

Cornell CHRONICLE

A weekly digest of news from CHRONICLE ONLINE: www.news.cornell.edu

JANUARY 22, 2010

Two students in Haiti evacuated; vigil planned for earthquake victims

Two Cornell students who were at the Weill Cornell-affiliated GHESKIO clinic in Port-au-Prince, Haiti, when the Jan. 12 earthquake struck were safely evacuated to the Dominican Republic two days later, university officials said.

Several WCMC-affiliated faculty and staff, including the clinic's founder, Dr. Jean William Pape (a 1975 Weill Cornell graduate and now professor of medicine), stayed behind to continue work at the clinic, which was heavily damaged in the quake; several GHESKIO staff members died.

University officials were still trying to determine whether any of the eight Cornell students who are Haitian nationals were in Haiti over break. As of Jan. 19, two of them had been located and determined to be safe, said Allen Bova, Cornell director of risk management and insurance.

In an e-mailed statement to the Cornell community, President David Skorton expressed sympathy for the people of Haiti and concern about the future of the clinic. "We have begun to consider how Cornell University can draw on the extraordinary expertise and good-will across our institution – so evident during the New Orleans crisis – to contribute in a meaningful way to the reconstruction process," Skorton said.

A candlelight vigil, sponsored by Cornell's Haitian Students Association, is planned for Thursday, Jan. 28, at 5:30 p.m. in Sage Chapel and will be open to the public.

For additional updates on Cornell's relief efforts for Haiti, go to www.cornell.edu/Haiti.

— Joe Wilensky

Operational streamlining to spur significant savings

A mantra is taking hold in Day Hall: Restructure rigorously, responsibly and humanely.

Associate Vice President Paul Streeter has adopted those watchwords as he works to balance the university's budget – by making Cornell more efficient.

Since the 2008 economic downturn, the university has been paring down its budget deficit, but significant challenges remain. The estimated deficit for the current year is \$68 million, and if no action is taken this deficit could grow to \$85 million next year. Streeter is directing an effort to significantly whittle down the deficit by saving \$90 million annually in administrative costs by 2015.

"We do need to balance our budget within the next three to four years. We don't have a choice about that," said Streeter, who has 23 years of experience at Cornell, much of it evaluating and recommending improvements in university operations. "We are aggressively pursuing savings opportunities that don't affect positions, but we do recognize that staff layoffs and position eliminations are inevitable."

Provost Kent Fuchs announced



ROBERT BARKER/UNIVERSITY PHOTOGRAPHY

Associate Vice President Paul Streeter is leading the Initiatives Coordination Office, which aims to save \$90 million by 2015.

the creation of the Initiatives Coordination Office (ICO) (initially termed the Project Management Office) Dec. 16 and named Streeter to lead the effort to achieve operational savings in five areas: procurement; facilities; information technology; finance, human resources and communication; and organization and management of support activities.

Streeter is coordinating five teams – one for each area – led by deans, vice presidents and other senior administrators. (The

teams and their tasks are listed at www.cornell.edu/reimagining/initiatives.cfm.) Each team has analyzed savings targets and is creating detailed implementation plans to meet those targets.

As Fuchs and Skorton announced in fall 2009, non-personnel savings will account for at least half of the \$90 million target. But the remainder will have to come from personnel reductions over the next five years, Fuchs said Dec. 16.

— Susan Kelley

Javaid Sheikh appointed dean of WCMC-Q

Physician, researcher and Weill Cornell Medical College in Qatar (WCMC-Q) interim dean Javaid I. Sheikh has been appointed dean of the college, effective Jan. 1.

Sheikh joined WCMC-Q as vice dean for research in April 2007 and was named deputy dean in May the following year. He has served as interim dean since founding dean Daniel R. Alonso retired in January 2009.

An internationally renowned researcher in anxiety disorders, Sheikh conducted some of the first studies to characterize the effects of aging on anxiety disorders during the 1990s. His most recent investigations, funded by the National

Institutes of Health, have focused on the interface of central fear circuits and sleep architecture in patients with chronic anxiety disorders. He has published more than 125 scientific articles, along with numerous research abstracts.

Under Sheikh's leadership as vice dean for research, WCMC-Q has established a translational and clinical research infrastructure, including core laboratories and research administration structure. He has recently begun to implement a five-year strategic plan for the next phase of WCMC-Q's development and continuing implementation of its tripartite mission of education, research and clinical care.

Cornellians in the news

Worth her weight?

Extra weight, for white women in particular, translates into confidence-sapping stigma and lower salaries. A 2005 study by **John H. Cawley**, associate professor of policy analysis and management, found that a weight increase of 64 pounds above the average for white women was associated with 9 percent lower wages. Extra weight for women is essentially a disguised tax, according to the study. A 2009 study in the journal *Obesity* suggests discrimination and cultural bias is behind the targeting of women, who were 16 times more likely to report weight-related employment discrimination than men. **BOOK OF ODDS.COM, JAN. 19**

Luscious eats

Using a name like "German Black Forest Indulgence" rather than "chocolate cake" can boost food sales by up to 27 percent. **Sybil Yang**, a Ph.D. candidate at the School of Hotel Administration who studies consumer behavior, says that it pays to sex up the names of foods. "Enticing descriptions create a positive emotion about how something will taste," she says. Thus, saying something is "hand-battered" or "crispy" draws your attention away from the reality of fried food. **HEALTH.MSN.COM, JAN. 14**

Driven to death

"It's hard for people to evaluate the additional benefit of security measures. But it's easy for people to say, 'I'm going to have to stand in line for an hour; I don't like that,'" says **Garrick Blalock**, associate professor of applied economics and management and co-author of a paper looking at the connection between airport security and driving fatalities. Blalock estimated that from September of 2001 to October of 2003, enhanced airport security led to 2,300 road fatalities that otherwise would not have occurred. **FINANCE.YAHOO.COM, JAN. 12**

Weill scientists develop way to generate abundant blood vessel cells from stem cells

In a significant step toward restoring healthy blood circulation to treat a variety of diseases, a team of scientists at Weill Cornell Medical College (WCMC) has developed a new technique for turning human embryonic stem cells into plentiful, functional endothelial cells.

Such cells form the interior "lining" of all blood vessels and are the main component of capillaries. In the near future, the researchers believe, it will be possible to inject these cells into humans to heal damaged organs and tissues.

The new approach allows scientists to generate virtually unlimited quantities of durable endothelial cells – over 40 times more than previous approaches can develop. The approach may also yield new ways to study genetically inherited vascular diseases.

The study appears in the advance online issue of *Nature Biotechnology*.

"This technique is the first of its kind with serious potential as a treatment for a diverse array of diseases, especially cardiovascular disease, stroke and vascular complications of diabetes," says Dr. Shahin Rafii, the study's senior author and co-director of the Ansary Stem Cell Institute at WCMC.

In recent years, enormous hopes have been pinned on stem cells as the source of future cures and treatments. Indeed,

human embryonic stem cells have the potential to become any one of the more than 200 types of adult cells. However, the factors and pathways that govern their differentiation to abundant derivatives that could be used to repair organs have remained poorly understood.

A major challenge for Rafii's lab has been to improve their understanding, and hence control, of how stem cells convert to various cell types (the differentiation process), and then to generate enough vascular endothelial cells – many millions – so they can be used therapeutically.

To meet this challenge, the scientists first screened for molecular factors that come into play when stem cells turn into endothelial cells. Their findings led them to a strategy that significantly boosts the efficiency of producing these cells.

Then, the researchers tracked the differentiation process in real time using a green fluorescent protein marker. They found that when they exposed stem cells to a compound that blocks a growth factor involved in cell specialization at just the right time during cell culturing, the propagation of endothelial cells dramatically increased.

Even more striking, they found that the cells worked properly when injected into mice.

Testing in humans to restore blood supply to injured organs is the next major step.

Big Red Athletics



Women's Ice Hockey

Sophomore Chelsea Karpenko and freshman Laura Fortino were named the ECAC Hockey Player and Rookie of the Week, respectively, on Jan. 18, following their performances in a tie with Harvard and a win over Dartmouth. Karpenko and Fortino helped the Big Red to a crucial three-point weekend to keep the Big Red even with Clarkson atop the ECAC Hockey standings.

Women's Track

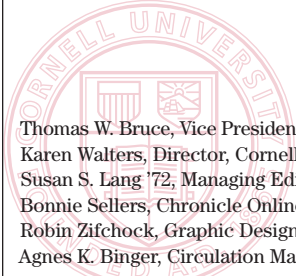
The Big Red took to the road for the first time in the 2010 indoor season on Jan. 16 and came away with strong performances at the Penn State Northeast Challenge. Competing against Penn State, Michigan, Penn, Georgetown, Seton Hall, Rutgers, Lock Haven and others, the Big Red came home with an event win and a meet record, several alterations to the all-time top-10 lists, eight ECAC qualifiers and more than 25 top-10 finishes. Leading the way, senior co-captain Jessica Weyman set a meet record in winning the 500 in an outstanding 1:13.31, which ranks third all-time at Cornell, behind only Morgan Uceny '07 and Shonda Brown '05.

Men's Track

The Big Red displayed impressive depth across the board Jan. 16 at the Penn State Northeast Challenge in State College. Cornell came home with a new school record and two freshman records, an event win, several alterations to the all-time top-10 lists, an impressive 17 IC4A qualifiers, and more than 25 top-10 finishes. Freshman Nick Wade was particularly impressive, as he broke the school and freshman records in his first collegiate race in the 1,000, running an outstanding 2:23.99 to place fourth in one of the toughest fields in the meet.

Team schedules

www.cornellbigred.com



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Watt Webb receives Hollaender Award for biophysics

Cornell biophysicist Watt W. Webb, whose imaging techniques have revolutionized how scientists see into biological dynamics and structures, has been honored by the National Academy of Sciences with the Alexander Hollaender Award in Biophysics.

Announced Jan. 20, the award cites Webb, the Samuel B. Eckert Professor in Engineering and professor of applied and engineering physics, for "pioneering the applications of rigorous physical principles to the development of optical tools that have

broadly impacted our ability to examine biological systems."

Webb, who was honored at Cornell in 2008 with a symposium marking his 80th birthday, is best known for inventing fluorescence correlation spectroscopy (with Elliot Elson) and later, multiphoton microscopy (MPM) with Winfried Denk. The MPM technology allows, for example, cellular DNA to be imaged in 3-D resolution with limited damage to the cells.

In a collaborative bioengineering research partnership with physicians and research-

ers at Weill Cornell Medical College, Webb is now trying to further engineer the reaches of these technologies by developing medical multiphoton microscopic endoscopy. By taking advantage of the body's natural fluorescence to provide microscopy images of living tissue in real time and without dyes, Webb's images acquired via medical MPM endoscopes can help surgeons find and diagnose cancerous tissues during operations, augmenting such traditional diagnostic tools as fixed and stained biopsy images.

Webb came to Cornell as an associate professor of engineering physics in 1961. His six-decade career has spanned many areas, from solid-state physics – during which time he led creation of the first stable superconducting magnet, of the type still used today in magnetic resonance imaging – to biomolecular dynamics, neuroscience, molecular biology and DNA sequencing.

Webb will receive the Hollaender award, which comes with a \$20,000 prize, April 25.

— Anne Ju

Cornell moves beyond coal with combined heat and power plant

Cornell's new combined heat and power plant will cut carbon emissions by 28 percent, but the impact of the project goes beyond just reducing Cornell's carbon footprint, said President David Skorton at a grand opening celebration in Duffield Hall Atrium Jan. 15. "Through example and the bully pulpit, we will educate the state, the nation and the world," he said.

That sentiment was echoed by guest speaker Bruce Nilles, director of the Sierra Club's "Beyond Coal" campaign. The club has approached educational institutions to urge them to stop burning coal, and many say they just can't do it, Nilles reported. "We're going to be holding up Cornell as a showcase," he said.

Guests toured the new 15,000-square-foot

facility adjacent to the existing coal-fired central heating plant on Dryden Road, where two giant turbines fired by natural gas drive electric generators. Waste heat from the turbines makes steam that runs another generator, and the steam, reduced in temperature and pressure, is piped throughout the campus for heating. The output will be up to 30,000 kilowatts of electricity, or about 70 percent of campus usage. The campus also draws power from the small hydroelectric plant on Beebe Lake, and some power is purchased from the grid.

In the future the new turbines could run on gas or liquid biofuels, and the coal-fired generators might be converted to run on wood, technicians said.

The system does not depend on local

sources of natural gas. An interstate natural gas pipeline is located about three miles from campus, and Cornell has installed and owns a spur from that line.

The system is expected to reduce carbon dioxide emissions by about 75,000 tons per year. Consumption of coal will be reduced by 50 percent over the first year, and completely the second. Discontinuing coal also will save 100,000 gallons a year of diesel fuel used by trucks that deliver the coal to Cornell.

The New York State Energy Research and Development Authority provided \$1 million in funding for the plant. Local government also supported the project through bond funding. The total cost has been estimated at about \$80 million.

— Bill Steele

Big Red Bikes bike-sharing program set to roll next fall

Beginning next fall, undergraduates will have a new way to get around campus: Big Red Bikes will offer a fleet of bikes that will be available to every undergraduate student at no additional cost through the library system.

Big Red Bikes will be one of the first university bike share programs of its kind, says Noah Zallen '10, president of the student organization. Funding was approved Nov. 2 for the program, said Mollie Futterman '10, a member of Big Red Bikes.

"The funding comes from the Undergraduate Student Activity fee that all Cornell undergraduates pay in addition to tuition,"

said Futterman, and will amount to an annual budget of \$13,650." The funding was approved by President David Skorton and the Cornell Board of Trustees.

There will be 20 bikes – Electric Ladies Townie Original 3i Bicycles (all with step-through frames) – the first year and 40 in the second year.

The program will operate through Uris, Mann, Carpenter and the Vet School libraries. Students can check out a bike at circulations desks as late as the libraries stay open (some as late as 2 a.m.) and for as long as 24 hours and return it to any of the four library stations.

— Susan S. Lang

Roberto Sierra's musical tribute to Saturn now available on DVD

The art of music meets Saturn: A sultry, circular and sweeping 10-minute concerto, "Anillos" – perfectly timed to breathtaking and ethereal images of the planet Saturn and its rings and moons from NASA's Cassini-Huygens mission – is now available on DVD.

Composed by Grammy nominee and Cornell professor of music Roberto Sierra, "Anillos" (meaning rings in Spanish) is presented on the DVD, featuring the Cornell Symphony Orchestra and a slide show created by research associate Matthew Hedman.

Sierra took on the challenge suggested by Elizabeth Bilson, retired administrative director

for Cornell's Center for Radio-physics and Space Science Research, to create an original musical piece for the October 2008 annual meeting of the American Astronomical Society/ Division of Planetary Science in Ithaca. Sierra found inspiration for the piece from the mission images and from essays by 17th-century astronomer and musician Christiaan Huygens.

"Anillos" is available for \$15 at Buffalo Street Books, Dewitt Mall, 215 N. Cayuga St., Ithaca (buffalostreetbooks@hotmail.com); the Department of Astronomy, 104 Space Sciences Building; and mail orders are accepted by Bilson at emb9@cornell.edu.

Spices were early engine of globalization, says Tagliacozzo on New York City panel

"Dating back to Asian spice trading routes around 200 B.C., globalization began long before the Internet," said Eric Tagliacozzo, associate professor of history, at a Jan. 14 panel discussion at the American Museum of Natural History (AMNH) in New York City.

Tagliacozzo and two other experts discussed food's ubiquitous role in the economic, political and social development of the world, from battles over spice trading routes in the first millennium to tea wars in the second, before a capacity crowd. Moderated by author Sasha Issenberg, the panel was part of AMNH's exhibition on trade routes 2,000 years ago, a period dominated by India and China.

"The idea that spices were used as a preservative in the ancient world is a myth," said panelist Tom Standage, author of "An Edible History of Humanity." "In ancient times, spices were valued as a symbol of wealth and power."

However, "India was not always the spice capital of the world," said panelist and culinary expert Julie Sahni. Indian curry is actually from the Mediterranean, she said. "India has always been good at absorbing other's influences and making them her own," said Sahni.

Other foods have had a strong influence on the geopolitical development of the world more recently, noted the panelists. In the 1800s, England began making opium from Chinese poppy; when China realized what

opium imported from British traders was doing to their population, they attempted to halt trading. The result were the Opium Wars between China and Britain (1839-1842 and 1856-1860). China lost both and was forced to cede Hong Kong to England.

The palettes and profits of the wealthy and powerful have also played a significant role on the consumption and development of certain foods throughout history, according to the panelists. "There is strong evidence to suggest that elites were the taste-makers of history," said Tagliacozzo. "Cloves found in the tombs of Han Dynasty princes in the first millennium offer just one example." Today, bird's nest soup, literally made from swallow nests and considered a delicacy among wealthy Chinese dating back hundreds of years, is still served as a status symbol at middle- and upper-class Chinese weddings, he said.

Interest in the flavorful past of China and India seems to be growing as both countries re-emerge as driving forces of the world's economy, said the panelists.

"There was a time when Chinese officials mostly came to America to meet with university presidents," said Tagliacozzo after the event. "Today, U.S. university presidents also travel to Asia to meet with Chinese officials."

— *John Mikytuck '90*
New York City freelancer.

People with gene alteration take longer to 'get over' responding anxiously

Weill Cornell Medical College (WCMC) researchers have identified an alteration to the DNA of a gene that imparts similar anxiety-related behavior in both humans and mice, demonstrating that laboratory animals can be accurately used to study these human behaviors.

The research, published in the Jan. 14 issue of the journal *Science*, also found that people with a certain altered gene have a harder time recovering from highly stressful experiences. The finding may help researchers develop new clinical strategies to treat humans with such anxiety disorders as phobias and post-traumatic stress disorder, said B.J. Casey, co-senior author of the study and professor of psychology in psychiatry at the Sackler Institute for Developmental Psychobiology at WCMC.

The researchers observed common behavioral responses between humans and mice that possess an alteration in the brain-derived neurotrophic factor (BDNF) gene. The mice were genetically altered – meaning that they had a human genetic variation inserted into their genome.

When people are exposed numerous times

to harmless stimuli after learning to respond anxiously to aversive stimuli, they usually eventually stop responding anxiously.

"But both the mice and humans found to have the alteration in the BDNF gene took significantly longer to 'get over' the innocuous stimuli and stop having a conditioned fear response," said Fatima Soliman, lead author of the study, a Tri-Institutional M.D.-Ph.D. student who has completed her Ph.D.

The researchers also performed brain scans on the human participants to see if brain function differed between people with the normal and abnormal BDNF gene.

They found that a circuit in the brain involving the frontal cortex and amygdala – responsible for learning about cues that signal safety and danger – was altered in people with the abnormality, compared with participants who did not have the abnormality.

Testing for this gene may one day help doctors make more informed decisions to treat anxiety disorders, said the researchers.

The study was funded by the National Institutes of Health.

Obituaries

Oliver S. Schaufelberger, 20, a junior environmental science major in the College of Agriculture and Life Sciences, died Jan. 13 at his home in Lebanon, N.J. He was a Cornell Outdoor Education instructor and Outdoor Odyssey guide, an Arnot Forest Research Intern, an Environmental Science peer adviser, and an active member of the Cornell Outing Club and Kappa Delta Rho fraternity on campus.

A memorial service, to be coordinated with Schaufelberger's family and friends, will be held at a later date on campus.

Cornell students seeking additional personal support at this time can contact Gannett Health Services' Counseling and Psychological Services at 607-255-5208 or www.gannett.cornell.edu/CAPS/offsiteSupport.html.

Joseph A. Kahl, a professor of sociology at Cornell from 1969 until his retirement in 1983, died Jan. 1 in Bethesda, Md., at age 86. Kahl's influential 1957 textbook "The American Class Structure" defined the emerging field of social stratification.

Kahl attended the University of Chicago and received a Ph.D. from Harvard University, where he also taught. At Cornell Kahl served as chair of sociology and director of the graduate field.

His other books include "The Deadeyes: The Story of the 96th Infantry Division," "The Measurement of Modernism" and "Modernization, Exploitation, and Dependency: Germani, Gonzalez Casanova, Cardoso."

CU in the City

Piano recital

Tri-Institutional Noon Recital, Jan. 22, noon, Caspary Auditorium, Rockefeller University, York Avenue. Pianist Benjamin Moser will perform Mendelssohn, Beethoven, Chopin and Rachmaninoff. Sponsored by Weill Cornell Medical College, Rockefeller University and Memorial Sloan Kettering. Free.

Hockey televised

The men's hockey team takes on North Dakota at Lynah Rink Jan. 22-23. The Jan. 22 game vs. North Dakota will be televised in NYC on Time Warner Cable Channel 198 at 7 p.m. Both games will be streamed through Cornell Redcast at 7 p.m.

Wine course

All-Ivy Intensive Wine Course, Jan. 23-24. The Cornell Club presents this social and educational weekend to help enthusiasts at all levels expand their wine knowledge by sampling a portfolio of global wines selected by Alyssa Rapp, founder and CEO of Bottlenotes. Rapp will team with Artisanal Cheese and TCHO Chocolates. Cost: \$275 per person. Contact Kerry Strassel for availability of single sessions. RSVP k.strassel@cornellclubnyc.com or 212-692-1381.

FOCUS ON **global cornell**

spotlight: SCENES FROM AFAR

The Mario Einaudi Center for International Studies has announced three winners and nine honorable mentions in its 2009-10 photo competition.

The photos were chosen from 63 submitted by graduate students studying or doing research abroad. Faculty, staff and students voted on the entries at the center's annual reception during International Education Week, Nov. 16-20.

The Einaudi Center sponsors the photography contest each year to capture the diversity and beauty of the students' destinations and to highlight the Einaudi Center's international research travel grants. Selected photos are posted on their home page, and some of the best will be on display this spring in the Big Red Barn.

Graduate student in economics Sarah Reynolds won first place with her photograph "Gracinha and Marcelinho." She took the photo in Salvador, Brazil, while she was doing research on intergenerational families.

For more information, and to view the winning photos, visit www.einaudi.cornell.edu/news/headlines.asp?id=2217.

'60 Minutes' features Cornell's Elephant Listening Project

In February 2009, researchers from the Cornell Lab of Ornithology's Elephant Listening Project (ELP) caught a charter plane from Cameroon to the Central African Republic with "60 Minutes" anchor Bob Simon and a video crew.

There, in the Dzanga-Sangha Deep Forest Reserve, the crew filmed elephants and interviewed researchers – including Peter Wrege, director of the ELP.

The program featured the elephant project Jan. 3 with a segment that covered the trip and a subsequent visit by Simon and his crew to the Cornell Lab of Ornithology this past June where he interviewed the founder of the project, Katy Payne, and ELP researchers Mya Thompson, Ph.D. '09, Elizabeth Rowland and Melissa Groo.

"At Dzanga, the focus was on the elephants and their communication," said Wrege. "We did lots of talking about what we know about a dictionary of elephant vocalizations and what we hope to learn."

Simon also interviewed Andrea Turkalo, a Wildlife Conservation Society researcher, a world expert on African ele-

phants and a founding member of ELP. Turkalo, who continues to work with ELP researchers to understand the habits and biology of forest elephants, discussed details on individual elephants, her life in the reserve and efforts to keep poachers away.

At the lab, Simon reinterviewed Wrege; he also talked with Payne about how ELP got started and her perspective on the future of elephant conservation and with Thompson on how the lab uses field recordings to study forest elephant ecology and behavior.

To capture audio recordings of elephants, the researchers hoist battery-run bioacoustic recorders, which can record continuously for three months, up into trees and hope that monkeys do not pull out the wires, explained ELP analyst Rowland. In Ithaca, the sound files are analyzed using Cornell-developed software that turns the sounds into visual representations featuring amplitude, frequency and time scales. Analysts then parse out individual elephant calls of males and females in various reproductive stages, vehicle sounds and even gunshots.

— *Krishna Ramanujan*

Student group studies Indian sites and culture during winter break trip

Twelve students in the Minority Organization of Architecture, Art and Planning (MOAAP) spent winter break in India Dec. 31-Jan. 21, engaging in cultural immersion and field study at several sites in rural areas and cities from Delhi to Mumbai.

The trip was a student-led initiative, and participants toured "everything from the traditional housing in Mumbai to a bird sanctuary in Rajasthan and the Taj Mahal," said city and regional planning associate professor Jeffrey Chusid, who accompanied the group. The group met with planning professionals, architects and artists, as well as went sightseeing related to the culture and the history of the place, experiencing new food and Bollywood movies.

Students conducted an academic design exercise in Diggi, a rural community 50 miles south of Jaipur.

"It's a community with a 1,000-year-old fort and a Hindu temple which attracts some 100,000 visitors or pilgrims a year," Chusid said. "In this town of 5,000, there was a question of how best to plan for both of those, and also to understand and plan for what the community needs itself."

ILR School student Ray Mensah '11 said before the trip that he would be looking "into the construction laws and the labor laws in India, so we can have that background as we prepare to draw up our plans."

The group studied water, transportation and planning issues in Delhi, and observed how the city is preparing to host the Commonwealth Games later this year. They also toured Mumbai slums and factories. In addition to visiting museums, art students met with professional photographers working in India. The trip included "historic sites that have native, historical

art and architecture of India," Chusid said.

The trip involved 10 students from the College of Architecture, Art and Planning and one each from the ILR School and the College of Engineering. MOAAP membership is open to all Cornell students.

The organization approached Chusid and city and regional planning professor Michael Tomlan to help them structure the trip. MOAAP raised funds throughout the fall semester and held an Indian-themed gala Nov. 20 in the Duffield Hall Atrium.

"We raised funds, but more importantly we raised awareness of our service-learning initiative to a wide and varied audience," said MOAAP treasurer Fernando Montejó '10.

The students will assemble an exhibition from the trip to be mounted on campus in the spring and will prepare a formal presentation on the design exercise in Diggi.

"You do a lot of sketching, a lot of photography, a lot of interviews and take a lot of notes while in the field," Chusid said.

Chusid and Tomlan have done extensive research in India. Chusid focuses on "urban transformation issues – the fate of post-independence modern architecture and planning and what was done basically after Nehru to transform India," he said. He is studying the preservation and history of these sites including the work of Joseph Stein, an American architect who arrived in India in 1952 and worked there until his death in 2001.

"India in the past few years has been changing incredibly rapidly, and we'll see that," Chusid said. "The contrasts and the contradictions of the country are very powerful."

— *Daniel Aloï*

'We raised funds, but more importantly we raised awareness of our service-learning initiative to a wide and varied audience.'

Fernando Montejó '10

Watching crystal layers grow gives clues to making smooth, defect-free thin films

To make thin films for semiconductors in electronic devices, layers of atoms must be grown in neat, crystalline sheets. But while some materials grow smooth crystals, others tend to develop bumps and defects.

In the Jan. 22 online edition of the journal *Science*, Cornell researchers shed new light on how atoms arrange themselves into thin films. Led by assistant professor of physics Itai Cohen, they recreated conditions of layered crystalline growth using particles bigger than atoms but still small enough that they behave like atoms.

Using an optical microscope, the scientists could watch exactly what their “atoms” – actually, micron-sized silica particles suspended in fluid – did as they crystallized. They also manipulated individual particles to test conditions that led to smooth crystal growth. They discovered that the random darting motion of the particles is a key factor that affects how the crystals grow.

A challenge to growing thin films with atoms is that the atoms often form mounds, rather than crystallizing into thin sheets. As atoms are deposited onto a substrate, they initially form small crystals, called islands. When more atoms are dumped on top of these crystals, the atoms tend to stay atop the islands, rather than hopping off the

edges – as though there were a barrier on the crystals’ edges.

Conventional theory says atoms that land on top of islands feel an energetic “pull” from other atoms that keeps them from rolling off. In their experiments, the researchers eliminated this pull by shortening the bonds between particles, but they still saw the barrier.

Using optical tweezers to manipulate individual particles, the researchers measured how long it took for particles to move off the islands. Because the particles were suspended in fluid, they were knocked about in what’s called Brownian motion, which is like a random walk.

As particles diffused from one area to another, the researchers noted that the distance a particle had to travel to “fall” off an island’s edge was three times farther than moving from one site on the island to another. Brownian motion made them take nine times longer to complete the “fall.” This difference in time explained the barrier.

Due to vibrations of the underlying crystal, atoms on a crystalline film move in a manner similar to Brownian particles. The researchers surmised that this motion may also contribute to the barrier at the crystals’ edges, and hence the roughness in the crystal film.

— Anne Ju

Search engines learn on the job by experimenting on users as they click

In the near future some search engines may start experimenting on you, to better understand what you were looking for and give you the best possible answers.

New research by Thorsten Joachims and Robert Kleinberg, associate and assistant professors of computer science, respectively, aims to create search-engine software that can learn from users by noticing which links they click on in a list of search responses, and how they reformulate their queries when the first results don’t pay off.

The work is funded by a four-year, \$1 million grant from the National Science Foundation under federal stimulus funding. The research will lead to methods that improve search quality without human guidance, especially on specialized Web sites such as scientific or legal collections or corporate intranets.

As a demonstration, the researchers plan to create a new search engine for the physics arXiv Web site at Cornell, and possibly for other specialized collections.

“In several ways, providing search for small collections is more difficult than for the whole Internet. Google, Yahoo! and Microsoft can spend a lot of manpower on

engineering a good ranking function for the Internet. For small collections, this has to happen automatically via machine learning to be economical,” Joachims explained.

He and his collaborators have already created a search engine called Osmot that employs machine learning. The problem the new research will address is that what the machine learns may be biased by the way it displays results.

Eye-tracking studies done in cooperation with Geri Gay, the Kenneth J. Bissett Professor and Chair of Communication, have shown that absence of a click may mean that the result did not fit the user’s information need, but it may also mean that the user had given up scanning the list that far down. To get reliable feedback from clicks, the search engine needs to shuffle the order in which results are returned. The trick is to manage experimentation while still presenting useful search results.

Osmot is open-source software but still very much in beta. More information can be found at <http://learnimplicit.joachims.org>.

So far, Cornell has received 131 stimulus grants, totaling more than \$105 million.

— Bill Steele

Notables

Dev one of 25 ‘extraordinary minds’

The Hospitality Sales and Marketing Association International has selected Chekitan S. Dev, associate professor of marketing and brand management in Cornell’s School of Hotel Administration, as one of the “Top 25 Most Extraordinary Minds in Sales and Marketing” for 2009.

The annual list recognizes leaders in the hospitality, travel and tourism industries for their creativity and innovation; cutting-edge sales or marketing campaigns; triumph in challenging situations; and sales efforts that resulted in dramatic gains. Recipients will be honored Feb. 1 in New York.

Dev, one of just a handful of educators ever to make the “extraordinary minds” list, researches strategic marketing, brand management, strategic alliances and e-commerce, has worked with corporate, government, education, consulting and private equity in more than 35 countries since the 1980s.

Hilgartner tapped for Center for Scientific Review

Stephen Hilgartner, chair and associate professor of science and technology studies, has been chosen to serve as a member of the Ethical, Legal and Social Implications of Human Genetics Study Section with the Center for Scientific Review. Membership on a study section represents an opportunity for participants to contribute to national biomedical research.

The Center for Scientific Review is part of the National Institutes of Health and serves as the gateway for grant applications. Study section members review submitted applications, make recommendations on these applications and survey the status of research in their fields of science. The position helps ensure the quality of the NIH peer review process.

Hilgartner’s term has begun and will end June 30, 2013.

Rebillard wins \$45,000 Mellon grant

Classics professor Eric Rebillard has been awarded a \$45,000 grant from the Andrew W. Mellon Foundation to support his research on funerary behaviors among the common people of the Roman Empire.

Rebillard’s project applies statistical analysis to a database of excavated tombs in Italy during the first three centuries of the Roman Empire to analyze the layout and contents of the graves and treatment of the bodies.

The project is unique, says Rebillard, because previously funerary monuments and grave goods have been studied mainly as indicators of social status. Rebillard’s approach is to emphasize funerary ritual itself and to study funerary behaviors.

>> The essentials <<<<

ideas>>people
>>details>>data
>>happenings

>Accolades

Festschrift celebrates work of ILR economist

"Human Resource Economics and Public Policy: Essays in Honor of Vernon M. Briggs Jr." covers public policies on employment, immigration and other subjects to which the ILR School emeritus professor has contributed his scholarship. The book was edited by Charles J. Whalen '82, a former student of Briggs', and is published by the W.E. Upjohn Institute for Employment Research.

>On the Blogs

Stretch your dollars

The Office of Workforce Diversity and Inclusion has launched the Personal Money Savings Solutions blog: <http://blogs.cornell.edu/savingsolutions>. You'll find tips to help save on energy or grocery bills; discounts; transportation resources; financial assistance programs; and other personal finance tools. Share your tips and enter your Cornell e-mail address to be notified of new content. Send questions to wellbeing@cornell.edu.

- Nancy Doolittle

>Shelf Life

A year in pictures

Jan. 10, 1920: A handful of bundled-up figures ride a toboggan down an impossibly steep slide on Beebe Lake as bystanders wait their turn.

That photograph is one of 12 archival images in the library's annual report, which got a makeover this year and emerged in the form of a 2010 calendar. In addition to descriptions of library highlights from the past year, the calendar includes more historic Cornell photos, an Audubon illustration, a Lincoln editorial cartoon and other images from the millions in the library's collections.

Curious to see more? E-mail Lynn Bertoia in Library Communications (lbm20@cornell.edu) to buy a copy for \$6.

- Gwen Glazer

>Cornell People

Engineering diversity

Sara Xayarath Hernández is the College of Engineering's new director of diversity programs in engineering. She was most recently associate director and co-principal investigator on the NSF-supported Louis Stokes Alliances for Minority Participation project. Hernández serves as a committee chair for the national Women in Engineering ProActive Network, and at Cornell she will advise the Society of Women Engineers and the Society of Hispanic Professional Engineers.

- Anne Ju

Turnover hurts customer service, ILR study shows

Companies invest significantly in retaining talented employees whose jobs are critical to their competitive advantage and with good reason, reports a new study from the ILR School's Center for Advanced Human Resource Studies.

When employees quit, operations, productivity, employee morale and service falter. For services companies – which dominate the U.S. economy – losing employees means that customer service standards decline.

In one of the first data-based investigations of its kind, the researchers studied more than 5,000 employees in 75 workplaces at a large U.S. hotel and casino chain. They chose this industry because of its high annual quit rates, which average about 50 percent.

For service firms to succeed, human resources practitioners must better understand why workers quit and find ways to

minimize the disruption of customer service, the study reports, noting that it is possible to manage turnover in ways that keep good service flowing to customers.

Cornell ILR School assistant professor John Hausknecht and two colleagues examined whether service quality is impaired by employee turnover, and if so, how managers can make the situation better.

The study finds that:

- As rates of voluntary turnover climb within key business units, customers are more likely to report poor customer service.

- When new workers arrive, established workers have to take time away from customer service to train the new workers in procedures and company culture.

- Work units with many new employees have more trouble managing turnover and receive the lowest customer service ratings.

— George Lowery

Winter Employee Celebration draws 1,500 for food and fun

With the double attraction of men's and women's basketball against Columbia University in Newman Arena Jan. 16, more than 1,500 Cornell faculty, staff, retirees and their families enjoyed chicken parmesan, pasta, salad and Cornell Dairy ice cream at the Employee Celebration community dinner in the Ramin Room of Bartels Hall.

The men's team defeated Columbia, 74-53, while the women's team fell to the Lions, 68-44, in what was the Ivy League opener for the Big Red.

Attendees participated in a variety of campus events throughout the day, including an open swim and bowling at Helen Newman Hall and open skating at Lynah Rink. New this year were two child-oriented events sponsored by the New York state retirement program vendor, ING Financial Services: a remote-control car course in the Ramin Room and a half-time contest in Newman Arena featuring the Cornell Bear,

RedMan the wrestling mascot, Crossroads Clown and "Guido" from local radio station Z95.5.

Also featured were door prizes, displays by Cornell Police, and Transportation and Mail Services, and information on assisting the victims of the earthquake in Haiti.

"Thanks go to our new children's event sponsor, ING Financial Services, members of the Cornell wrestling team who built and ran the remote control car track, and the many volunteer employees who helped make this event a great success," said Cheryl McGraw, manager for employee outreach and connections and coordinator of Employee Celebration Day. "I'd also like to thank those who sponsored the dinner and athletics admission, making it possible for so many in the Cornell community to attend: the Department of Athletics and Physical Education, the Division of Human Resources, Cornell Catering and Pepsi."

— Nancy Doolittle

6 THINGS TO DO

Jan. 22-29, 2010

1. Haiti earthquake vigil

Cornell students, faculty, staff and local community members will gather for a candlelight vigil Thursday, Jan. 28, at 5:30 p.m. in Sage Chapel to show support for the victims of the earthquake in Haiti. The vigil, sponsored by the Haitian Students Association, is free and open to the public. Information: Haitian Students Association co-presidents Kenya Desiste, kd87@cornell.edu or 347-256-2189 and Albert Lee, al368@cornell.edu or 908-217-7663.

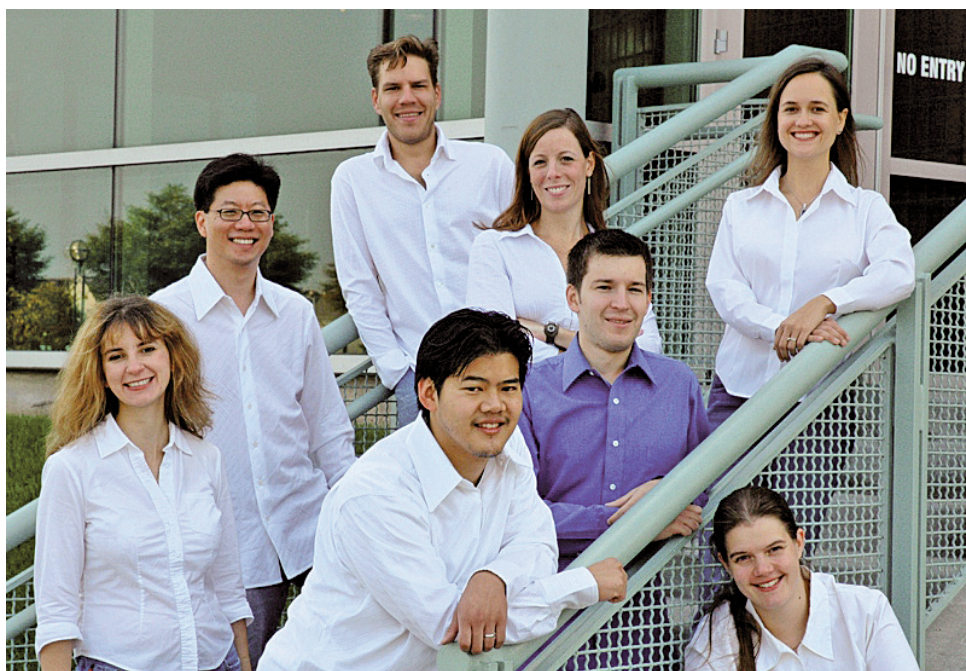
2. Bound for Glory begins

On Jan. 24, WVBR's "Bound for Glory" show will launch its 43rd year of broadcasting live folk concerts from the Anabel Taylor Hall Café, with Joe Crookston and the Bluebird Jamboree with Peter Glanville. Crookston is well known in Ithaca for his songwriting and guitar playing. See: <http://joecrookston.com>.

Hosted by Phil Shapiro, "Bound for Glory" runs Sunday nights from 8 to 11 p.m., with live sets at 8:30, 9:30 and 10:30 p.m. As always, admission is free, and the show is open to the public. The show also can be heard live on WVBR-FM, 93.5 and 105.5, and streams online at wvbr.com.

3. The Quay brothers

The College of Architecture, Art and Planning will host internationally renowned filmmakers the Quay brothers Jan. 25-26. Their visit coincides with the opening of "Dormitorium: An Exhibition of Film Decors by the Quays" in the John Hartell



PROVIDED

Brave New Works chamber ensemble. See No. 4.

Gallery in Sibley Hall, which will be up from Jan. 25 to Feb. 5.

The exhibition features sets and film decors from stop-motion animated films by Timothy and Stephen Quay. Reminiscent of architectural models, the meticulously crafted miniature sets provide a glimpse into the Quay brothers' unique aesthetic vision and artistry.

On Jan. 25 at 5 p.m. in Hartell Gallery, the Quays will join Kent Kleinman, dean of the College of Architecture, Art and Planning, for a panel discussion about their work.

On Jan. 26 at 7 p.m., at Cornell Cinema's Willard Straight Theatre, the Quays will host "Tales from the Quay Brothers," a collection of their short films. "Tales" will also be shown without commentary on Jan. 28 at 7 p.m., followed by the feature-length "Piano Tuner of Earthquakes" at 8:45 p.m.

4. Brave New Works concert

Guest ensemble Brave New Works, led by Cornell Director of Orchestras Chris Young-hoon Kim, presents two premieres and music of faculty from the Eastman School of Music, Syracuse University and Cornell, Jan. 29, 8 p.m., Barnes Hall. A project of the Mellon CNY Humanities Corridor, the concert is free and open to the public.

Brave New Works is a chamber ensemble of 10 musicians dedicated to performing and promoting new music.

Ithaca audiences will recognize a number of the performers, including Kim; violinist Stephen Miahky, who taught for one year at Cornell; clarinetist Richard Faria of the Ithaca College faculty and Cornell percus-

sionist Tim Feeney, both performing as substitutes.

5. Entrepreneurship lecture

Steven Gal, visiting associate professor of clinical entrepreneurship in the Johnson School, has been involved in 10 technology startups as a founder, CEO, senior executive and/or board member or adviser – all in partnership with a scientific leader.

In a free lecture geared to graduate students and postdoctoral researchers, Jan. 27, 1:30-3:30 p.m. in 226 Weill Hall, Gal will highlight the five key basics that every scientist should know about the startup process – from founding through funding and into development. Participants will learn whether an entrepreneurship course would be helpful in furthering their business ideas and will gain tools to use in evaluating an entrepreneurial opportunity.

Gal has served on the boards of various for-profit and not-for-profit companies for more than two decades.

6. LEGO League Expo

Ranging from ages 6 to 9, 85 children on 18 school teams from the Rochester, Syracuse and Ithaca areas will display their research projects at the fourth annual Junior FIRST LEGO League Expo – hosted by the Cornell NanoScale Facility – at Duffield Hall Atrium, Jan. 30, 1-3 p.m.

Teams were asked to build LEGO brick models that depict how people and things as varied as horses, mail, money and DVDs can best be moved around in their communities and to imagine ways to improve them.