC agreed to support the committee’s recommendation to join the initiative.

“The board is pleased to formalize and expand its role with the university to collaborate in providing the benefits of online education and public safety,” said Brent Fischer, board chair of the Urbana campus. The board approved the arrangement on June 12.

The Urbana campus assumed the role of vice chancellor for academic affairs on the UI in 1990 as a training and research institute, with the board and the university jointly guiding academic research on numerous law enforcement and educational initiatives.

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Decade of renovation puts Allerton back on track

Derek Peterson talks about Robert Allerton like he knew the man. He didn’t, but after six years caring for Allerton’s 100-year-old legacy – 80 acres of formal gardens where art reflects nature and nature reflects art – he’s hard to separate from the man behind the vision.

“I think everybody who works here feels some kind of a connection to him,” said Peterson, the associate director of Allerton Park and Retreat Center and a UI horticulture graduate. “We talk about Robert a lot; for some it’s his Mr. Peterson.”

And even when his name isn’t evoking, Allerton’s gardens’ maintenance staff, Allerton’s vision is.

The end result is a naturally cordoned place of escape and personal bridge to enlightenment.

“In a lot of areas you can really feel that enclosure he had in mind,” Peterson said. “He wanted it to be a place of inner search and discovery. After all this time, it still is.”

Allerton and John Gregg Allerton, Robert’s longtime companion and gardener, co- visionary, in 1946 donated the 1,500-acre property and mansion to the UI. The park’s mansion and gardens section has seen a multitude of uses since then, the most recent incarnation as a retreat center and site of countless weddings.

Peterson’s staff, which includes two full-time workers, five extra-help workers, a few dedicated volunteers, and a full-time natural areas manager, cares for the formal gardens. The mansion is maintained and managed separately by two Allerton maintenance staff members. Despite the operational separation between the mansion and gardens, physical proximity and a shared vision have naturally led to a symbiotic relationship.

The last 10 years has been a period of renaissance for the park, starting with a 2001 Cultural Treatment Plan prepared by Sasaki Associates that recommended it challenge mem-

bers reconnect to Allerton’s original vision. The plan was solidified after the park, led by its public advisory board, was allowed to utilize a university loan program. The program has allowed improvements big and small, all financed through the park’s endowment fund.

“It’s the little details that make this park outstanding,” he said. “There are a lot of little hidden areas visitors may not even notice their first time out; you can learn something new every time you visit.”

Making improvements

While the loan money has been used to replace aged walls, trim invasive trees and repair statues, the biggest improvement may be logistical. Crews are nearing completion of the Old Levee Road entrance, a state-financed proj-

eimprovements in Central Illinois, that’s for sure.”

Junior Milles’ “Solsargaren,” which stands watch over Stockholm Harbor. Allerton’s “Three Graces.” One adorns the east wall of the posy garden (above), while the other is at the grave of Allerton’s aunt in Geneva, Ill.

Full circle

Several recent renovations have been made to the 1902 Brick Wall Garden, where, in 1942, the Allertons added the “Girl With a Straw” sculpture, left, one of the park’s most popular pieces. The piece was the last Robert Allerton purchased for the estate.

Allerton had two limestone copies of Germaine Pilon’s “The Three Wonders” is again wondrous. It wasn’t until the 2000s, when the loan program became available, that the park possessed enough resources to start reversing the course.

“T here had been so many different ideas and directions it had kind of become muddled,” Peterson said. “The plan was to get it back to 1946, when it was given to the university. We’ve worked hard and made a number of positive, noticeable changes throughout the park to make it better for visitors. We’ve paid a lot of attention to the details of the original plan.”

New path

All that’s left is to let destination-seekers know that one of Illinois’ official Seven Wonders is again wondrous.

“Making more connections and recon- structing – that’s something we’re looking to improve upon,” he said. “We’re so far away from everything, it’s easy for people to forget about us. But this wasn’t just a gift to the university, it was a gift to the people of Illinois.”

Peterson said he has had discussions with regional bus services in an effort to improve physical connections to the university.

“We’re trying to get more students out here,” he said, adding research has for years been conducted in Allerton’s natural areas. The park also was updated.

“Almost everybody I talk to says it’s been 15 years since they’ve been out here,” he said. “Opening that road will be huge.”

Proximity has always played a role in Al- lerton’s distant relationship with the outside world (just as Robert had counted on), but the 1946s and 1950s were not the kindest de-

cades in terms of the gardens’ appearance. Time had begun to take its toll, money was tight, and the number of staff members and visitors had dwindled.

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更多信息请访问 http://allerton.illinois.edu
A new study of aged female rats found that long-term treatment with estrogen and a synthetic progesterone known as MPA increased levels of a protein marker of synapses in the prefrontal cortex, a brain region known to suffer significant losses in aging. The new findings appear to contradict the results of the Women’s Health Initiative, a long-term study begun in 1993 to analyze the effects of hormone therapy on a large sample of healthy postmenopausal women aged 50 to 79. After eight years of results, the WHI found that long-term exposure to estrogen alone or to estrogen and MPA resulted in an increased risk of stroke and dementia. More recent research, however, suggests that starting hormone replacement therapy at the onset of menopause, rather than years or decades afterward, yields different results. The new study, from researchers at the UI, is the first to look at the effects of long-term treatment with estrogen and MPA on the number of synapses in the prefrontal cortex of aged animals. The researchers describe their findings in a paper in the journal Menopause.

"Our most important finding is that estrogen and progesterone, when combined with MPA to actually see the significant effect,” Juraska said. “And there’s a lot of evidence now saying that the aged brain is different; the effect of these hormones is not going to be the same.”

In a new study followed mid-aged rats exposed to estrogen alone, to no additional hormones, or to estrogen in combination with MPA for seven months, a time period that more closely corresponds to the experience of women who start hormone therapy at the onset of menopause and continue into old age. The researchers removed the rats’ ovaries just prior to the hormone treatment (or lack of treatment) to mimic the changes that occur in humans during menopause.

"Our most important finding is that estrogen in combination with progesterone increases the number of synapses in the prefrontal cortex than that seen in animals that are not receiving hormone replacement,” Chisholm said. “Estrone alone marginally increased the synapses, but it took the combination with MPA to actually see the significant effect.”

"Our data indicate that re-examining the effects of estrogen and MPA, when first given to women around the time menopause is initiated, is important,” Juraska said.

The concert will begin at 7:30 p.m. in the Foellinger Great Hall at the Krannert Center for the Performing Arts. Tickets are $15 ($5 for students), and available at the Krannert Center box office. The public is invited to attend the NABMSA conference keynote address, “John Philip Sousa, British Copyright, and the Making of Popular Taste,” by Patrick Warfield, at 1:30 p.m. July 27 at Krannert Art Museum (seating is limited). Warfield, a professor of musicology at the University of Maryland, specializes in the American wind band tradition. “This talk traces Sousa’s connection with British music, from his youthful experiences orchestrating Gilbert and Sullivan to his efforts to alter English copyright law,” Warfield said in an email. “Along the way, we’ll see how Sousa used public opinion to solidify his reputation as the March King.” For more information, contact Bashford at bashford@illinois.edu.

The concert will open with Handel’s "Organ Concerto in D minor," performed by the Illinois Chamber Orchestra; and "The Music of the English Parish Church," performed by the Oxford University Wind Ensemble, conducted by Kevin Kelly; and "A Passion According to Handel," performed by the Illinois Baroque Orchestra, conducted by Andrew Manze.

The program will close with Handel's "Organ Concerto in G minor," performed by the Illinois Chamber Orchestra; and "The Music of the English Parish Church," performed by the Oxford University Wind Ensemble, conducted by Kevin Kelly; and "A Passion According to Handel," performed by the Illinois Baroque Orchestra, conducted by Andrew Manze.

The public is invited to attend the NABMSA conference keynote address, “John Philip Sousa, British Copyright, and the Making of Popular Taste,” by Patrick Warfield, at 1:30 p.m. July 27 at Krannert Art Museum (seating is limited). Warfield, a professor of musicology at the University of Maryland, specializes in the American wind band tradition. “This talk traces Sousa’s connection with British music, from his youthful experiences orchestrating Gilbert and Sullivan to his efforts to alter English copyright law,” Warfield said in an email. “Along the way, we’ll see how Sousa used public opinion to solidify his reputation as the March King.” For more information, contact Bashford at bashford@illinois.edu.
ON THE WEB
kranertcenter.com

FOELLINGER, FROM PAGE 1

19th-century concert venues upon the kind of sleek, modern halls that became popular in the 1960s. Herman and Ellinora Krannert, who funded the entire UI performing arts complex, took a personal interest in the details of the Great Hall. For example, Mrs. Krannert didn’t like the look of acoustic “clouds” she had seen used in other large concert halls to absorb and reflect sound, so Harris created a plaster ceiling suspended on springs from the true ceiling, which is 30 feet above the plaster at the back of the hall, and 90 feet above it near the front. For the hall’s paneling, Mrs. Krannert dispatched a carpenter to a friend’s farm in Southern Indiana to search 6,000 acres for the 90 best butter-nut trees.

No two surfaces in the hall are parallel, but instead are angled to reflect sound to the audience. The seats are upholstered with foam that mimics the human body, to help the hall’s reverberations remain consistent whether there’s a full audience or not. The density of the foam varies throughout the hall to adjust for places where the sound is particularly “live” or “dead.”

The floor under the seats and the stage floor are covered in oak. The stage itself is built on a hollow box – a design Mark Rubel, the owner of Pogo Studio in Champaign – compared to the clay amphora used as resonators in Champaign – compared to the Rubel, the owner of Pogo Studio in Southern Indiana to search for RCA Records in 1997. Rubel recorded most of their CD “Downward Is Heavensward” at Pogo, but they cut a slow, spacey, shoe-gazing track called “Apollo” in the Great Hall.

“Of course the sound hangs,” Rubel said.

His fondness for the hall’s unique qualities inspired Rubel to try the tricky business of recording electric guitars there, when the rock band Hum made an album for RCA Records in 1997. Rubel recorded most of their CD “Downward Is Heavensward” at Pogo, but they cut a slow, spacey, shoe-gazing track called “Apollo” in the Great Hall.

“The hall’s Midas Venice mixing board is likewise simple (it retails for about $3,400), but Rubel, who has occasionally rented the Great Hall to record classical clients, remembers the original board – a Studer, made in Switzerland. “Being a European console from the 1960s, it had an ashtray for RCA Records in 1997. Rubel recorded most of their CD “Downward Is Heavensward” at Pogo, but they cut a slow, spacey, shoe-gazing track called “Apollo” in the Great Hall.

“Hearing the hall on the snare drum,” Rubel said.

“No two surfaces in the hall are parallel, but instead are angled to reflect sound to the audience. The seats are upholstered with foam that mimics the human body, to help the hall’s reverberations remain consistent whether there’s a full audience or not. The density of the foam varies throughout the hall to adjust for places where the sound is particularly “live” or “dead.”

Still, the hall is not perfect for every instrument. “Things like percussion and instruments that have lots of sharp transience tend to get lost in that huge room,” Murphy said.

William Moersch, the chair of the percussion division at Illinois, has found ways to cope with those acoustical quirks. Moersch has recorded about 15 chamber music CDs in the Great Hall, and is working on his second solo marimba recording in the hall (he is the first marimbaist to receive a National Endowment for the Arts solo recitalist fellowship). “It is wonderful for recording marimba, if not drums, just to give the instrument the resonance it deserves,” he wrote in an email from Argentina, where he was performing at a summer festival. “Recording is different than listening to a live concert, mainly through choices of where you are listening from. With careful microphone placement … the sound of the hall can be tailored to fit the style of the piece.”

Compared to the micro-planning that went into the hall, the recording booth looks to the untrained eye like it might have been an afterthought. Tucked into a side wall at balcony level, the room is about the size of a freight elevator and shaped like a wedge of pie. Its main furnishings – a desk and a small couch – might have come from a yard sale, and a collection of LPs stacked under the speakers add to the 1960s dorm-room feel. To optimize the sound quality, the mixing board sits in the middle of the room, facing the wall of speakers instead of the small window overlooking the hall. Thus, a mirror propped on a music stand next to the window provides the engineer’s only sightline to the stage.

However, Murphy said this small, seemingly awkward recording booth was planned with other priorities – namely keeping the length of the wiring as short as possible. “Having it close to the stage, there’s a lot less copper running between here and there, so the mic lines are all shorter, which helps,” he said. “As you increase the length of a cable, it takes more sound to drive a signal down that line. Plus you can run into ground-loop issues. Really long cables start to act like antennae and introduce radio frequency noise into your system. Keep things short – it keeps things simple.”

The hall’s Midas Venice mixing board is likewise simple (it retails for about $3,400), but Rubel, who has occasionally rented the Great Hall to record classical clients, remembers the original board – a Studer, made in Switzerland. “Being a European console from the 1960s, it had an ashtray built into it at each end – something you would never see on professional recording equipment now,” Rubel said.

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“They couldn’t hit any wrong notes, since sound hangs in that room for so long,” Rubel said.

“You can really hear the hall on the snare drum.”
Rainfall and temperature affect the number of mosquito species linked to West Nile Virus in storm catch basins in suburban Chicago, two UI researchers report.

The study was conducted using mosquito larvae collected from catch basins in Alsip, a southwest suburb. The researchers examined weather factors that influenced the levels of mosquito larvae in the basins. They found that low rainfall and high temperatures are associated with high numbers of larvae.

The researchers found that rainfall was the primary factor in determining the presence of larvae, with low rainfall associated with greater numbers of larvae. The studies showed that while some rain is necessary for the larvae to develop, excess rain flushes out the premature larvae.

High temperatures also appeared to contribute to more larvae in the basins. The researchers found that the larvae developed more quickly when subject to both high air and water temperatures.

According to Ruiz, this analysis should allow for further research into the environmental factors affecting the abundance of disease-carrying mosquitoes, as weather variability may not affect all catch basins equally. The results also may help those hoping to lessen populations of disease-carrying mosquitoes to properly treat catch basins to eradicate potentially harmful larvae.

**Summer 2012 Publication Schedule**

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East Central Illinois University Center
Rantoul Business Incubator now open

The Rantoul Business Incubator, a new resource for local entrepreneurs offering a suite of support services, is now open.

Located within the Rantoul Business Center, it is a service of the East Central Illinois University Center, a partnership among local educational institutions and business development resources to promote and foster entrepreneurship in the region.

“This community incubator will leverage resources that we have developed at EnterpriseWorks to nurture startups and grow existing businesses,” said Laura Frechtes, the director of the UI Research Park. “We are excited to offer these services in Rantoul and continue to build on entrepreneurship in that area.”

The East Central Illinois University Center is a partnership among EnterpriseWorks (the incubator at the Research Park), the UI College of Business, Parkland College, the Champaign County Economic Development Corp., the village of Rantoul and the Rantoul Business Center, and the Champaign County Regional Planning Commission.

WILL-AM (580) and WILL-TV
WILL looks at local food movement

The growing movement to eat food grown in Central Illinois is the focus of a day of programming on WILL-AM (580) and WILL-TV on July 19. It’s the third special day in Champaign-Urbana. Video stories will look at Urbana’s production efforts and consumption of locally produced food live, studio-based discussion will center on local food movement in Iowa, Missouri and Nebraska and its future as a sustainable industry. Report/producer Clay Masters looks through the lens of Midwest producers, consumers, grocery store owners, restaurateurs and researchers to understand how local food networks operate.

UC2B fiber optic network
C-U seeks to expand broadband

The Champaign-Urbana community has entered a competition to continue building one of the fastest broadband Internet networks in the U.S. Local leaders are preparing a bid proposal for Champaign-Urbana to be one of six communities nationwide to split $200 million in funding from Gigabit Squared, an economic development firm that specializes in building broadband networks through its collaboration with Gig-U, the University Community Next Generation Innovation Project.

The communities selected will receive funding to expand broadband connectivity by building fiber-to-the-premises infrastructure. This would give all homes and businesses in Champaign, Urbana and Savoy the ability to connect to the local ultra-high-speed network. In order to increase the chances of being selected as one of the winning communities nationwide, as many residents and businesses in Champaign-Urbana as possible need to declare their interest in subscribing to the UC2B project, an intergovernmental consortium that includes the UI, Urbana and Champaign and is dedicated to building and operating an open-access fiber-optic broadband network throughout the area. With 2,500 homes and 200 community organizations connecting to UC2B, the network will be one of the largest connected at gigabit speeds in the nation. The network also will make Champaign-Urbana an appealing location for researchers and entrepreneurs to create and test next-generation applications. “Gigabit Squared has opened the door to a great opportunity to build out the UC2B network,” said Jon Gant, a professor of library and information science at the UI and a researcher on the UC2B project.

To sign up, residents should visit www.uc2b.net/bidproposal and committing to a one-year service contract with Gigabit Squared. Businesses also are encouraged to participate by committing to keep access broadband service through Gigabit Squared. Businesses also are encouraged to participate by committing to a one-year service contract with Gigabit Squared.

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UI Board of Trustees to meet July 19 in Chicago

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Inside Illinois posts stories online between print issues when there is breaking news or an important event such as a meeting of the trustees. Subscribe to the online version of Inside Illinois and we’ll email you an index of each issue and news updates between issues: go.illinois.edu/ilSubscribe
A simple new improvement to an essential microscope component could greatly improve imaging for researchers who study the very small, from cells to computer chips.

Joseph Lyding, a professor of electrical and computer engineering at the UI, led a group that developed a new microscope probe-sharpening technique. The technique is described in research published this week in the journal Nature Communications.

Scanning probe microscopes provide images of tiny structures with high resolution at the atomic scale. The tip of the probe skims the surface of a sample to measure mechanical, electrical or chemical properties. Such microscopes are widely used among researchers who work with tiny structures in fields from nanotechnology to cellular biology.

Labs can spend hundreds of thousands of dollars on an elegant instrument – for example, a scanning tunneling microscope (STM) or an atomic force microscope (AFM) – yet the quality of the data depends on the probe. Probes can degrade rapidly with use, wearing down and losing resolution. In such cases, the researcher then has to stop the scan and replace the tip.

“To put it in perspective, if you had an expensive racecar but you put bicycle tires on it, it wouldn’t be a very good car,” Lyding said.

To shape tips, researchers shoot a stream of ions at the tip. The material sputters off as the ions collide with the tip, whittling away the probe. One day in the lab, after yet another tip failure, Lyding had the simple, novel idea of applying a matching voltage to the tip to deflect the incoming ions. When a voltage is applied to a sharp object, the electrical field gets stronger as the point narrows. Therefore, ions approaching the sharpest part of the electrified tip are deflected the most.

“This causes the ions to remove the material around that sharp part, not on the sharp part itself, and that makes it sharper,” Lyding said. “You preserve the point and you sharpen what’s around it.”

Lyding and graduate student Scott Schmucker purchased an inexpensive ion gun and tested Lyding’s idea. It worked beautifully. STM tips with a starting radius of 100 nanometers were honed to a sharp 1-nanometer point, yielding extremely high resolution. In addition, the sputtering process works with any electrically conductive material.

But once the probes are ultra-sharp, what’s to keep them from wearing down just as quickly as other probes? Lyding and Schmucker then teamed with UI chemistry professor Gregory Girolami and materials science and engineering professor John Abelson, whose groups had demonstrated coatings for silicon semiconductors made of a material called hafnium diboride. The coatings are 10 times harder than the metal usually used to make STM tips, but are also metallic – the key property for the ion-sputtering process.

The group applied the hafnium diboride coatings to their probes, sputtered them further, and found that the resulting probes are stable, durable and excel in the types of microscopy and patterning applications for which such tips are used.

“Nobody else makes probes with the combination of sharp, hard and metallic conduction,” said Lyding, who is also affiliated with the Beckman Institute for Advanced Science and Technology at the UI. “You can find one or the other but not all three. There’s a tremendous demand for that.”

The researchers now are moving to commercialize their tough, sharp probes. They received a patent and started a company called Tiptek to begin manufacture. They also are expanding their sharpening technique to include AFM probes as well as STM, and are developing batch-processing techniques for higher throughput.

“When people make AFM tips they make them on wafers, hundreds of tips at a time,” said Lyding. “The methodology that we’re developing lets us process this entire wafer as a unit so all 400 tips would be done at the same time.”

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