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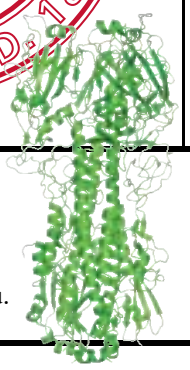

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With Cornell's help, a glorious Saturn steps into spotlight in New York City

BY LAUREN GOLD

In the four years since NASA's Cassini-Huygens spacecraft entered Saturn's orbit and began snapping pictures, Cassini's cameras have sent nearly 140,000 images back to researchers on Earth.

The images – as well as data from infrared, radar and ultraviolet detectors on the orbiter and images from the Huygens lander on the surface of the planet's moon Titan – have given researchers valuable new information about Saturn, its rings and moons, and the evolution of the solar system as

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NASA/JPL/SPACE SCIENCES INSTITUTE

When the Cassini spacecraft passed behind Saturn's shadow in September 2006 it sent back this image of the planet and its rings, stunningly backlit by the sun. For more photos, see page 10.

Planetary scientist Don Campbell named director of Cornell center that manages NSF's Arecibo Observatory

BY LAUREN GOLD AND BLAINE P. FRIEDLANDER JR.

Donald B. Campbell has been appointed director of Cornell's National Astronomy and Ionosphere Center (NAIC), which manages the Arecibo Observatory in Puerto Rico on behalf of the National Science Foundation (NSF). He assumes the position June 1.

Campbell, a native of Australia, succeeds Robert Brown, who has served as director since 2003. Brown will remain on the NAIC staff as director emeritus and as special adviser to the director through the summer.

A planetary scientist with strong, decades-long ties to Arecibo, Campbell takes the reins as the observatory – the world's largest single-dish radio telescope and most powerful planetary radar facility – faces a tightening NSF budget and an uncertain future. But Campbell's appointment gives the Arecibo and Cornell communities good cause for optimism, said Robert Buhrman, Cornell senior vice provost for research.

Before joining Cornell as a professor of astronomy in 1987, Campbell was on the NAIC research staff at Arecibo for more than 15 years. He served as director of the Arecibo Observatory (1981-87), interim director of NAIC (1992-93) and as associate NAIC director (1993-2004).

"Don's long affiliation with NAIC and the Arecibo Observatory and his familiarity with its scientific mission and its community, staff, users and supporters make him

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JASON KOSKI/UNIVERSITY PHOTOGRAPHY

Astronomy professor Donald Campbell, pictured above in his office in Space Sciences, will succeed Robert Brown as director of the National Astronomy and Ionosphere Center.

$25 million CU-Saudi link will boost nanoscience research, with focus on sustainability

BY ANNE JU

A new partnership between Cornell and King Abdullah University of Science and Technology (KAUST) in Saudi Arabia promises to strengthen Cornell's research efforts in energy and sustainability.

The Cornell University-KAUST Center for Research and Education will receive an estimated $5 million per year for five years to establish what is hoped will become a leading research hub for nanomaterials science and technology.

Emmanuel Giannelis, Cornell's Walter R. Read Professor of Engineering and chair of the Department of Materials Science and Engineering, and Lynden Archer, the M.L. Hart Professor of Chemical and Biomolecular Engineering, will be co-directors of CU-KAUST.

The partnership will focus on a new class of hybrid nanomaterials recently discovered at Cornell. Termed nanoparticle ionic materials (NIMs), they hold potential for applications in emerging technologies for water desalination, carbon capture and solar energy.

KAUST, a research university whose core campus will be located on the Red Sea at

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Skorton approves revised Campus Code of Conduct, calling it 'good day for shared governance'

BY DANIEL ALOI

President David Skorton has accepted the revised Campus Code of Conduct submitted to him by the University Assembly (UA) on April 25. The Cornell Board of Trustees will consider adoption of the new code at its meeting May 23.

The UA approved the revised code following action by its Codes and Judicial Committee (CJC) addressing those sections of the code that Skorton said needed amending further.

"I appreciate the many hours that members of the assembly and its Codes and Judicial Committee have volunteered to simplify the code and to make it more accountable to and in alignment with the educational interests at the heart of the university's mission," Skorton said in his acceptance letter to Rodney Orme, the employee chair of the UA.

In his final column of the academic year in Wednesday's Cornell Daily Sun, Skorton stated, "This day marks the end of a long and sometimes difficult process. It is a good day for shared governance on our campus."

The UA had voted 14-2 in favor of the revisions following a 90-minute discussion at its April 23 meeting in Clark Hall. The revised code was the result of 30 months of debate that eventually involved representatives of Cornell's central administration as well as feedback from

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Call for awards for Commencement edition of Chronicle

The Cornell Chronicle will publish on May 23 (the Friday before Commencement Weekend) the names of students and faculty members who have won Cornell college or department awards for the 2007-08 academic year.

Notices and lists of awards will only be accepted online. Please use our online form at <http://www.news.cornell.edu/awards.shtml> and enter the names of the awards, award winners and prizes (if applicable). The deadline for submissions is Monday, May 5.

Briefs

New monthly radio show begins this weekend: WVBR-93.5 FM will launch its new interactive radio series, "The Sunday Forum," Sunday, May 4, at 6:30 p.m. The program will air on the first Sunday of every month and will feature experts and community figures to discuss an eclectic mix of topics. The host will be Tommy Bruce, Cornell's vice president for university communications.

The show will be streamed live online at WVBR.com, and listeners are invited to participate in the discussion through AIM instant messaging by sending questions, comments and opinions to the screen name "SundayForum" during the show.

This Sunday's topic will focus on how the job market and the economic climate will affect new graduates.

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Men's lacrosse takes a share of title

TIM MCKINNEY/ATHLETIC COMMUNICATIONS/PROVIDED

Junior attacker Chris Finn in action during the Big Red men's lacrosse team's 11-7 win April 26 over Brown at Schoellkopf Field. The team rallied from a 4-2 deficit early in the second quarter with five unanswered goals to clinch a share of the Ivy League title. The win, coupled with Princeton's 11-9 loss at Dartmouth, put the Big Red, Tigers and Brown in a tie atop the league standings. The Big Red will play its final regular season game at Hobart in Geneva today, May 2, at 7 p.m. Meanwhile, the Cornell women's lacrosse team nabbed second place in the Ivy League April 26 by beating Harvard 12-9.

Alumnus makes $1.5 million gift to support West Campus programming

BY GARY E. FRANK

Larry Salameno '66, J.D. '69, has had little contact with Cornell since law school, but he has certainly renewed his ties. With his wife, Theresa, Salameno recently made a $1.5 million gift to endow a fund to support programming in the West Campus House System.

Reconnecting with the university through the efforts of a law school classmate led Salameno to recall his time on campus with pleasure.

"I thought about how much I enjoyed it, how well educated I was and what I got out of the experience," said Salameno, executive vice president at the Permal Group, an alternative asset management firm.

Salameno learned about the West Campus residential community through conversations with Susan Murphy, vice president for student and academic services. He was also inspired to make a gift because of his student activities as an undergraduate (he chaired the Scheduling Coordination and Activities Review Board) and his experiences living in old-style dormitories and off-campus housing.

"I was intrigued by the fact that Cornell is working to create a community in the houses on West Campus," said Salameno. "When I was a student, if you weren't a member of a fraternity, your social life could be difficult."

"The Salamenos' generous gift," said Alice H. Cook House Professor and Dean Ross Brann, the Milton R. Konvitz Professor of Judeo-Islamic Studies, "provides immediate program funding for such activities as guest speakers, field trips, leadership development, social activities, service projects or even academic courses taught in West Campus."

The endowment will support West Campus programming but has no restrictions, said Salameno, "because things come up that can't be budgeted for."

That flexibility is "absolutely key" to furthering the success of the West Campus House System, said Murphy. "While each house strives to bring together students and faculty to create living and learning environments, programs vary from house to house."

The gift, Murphy said, gives permanent funding for that enhanced living-learning experience. "As spectacular as the buildings are, it's the programming that's the difference in West Campus," she said.

And that programming runs the gamut, from biomedical engineering and politics to theater arts and diversity issues.

"Every day on West Campus," Murphy said, "there is rich and ongoing dialogue from students and faculty from all kinds of backgrounds, with a full array of interests."

For more information on West Campus, see <http://residential.alumni.cornell.edu>.

Gary E. Frank is a staff writer for Cornell Alumni Affairs and Development.

Art professor Norman D. Daly dies at 96

Daly

Norman D. Daly, Cornell professor emeritus of art, died at Cayuga Medical Center, April 2, after a brief illness. He was 96 years old.

Daly taught painting and drawing in the Department of Art at Cornell for 57 years (1943-1999), 24 of them as an emeritus professor. He was the first recipient of the John Hartell Award for Distinguished Teaching in the College of Architecture, Art and Planning.

Born Aug. 9, 1911, in Pittsburgh as the youngest of seven children, Daly started painting and drawing as a teenager. He majored in art at the University of Colorado, graduating in 1937, studied in Paris on a fellowship in 1937-38, and received an M.F.A. from Ohio State University in 1940.

He began exhibiting his paintings in New York in the 1940s; some of his paintings are represented in numerous permanent collections in U.S. museums.

In the 1960s he became interested in sculpture, working mainly with assemblages and marble carvings. This sculpture was the starting point for his most extensive project, the creation of an entire ancient civilization called Llhuros. Combining aspects of conceptual art with a determined attention to traditional aesthetic values, Llhuros came to be recognized as the foundation of "archaeological art." The project was exhibited widely in the United States and Germany in 1972-74. Elements of Llhuros were included in a retrospective of Daly's work at the Herbert F. Johnson Museum of Art at Cornell in 2004.

Predeceased by his wife, Helen (Gebbie) Daly, and a son; he is survived by a son and extended family.

A memorial event is being planned for sometime in June. Bangs Funeral Home is in charge of arrangements. Memorial donations can be made to a charity of one's choice.

Briefs

'Barack Obama and the Politics of Racism' to be discussed May 5: Ronald Walters, professor in government and politics at the University of Maryland, College Park, and director of the African-American Leadership Institute, will lecture on "Barack Obama and the Politics of Racism," Monday, May 5, at 12:15 p.m. at Cornell's Africana Studies and Research Center, 310 Triphammer Road. The talk is free and open to the public.

Walters is widely known for his expert views on African-American leadership and politics and for his writing and media analysis. He has authored more than 100 articles and eight books, including "Black Presidential Politics in America," which won the Ralph Bunche Prize from the American Political Science Association and the Best Book Award from the National Conference of Black Political Scientists.

Walters is a frequent guest on national media as an analyst of African-American politics. He has appeared on CBS News, ABC's "Nightline," NBC's "Today" show, C-Span and such public television shows as "The NewsHour With Jim Lehrer" and "Think Tank." Walters also writes a weekly opinion column for newspapers and Web sites.

His lecture will be followed by a reception and book signing for his latest work, "The Price of Racial Reconciliation" (University of Michigan Press, 2008).

American Academy of Arts and Sciences names four Cornell academics as fellows

BY ANNE JU

Baird

Guckenheimer

Krumhansl

Lepage

This year's class of American Academy of Arts and Sciences fellows includes four Cornell faculty members in disciplines ranging from mathematics to psychology.

They are: Barbara A. Baird, the Horace White Professor of Chemistry and Chemical Biology; John Guckenheimer, professor of mathematics; Carol L. Krumhansl, professor of psychology; and G. Peter Lepage, professor of physics and the Harold Tanner Dean of the College of Arts and Sciences.

They join 186 other new fellows from the United States and 22 foreign honorary members elected this year. The new members will be inducted at a ceremony Oct. 11 in Cambridge, Mass.

Baird's research group uses biochemical and biophysical approaches to understand cell surface receptors and mediate transmembrane signals in immune responses. Her work includes developing biophysical and nanobiological approaches for studying mechanisms of receptor-mediated cell activation.

Guckenheimer studies dynamical systems and their applications. His current work focuses on algorithm development for problems involving periodic orbits, and applications to the neurosciences, animal locomotion, turbulent combustion and control of nonlinear systems.

Krumhansl's research interests include human perception and cognition; cognitive processes in music perception and memory; application of mathematical models to psychological data; and multidimensional scaling and clustering.

Lepage, as well as being arts and sciences dean, is a physics researcher with interests in quantum field theory, particle physics, condensed matter physics and nuclear physics. He works on fundamental theory of quarks and gluons that explains the internal structure and interactions of protons, neutrons and other strongly interacting atomic particles.

Founded in 1780, the Academy of Arts and Sciences is one of the nation's oldest and most prestigious honorary societies and independent policy research centers.

For more information visit the academy's site at <http://www.amacad.org>.

Foodnet gets more done for less with streamlined methods devised by former ORIE students

BY MARK EISNER

Foodnet, a local meals-on-wheels program, has saved thousands of dollars by using more efficient routes and work methods, thanks to a group of former Cornell operations research and information engineering (ORIE) students.

Land-grant **Cornell**

MARK EISNER/PROVIDED

Foodnet workers pack hot lunches for delivery to clients on a redesigned line based on simulation experiments by the team. From left: Kent Moore, Gregory Turton, Mary Mente, John Yunker and Tim Andrews.

Two years ago, ORIE students were asked to advise Foodnet on ways to streamline its delivery routes to save money, time and energy. Their work has paid off. The nonprofit organization has been able to stay within its fuel and maintenance budget in a business that is highly dependent on transportation, despite increased gasoline prices and demand for meals.

The organization budgeted $32,000 for gasoline in 2006 but spent only $24,500. Maintenance costs dropped by one-third from the previous year, largely as a result of the new routes.

The recommendations came from the master of engineering project of former students Sebastien Desfriches-Doria, Hector Espinoza and David Rimshnick, under the guidance of ORIE professor Robert Bland, during the 2005-06 academic year.

Using advanced route optimization software, the team showed Foodnet how to reduce its "delivery time window" (the time between the first and last delivery of the day). The students also shortened how long it took Foodnet to pack food for delivery by reorganizing the packing line and testing alternatives in a computer simulation.

Using a client information database, mapping and routing software and additional computational techniques of their own, the team also developed a computer system that Foodnet staff can use to plan routes and adapt them to changes in client population.

"The outcome of the study helped us align our new routes, geographically and time wise," said Joe Fort, food service operations manager at Foodnet. "We also rethought how we served and packed our food. All in all, our goal of more timely delivery has been successful."

With more clients in its network, some were not getting their midday meal until after 3 p.m. "Now most of our routes are finished by 1:30 p.m.," added Foodnet Assistant Director Carolyn Arnold.

The three former Cornell students now work as logistics consultants. Rimshnick said he found the Foodnet project "a unique and fulfilling way of transitioning my academic training to real-world solutions."

Mark Eisner is a retired senior lecturer and part-time communications associate with the School of Operations Research and Information Engineering.

Perkins Prize for interracial harmony goes to Black Students United

BY SUSAN S. LANG

PROVIDED

Vice Provost Robert L. Harris, back row, poses with members of Black Students United, which won this year's Perkins Prize. Students are, back row from left, Jennifer Saint Preux, Enongo Lumumba-Kasongo and Melanie Lister. Front row from left: Ernie Jolly and Darin Lamar Jones.

The 2008 James A. Perkins Prize for Interracial Understanding and Harmony has been awarded to Black Students United (BSU) for its sponsorship of "Questions Out of a Hat," an event that brought members from nine student organizations together to discuss diversity.

On March 25, members of groups ranging from the Interfraternity Council, Cornell Hillel and Cornell Democrats to the Gay-Straight Alliance and Student Advocates of Palestine gathered in small groups. Each group picked questions that had been previously submitted anonymously about race, culture, religion or ethnicity out of a hat for discussion.

Robert L. Harris, vice provost for diversity and faculty development, presented the prize to members of BSU at a ceremony April 23 in the Carol Tatkon Center.

Honorable mentions went to the Asian and Asian American Forum and to the "Celebrating the Lunar New Year" series of events. The forum is a new student organization that was formed as a result of the 2004 "Cornell Asian and Asian-American Campus Climate Task Force Report." It has sponsored such events as a panel discussion for first-year students to adjust to life at Cornell and a stress-relief event that included crafts, massage and meditation. The Lunar New Year series, developed by Frances Yufen Lee Mehta, senior lecturer in Asian studies at Cornell, included educational, social and entertaining events from Jan. 29 through Feb. 19 to teach students about Chinese culture.

The Perkins Prize, established in 1994 by Thomas W. Jones '69, is awarded annually to recognize the significant contribution by a Cornell student, faculty, staff member or a program to advance campus interracial understanding and harmony. The prize honors former Cornell President James A. Perkins (1963 to 1969), who increased the enrollment of minority students during the 1960s. A monetary award accompanies the prize to help recipients fund continuing projects and programming.

Robert Kleinberg receives Microsoft Fellowship to help computers – and people – make better decisions

BY BILL STEELE

Robert Kleinberg '97, Cornell assistant professor of computer science, has been selected as a 2008 recipient of a $200,000 Microsoft New Faculty Fellowship grant.

Kleinberg works on computer algorithms – the strategic plans on which programs are based – for decision making in situations where all the necessary information may not be available. Applications can range from choosing the best route for an Internet message to setting the optimum price for a product offered on eBay to deciding what movies to recommend to a DVD rental customer. These are the same sorts of decisions human beings make, but computers can make them faster and – at least theoretically – can be taught to make the best possible decision every time.

"Although I expect this [research] is more likely to be applied to computer systems," Kleinberg said, "one of the goals is also to enable people to make better decisions, with appropriate help from their software."

He plans to use the Microsoft funding either to bring in a new postdoctoral collaborator or to host an interdisciplinary symposium in his research area. "The most important resource that my research requires is interaction with

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PROVIDED

A display of insect-infested plants at a session at Long Island Horticulture Research and Extension Center and Cornell University Cooperative Extension of Suffolk County, March 19.

PROVIDED

Gary Saunders, Central Park Conservancy (CPC) staff, shows how to prune a tree at a workshop sponsored with Cornell Cooperative Extension-New York City. Watching from left, are Gloria Hegy (in sunglasses), CPC volunteer; Larry Baskerville, CPC staff; Mark Douglas, CPC staff; Nancy Mieselas-Berner, CPC volunteer; William Parrish, CPC staff; and (with face hidden) Kevin Browne, New York City Parks Department staff.

Manhattan extension training is a walk in the park for CUCE classes learning about weeds, woods, worms and wildlife

BY SUSAN S. LANG

Maintaining New York City's Central Park can be daunting: The 863-acre spread has 26,000 trees, and a quarter million flowers and plants are put into the ground each year for 25 million annual visitors. All that activity encouraged Cornell's Cooperative Extension (CUCE) in New York City to collaborate with the Central Park Conservancy (CPC) to offer a new 18-week certification course for park employees and volunteers.

Launched Jan. 30 and running through June 4, the CPC-funded Urban Horticulture and Ecology Training program brings expert instructors from various Cornell Cooperative Extension offices in the New York City region to lead weekly hands-on classes, laboratory and field exercises on such topics as botany, soil science, geology, turf management, weeds, trees, perennials, urban ecosystems and wildlife.

"The participants are learning the science behind the practical concepts that are taught," explains Gretchen Ferenz, a senior extension associate who leads urban environmental programs at CUCE-NYC.

When it comes to pruning, for example, the participants "learn how a plant grows and transports water and nutrients thought its vascular system," says Ferenz. "Then they learn the direct application of that science to appropriate pruning practices to shape a tree, to invigorate a mature shrub, correct damage to a tree or shrub and remove diseased wood – very practical hands-on practices."

From a grounds technician who preps planting beds and does lawn trimming to a landscape architect who works in the park department's design office, participants form a diverse group. Only two have had formal education in ornamental horticulture, says Ferenz. About one-third of the 36 participants are volunteers educated in professions other than horticulture working for the CPC, one-third are CPC employees working in Central Park and one-third work for the New York City Department of Parks and Recreation in parks citywide.

"The program is much needed, and if I could take this program every year I would," says Cornell Simmons, a CPC grounds technician taking the course. "People in the city need this type of program to be expanded."

Cornell helps Indian marketing experts boost their country's fledgling food industry

BY SUSAN S. LANG

After years of having to import food to feed its 1 billion-plus people, India has become a net exporter of food. But millions of Indians still do not have access to affordable, nutritious food because of the country's poor infrastructure and lack of cold storage.

To help food retailers and manufacturers in India learn the nuts and bolts of distributing food products and running modern supermarkets, two food marketing experts in Cornell's Food Industry Management Program presented a five-day executive development program in India, Jan. 28-Feb. 1.

"India's economy is one of the world's largest and one of the fastest growing, a rare combination," said Edward McLaughlin, the Robert J. Tobin Professor of Marketing, who co-taught most of the program's content with Rod Hawkes, senior extension associate. Both are affiliated with the Food Industry Management program in Cornell's Department of Applied Economics and Management. "Even though there has been rapid development of modern food distribution and retailing facilities in the past few years, still only less than 5 percent of food consumed in India is sold through modern retail stores."

'India's economy is one of the world's largest and one of the fastest growing, a rare combination.'

- Edward McLaughlin

The program, conducted under the umbrella of Cornell-in-India, a universitywide initiative to promote a broad spectrum of activities in India, included presentations as well as interactive seminars and simulations. Topics included trends in the global food industry and the implications for India's rapidly developing food industry; expansion strategies; financial, inventory and labor management in supermarket operations; forecasting; product ordering and cost control in the supply chain; and introducing new products into the supermarket channel.

"The program attracted 29 participants, primarily from India but also representing Bangladesh, Sri Lanka, the Philippines and Singapore, who are all senior-level executives representing many of the leading food retailers in South Asia and some of the major food manufacturers," said Hawkes. "For many participants this was the first opportunity to get high-level training focused specifically on the food distribution and retailing industry."

PROVIDED

Ed McLaughlin responds to a participant's comments during a case-study discussion in Aurangabad, India.

Collaborating on the program, each presenting a seminar on the Indian perspective on critical issues, were K. Vijayaraghavan, founder and CEO of Sathguru Management Consultants, Cornell's in-country partner for India programming, and his colleague Amurt Betole.

The program's enthusiastic evaluations have encouraged Cornell and Sathguru to begin planning another program, tentatively scheduled for February 2009.

Did heads roll during the Terror? Just media hype, avers lecturer

BY CHANDI NAVALKHA

The French public was led to believe that heads rolled willy-nilly and that blood ran in the streets of Paris in 1793-94, when in fact, that wasn't quite the case.

Delivering the lecture "The Terror After the Terror: From Propaganda to History" on April 23 in Cornell's Kroch Library, Howard Brown, chair of the Department of History at Binghamton University and the author of "Ending the French Revolution: Violence, Justice, Repression," argued that in the years immediately after the revolutionary terror in France from 1792 to 1794, a flood of publications and pictorial representations "amalgamated the various episodes of 1793 to 1794 into a single terror."

In reality, most parts of France did not experience violence during the Terror, Brown said. It was only after the media "exaggeration" of the experience that the Terror became a collective national trauma rather than an experience of individual suffering.

His talk was part of the final event, organized by Rare and Manuscript Collections and sponsored by the French Studies Program, for the exhibition "Lafayette: Citizen of Two Worlds," which celebrated the 250th anniversary of the birth of the Marquis de Lafayette. One of the first biographies of Lafayette, the general famed for his participation in the French and American revolutions, was printed in Ithaca in 1841, and Kroch Library is home to a major collection on Lafayette and the French Revolution.

First by initiating a sense of collective trauma and then by historicizing it, Brown said, the ruling power – the Thermidors – made the Terror a foundation for future French political thought.

Brown said that "by turning the experiences of the Terror into a 'collective trauma,' [the ruling power] helped to create a stronger sense of national identity, based not so much on citizenship as on suffering."

Brown then cited examples of publications from the period after 1795 that showed how, over time, portrayals of the terror became more accurate, to "historicize the experience of revolutionary violence."

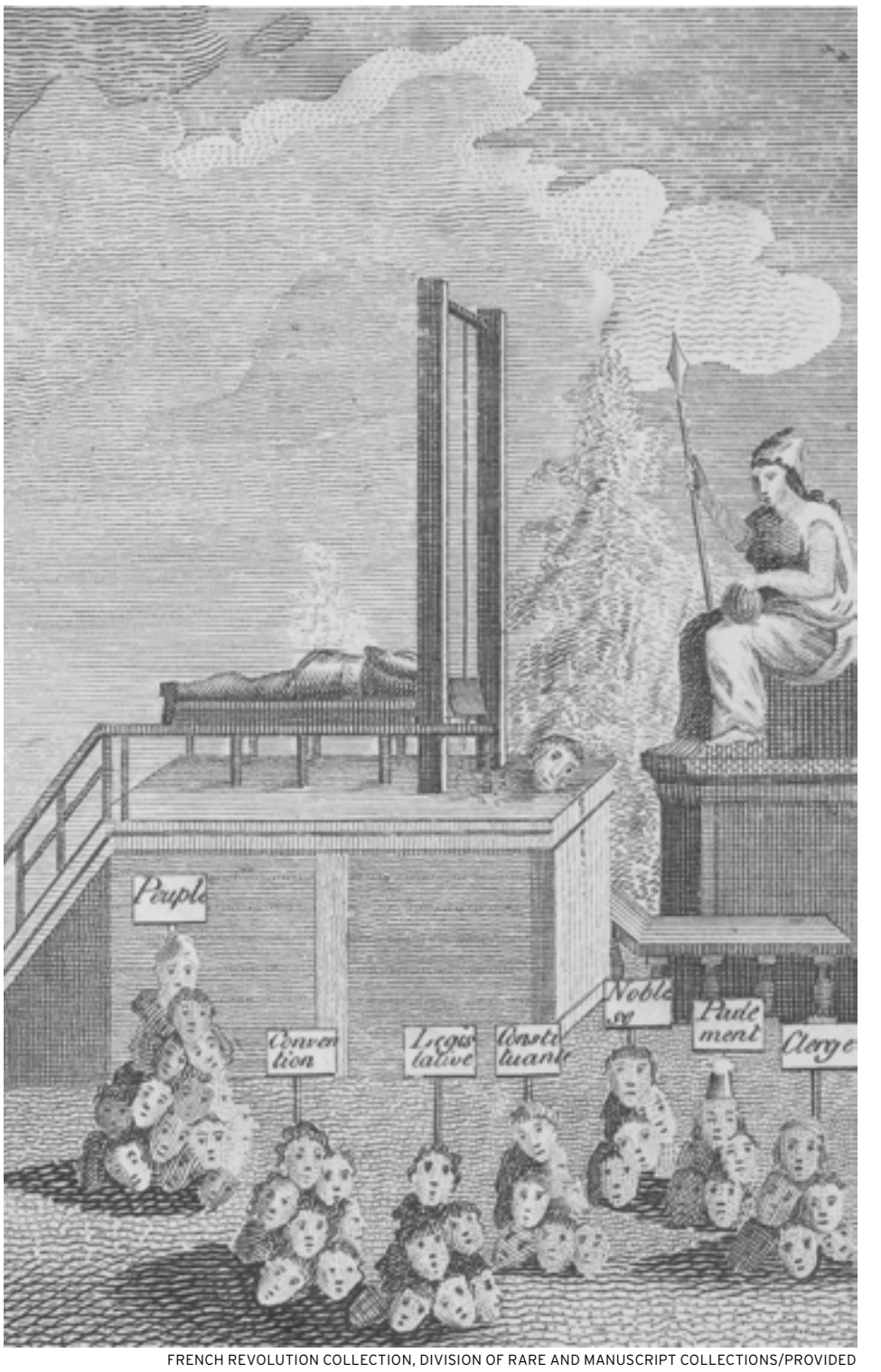
'[The ruling power] helped to create a stronger sense of national identity, based not so much on citizenship as on suffering.'

– Howard Brown, chair of Binghamton University's history department

The event also included a panel discussion with Brown; the exhibition's curator, Laurent Ferri; and Cornell Ph.D. students Desmond Jagmohan (government) and Cory Browning (French and Romance studies). The panel examined the importance of this creation of a "collective trauma" in today's political environment.

Formed in the 1960s with support from Arthur H. and Mary Marden Dean, Cornell's Lafayette Collection is unparalleled outside France. The exhibition, a collection of 11,000 original documents, manuscripts and letters, was open until April 28.

Chandni Navalkha '08 is a writer intern for the Cornell Chronicle.



FRENCH REVOLUTION COLLECTION, DIVISION OF RARE AND MANUSCRIPT COLLECTIONS/PROVIDED

The Terror: reality or propaganda?

40 years of gay student activism at Cornell is focus of new exhibition

BY BRENDA MARSTON

In May 1968, a year before the pivotal New York City Stonewall Riots, Cornell students formed a Student Homophile League (SHL) – the second gay student organization in the country, following the creation of a similar organization at Columbia University.

"Queer Cornell: LGBT student activism, 1968 – 2008" is a new Olin Library exhibition documenting some of the actions taken by Cornell's early lesbian and gay activists.

The exhibit shows, for example, that Cornell SHL students brought activist and bibliophile Barbara Gittings to campus in the fall of 1969. A crowd of 350 attended her lecture, "The Lesbian Speaks for Herself." Cornell gay activists later marched in New York City's first Gay Pride March in June 1970 on the first anniversary of the Stonewall Riots, wearing T-shirts they had silk-screened outside of Anabel Taylor Hall.

Also in 1970, Cornell students boycotted Morrie's bar in Collegetown for discriminating against those whom the owners believed were homosexual. And 10 years later, students fought for a gay-rights bill in the city of Ithaca to address discrimination by landlords, employers and businesses.

The exhibit also shows how SHL's name changed to the Gay Liberation Front, Cornell Gay Liberation, and Gay People at Cornell (or Gay PAC), and the 1979 formation of Cornellesbians. These student groups organized dances, discussion groups, peer counseling and, starting in 1971, an annual celebration of May Gay.

In 1999, the student group Direct Action to Stop Homophobia (DASH) organized an event for which queers and allies performed such "live homosexual acts" as "gayly" talking on a phone or "bisexually" shaking hands with passersby and passing out cards explaining that actions generally do not have sexual orientations. They also performed behind cardboard signs that read "bisexual playing the banjo," "lesbians kissing" and "queer with school spirit."

ALL IMAGES PROVIDED BY DIVISION OF RARE AND MANUSCRIPT COLLECTIONS

In 2003, the exhibit shows, DASH held a rally to bring attention to violence against transgender people.

The 2008 Gaypril poster in the exhibit shows that the Cornell activism is still alive. While May Gay turned into Gaypril and new generations of students have come and left their mark, the Cornell students of 1968 started a tradition of political activism, education, social events and support around issues of sexual identity that continues to this day.

The exhibition will be open through Reunion Weekend.

Brenda Marston is a historian and archivist in the Division of Rare and Manuscript Collections of Cornell University Library.

Campus Code of Conduct

continued from page 1

the UA and other members of the campus community.

"The committee members as a whole feel that the changes show a united effort to achieve the best possible code for the community," the CJC stated in a memo to the assembly.

The CJC and the UA plan to monitor the effects of the changes, and will make further changes to the code as needed.

In February, Skorton asked members of his senior staff to work with the UA leadership on further code revision after he had responded to a revision the UA had approved and presented to him in November 2007.

> **'It's an extraordinary opportunity to come together on what I think is a very reasonable compromise.'**
>
> – Charles Walcott

Three areas of the revised code remained unresolved among assembly members after discussion at the March UA meeting, and the continuing work of revision was given to a subcommittee of CJC and administration members.

In his April 30 Sun column, Skorton continued, "It seems fitting to end this year on a positive note as the debate on the code has come to equilibrium. Although at times the process has revealed lack of trust and strong disagreement among the several groups with an interest in this very important document and process, I believe recent months have reflected a 'textbook example' of shared governance at Cornell."

"It's an extraordinary opportunity to come together on what I think is a very reasonable compromise," retiring Dean of the University Faculty Charles Walcott said during discussion before the vote at the April 23 UA meeting. Walcott had participated in discussions of the code with the CJC and the UA.

One section Skorton and the UA differed on concerned the appropriateness of penalties in serious cases and when the imposed penalties may be changed.

The new revision now states that after a review board process is completed, an appeal may be made to the president to change a sanction for violations involving violence.

Regarding the role of an adviser or attorney in judicial proceedings, the proposed code ensures the right to counsel, but attorneys may only speak for their clients in hearings that may lead to suspension or dismissal from the university.

On the third issue, the "clear and convincing evidence" standard has been retained in the new code.

These latest revisions addressed both the UA's and Skorton's previous concerns. As an example of how the revised code now meets his concerns, Skorton noted in his Sun column that "more extensive involvement of third-year law students and the appointment of more judicial codes counselors were fruits of the continuing collaboration that resulted in the latest revision, as was an appeal mechanism regarding sanctions."

"As an advocate of shared governance, I would like to commend the University Assembly and the Codes and Judicial Committee for the work they have done over the past year," said Tommy Bruce, vice president for university communications. "It bodes well for the future."

UA member Dan Brown also commented on the review process: "I wanted to thank the administration for honoring shared governance – not all administrations do."

Codes committee asks for increased financial support for judicial offices

The Codes and Judicial Committee (CJC) of the University Assembly (UA) has requested that the Office of the Judicial Administrator (JA) and the Judicial Codes Counselor (JCC) receive additional funding to cover their increasing workloads.

"Both offices are understaffed and do not have sufficient office space to conduct their business," the CJC said in a memo accompanying the revised Campus Code of Conduct it submitted to the UA April 22. "The lack of permanent space is particularly crucial for the smooth operation of the office of the JCC."

The CJC also asked that the University Counsel's office participate in instructions given to hearing and review boards at the start of the academic year, and that additional law students and a designated law faculty adviser assist the JCC and JA.

"As a new code is implemented, all of these changes will assist in the overall judicial process on the campus and will help make the new code more effective," the CJC memo stated.

The assembly passed the requests on to President David Skorton, who noted in his letter to the UA accepting the revised code that he has asked his staff to study the request to allocate the additional resources to the JA and JCC offices.

Campbell

continued from page 1

uniquely positioned to assume the directorship at this critical time," Buhrman said. "There is no one more committed to ensuring the future of the observatory."

Buhrman added that Campbell is particularly well suited to present the NAIC's vision for the future to the 2010 Astronomy and Astrophysics Decadal Survey, to be convened later this year.

Campbell's research makes extensive use of the Arecibo radar systems to study the radio-wavelength-scattering properties of planets, planetary satellites and small bodies. Working with Cornell graduate students, he has recently examined the moon's polar regions for evidence of ice deposits, and used the polarization properties of reflected radar signals to investigate deposits on the surface of Venus and to look for regoliths (rocky material) on near-Earth asteroids.

Campbell is also largely responsible for Arecibo's continuing development as the world's most powerful facility for radar exploration of solar system bodies, including the moon, planets and their satellites and rings, and asteroids and comets. A former vice president of the American Astronomical Society, he earned his B.Sc. (physics) and his M.Sc. (physics – radio astronomy) from the University of Sydney and his doctorate in astronomy from Cornell.

Highlighting Arecibo's capabilities, Campbell testified before Congress last November on the importance of the telescope's radar system in identifying and tracking potentially hazardous near-Earth objects (NEOs).

"The more we know about [NEOs] in general and about specific ones that pose a threat to Earth, the easier it will be to design effective mitigation strategies," he testified. "Near-Earth objects form a very diverse population encompassing a large range of sizes, shapes, rotation states, densities, internal structure and binary nature."

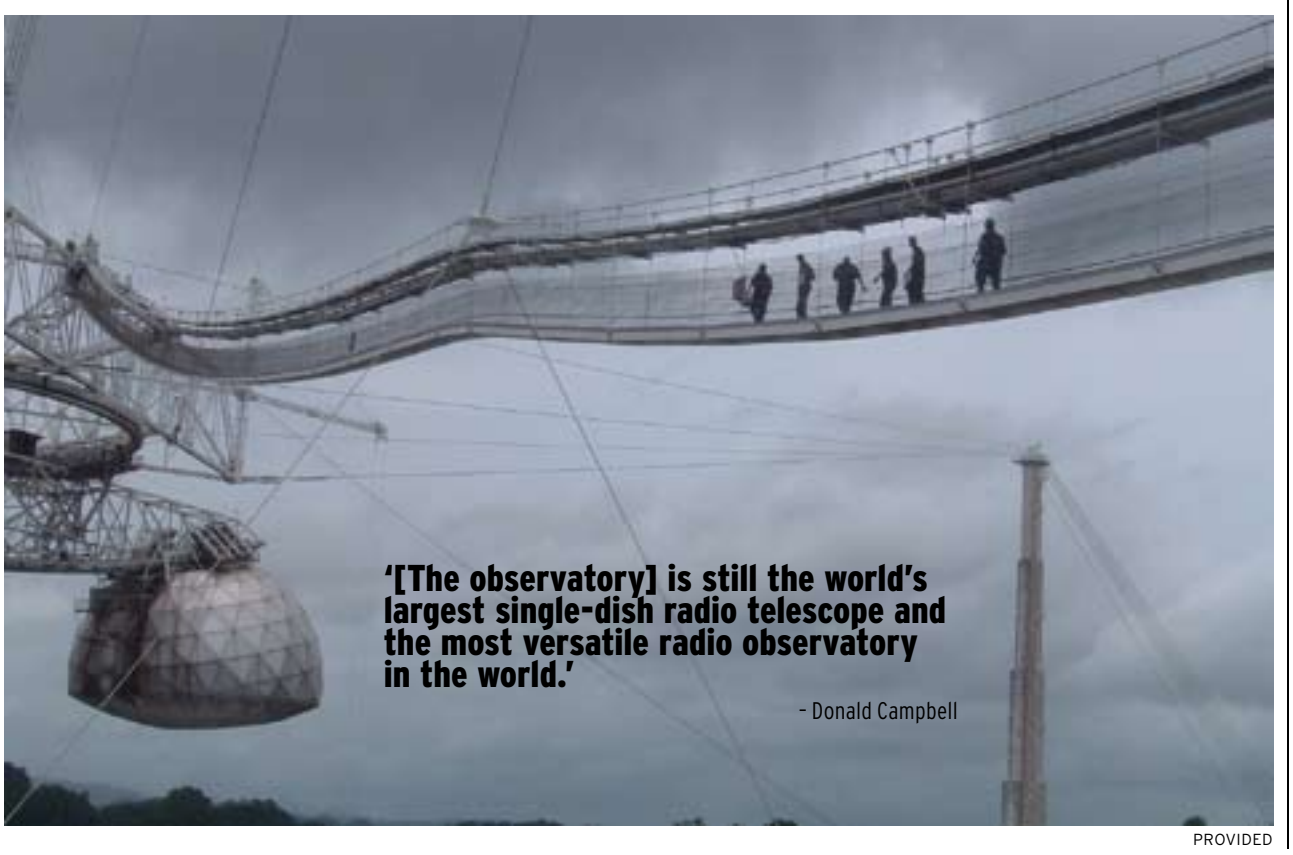
Campbell spoke this week about his close ties with the Arecibo community.

"I have spent a great deal of time both working at the observatory and living in Puerto Rico, and the observatory and all of its staff are extremely important to me," he said. "I will work with everyone who has an interest in the observatory's future to resolve the current funding issues so that the observatory's staff can concentrate full time on our research and educational missions.

"And let me emphasize, the observatory is still a forefront facility for astronomy and atmospheric research. It's still the world's largest single-dish radio telescope and the most versatile radio observatory in the world," he said.

The current and future research at the observatory ranges from the investigation of pulsars and the study of gravity to the evolution and distribution of galaxies in the universe, he noted – not to mention the continuing study of the terrestrial planets, NEOs, the Earth's upper atmosphere and space weather.

"I am optimistic that we will resolve [the current funding] issues and that the Arecibo Observatory will continue to be a major contributor to research in the areas of astronomy and atmospheric sciences," he said.



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KAUST

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A rendering of the campus of King Abdullah University of Science and Technology (KAUST).

Thuwal, is scheduled to open in September 2009. The $25 million award to Cornell will help create one of four KAUST centers for science research through the Saudi university's Global Research Partnership program. KAUST Centers at Oxford, Stanford and Texas A&M University will focus on applied mathematics, photovoltaics and computer science.

Both Cornell researchers have worked for several years to promote NIMs research, and they say the center will give the field a major boost.

"A center of this magnitude will accelerate the research and put it into the public domain," Giannelis said.

Cornell officials also will support development of KAUST's proposed KAUST Nanoscale Facility, drawing on past success with the Cornell NanoScale Science and Technology Facility. They also will provide advice on curriculum and faculty development at KAUST.

For more information, visit <http://www.kaust.edu.sa>.

NIMs are nanomaterials that act as both liquids and solids

The materials that Cornell scientists will be researching in the new CU-KAUST center have the characteristics of both liquids and solids.

They are called nanoparticle-based ionic materials (NIMs) and they are a new class of hybrid nanomaterials, meaning they are both organic and inorganic.

First developed at Cornell, they are believed to hold potential for applications in water desalination, carbon capture and solar energy.

NIMs are made by mixing nanoparticles with polymers. The resulting hybrid material maintains the structural integrity of the nanoparticles, yet is liquid at temperatures well below the melting temperature of either the polymer or the nanoparticle.

Nanoparticles and nanostructures already transformed by Cornell scientists include silicon dioxide, titanium dioxide and fullerenes. These new materials undergo reversible phase changes, are able to form solutions with other liquids and act as solvents. They also flow smoothly, as viscosity changes with room temperature.

How a Cornell team's study of horses is providing insights into a predicted human flu pandemic

BY METTA WINTER

Stored safely in a freezer at Cornell's James A. Baker Institute for Animal Health are samples of the virus thought to be most like the one public health experts expect someday to afflict record numbers of the world's population. The virus was collected in 1973 during an outbreak of equine influenza at a Florida racetrack. Dorothy Holmes, an infectious disease specialist in Cornell's College of Veterinary Medicine, had obtained samples of the virus with the intention of using it to create nasal spray vaccines for horses.

Now, 35 years later, Cornell scientists have the rare chance to study the behavior of the organism to figure out why this particular virus, an H7 serotype, outperforms all other serotypes in its lethal powers. The study is supported by a seven-year, $3 million award from the National Institutes of Health.

"Influenza H7 is unique in its capability to invade not only the lungs but other parts of the host's body, including the brain, and this is why it's so dangerous," explains Gary Whittaker, an associate professor of virology who leads the project.

All the action takes place where the virus enters the host's cells. To study what goes on there, Whittaker, a specialist in the entry mechanisms of viruses, has assembled a team of experts and computational resources from across campus. They include Daniel Ripoll, a senior research associate with the Computational Biology Service Unit at Cornell, who has created a computer-generated 3-D model of the molecular structure of the H7 influenza virus coat protein (hemagglutinin or HA, for short). This is the molecule responsible for enabling the influenza virus to recognize a cell and invade it.

"With this model we can look inside the structure of the virus and make a really good prediction of what's going on," Whittaker explains. "Without it we'd be shooting completely in the dark."

In preliminary studies, funded by Harry M. Zweig Memorial Fund for Equine Research, Whittaker found a surprising stretch of amino acids, the molecules that are the building blocks of a protein (tinted pink in illustration).

"That stretch fascinates me," Whittaker says. "No other influenza ever in any species has this sequence apart from equine H7 virus."

It's the exposure of this sequence that Whittaker believes controls the virus's ability to invade the tissues of many regions of the body rather than just the lungs, as do the currently circulating equine influenza (H3) and human influenza (H1 and H3).

Structural biologist and co-investigator Brian Crane, an associate professor of chemistry and chemical biology, is focusing on the static structure of HA. It is known that when viruses enter cells they undergo a change in their structure. Collaborator Lois Pollack, an associate professor of applied and engineering physics, is interested in the dynamics of this change – how the protein undergoes a change in shape and structure when entering the cell. Susan Daniel, an assistant professor of chemical and biomolecular engineering and an expert in using solid-supported lipid bilayers as mimics of cell membranes, is looking at what happens next, when the virus enters the host's cell and contacts the plasma membrane of the cell (which is a lipid).

"With this highly talented group of people, we can go deeper and deeper into the mechanism of how the virus recognizes the cell and undergoes its conformational change, right through to when it fuses with the lipids," Whittaker explains.

There is another equally compelling reason to study the activity of surface proteins of the equine influenza virus.

"Mutations occurring at the entry site are very often what allow host switching; that is, the virus's ability to jump from one species to another – say from birds to horses or from birds to people," Whittaker points out.

LEXY ROBERTS/PROVIDED

Gary Whittaker

The H7 serotype – the first documented equine influenza virus – was isolated from an equine outbreak in Czechoslovakia in 1956 that spread around the world. Subsequently it was shown that the virus was a very highly pathogenic H7 virus in chickens and other birds that had moved into horses. Now H7 is prevalent in birds, a fact that gives public health officials great concern.

Whittaker thinks there's a significant probability that the characteristics of H7 (which has never been studied in any kind of molecular detail before) as it infected horses in the 1950s would be similar to the characteristics of virus behavior when the next virus pandemic occurs in horses and in humans.

"The horse," Whittaker says, "can give incredibly valuable information for our global understanding of influenza."

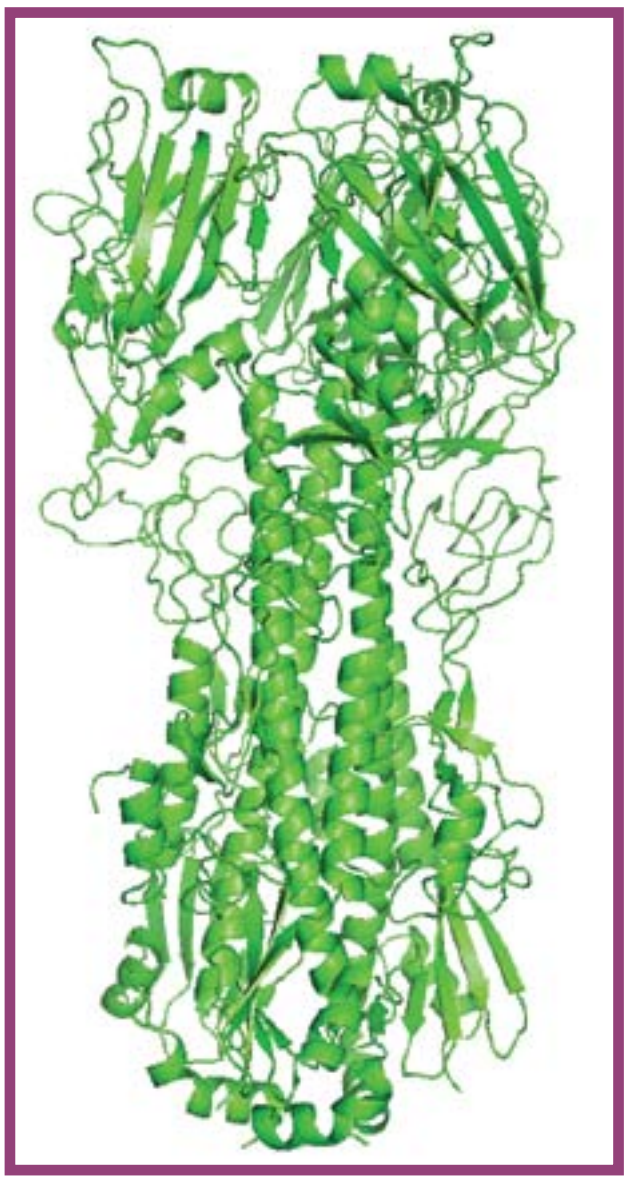
The investigators also plan to study the serotype of the virus that caused the 1918 flu pandemic and today's avian influenza serotypes to try to figure out what distinguishes those from flu viruses now circulating in the human population.

"We've shown that there's clearly an obvious difference between equine and avian viruses, but those between the human and avian viruses are more subtle, so we're going to have to do more work to find out what's going on there," Whittaker explains.

Metta Winter is a writer with the Office of Publications and Marketing.

'Influenza H7 is unique in its capability to invade not only the lungs but other parts of the host's body, including the brain, and this is why it's so dangerous.'

– Gary Whittaker, associate professor of virology



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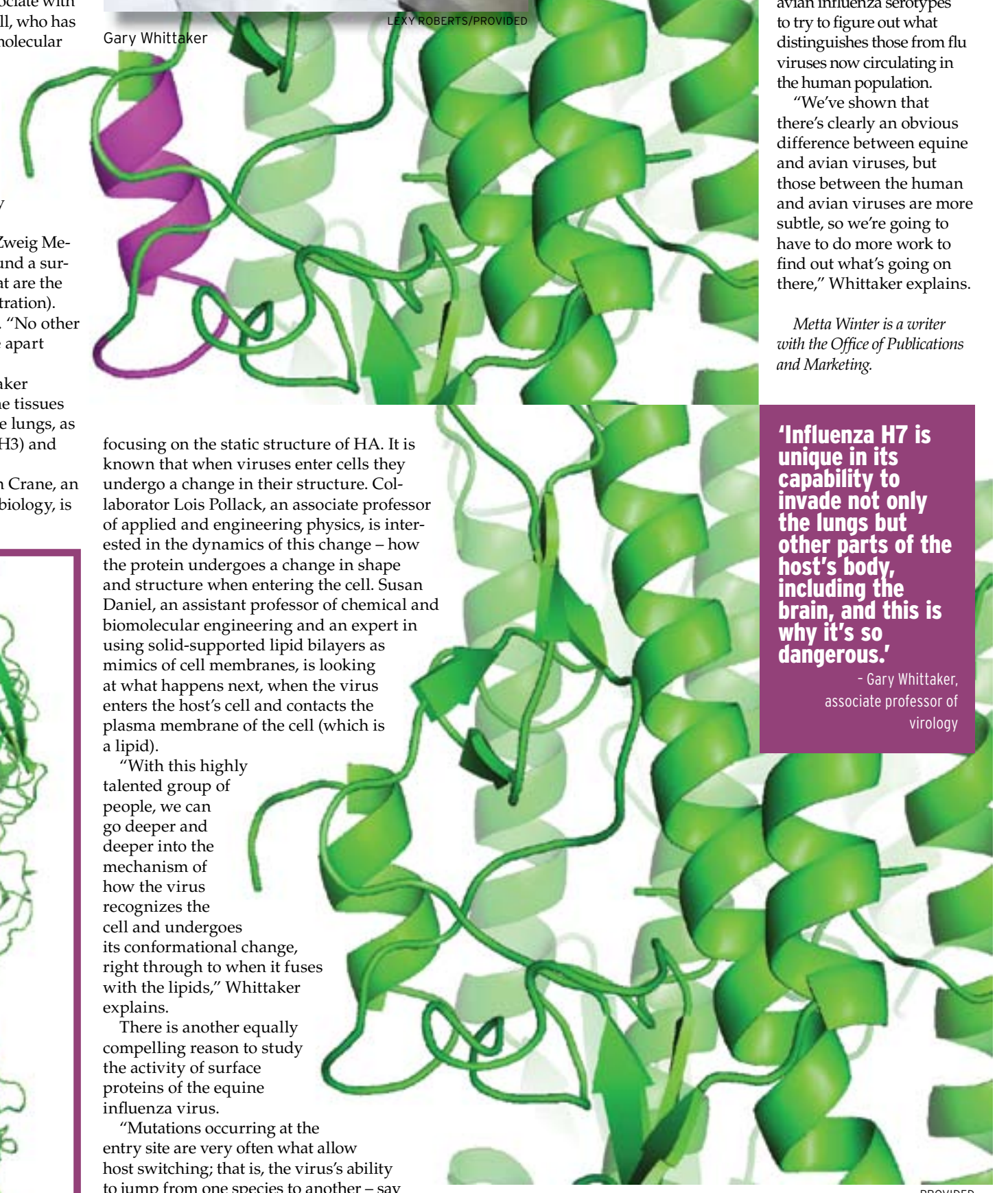

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Left: A computer-generated three-dimensional model of the molecular structure of the H7 influenza virus coat protein (hemagglutinin or HA, for short), the molecule responsible for enabling the influenza virus to recognize the host's cell and invade it.

Top: The spiral strand in pink is adjacent to a polybasic stretch of amino acids that become exposed at the cleavage site, making it possible for a respiratory virus to infect any tissue in the body, hence becoming a systemic lethal infection. **Bottom:** A closer view of this region allows Whittaker to identify it as the "cleavage site" where a stretch of amino acids is clipped by proteases released from cells in the lining of the horses' lungs. If the HA isn't cleaved, the virus remains totally non-infectious because it can't invade the host's cells.

Max Zhang uses cities as air-quality laboratories, including Olympic capital, Beijing

BY ANNE JU

As the world watches China prepare for the Olympic Games, Cornell researcher Max Zhang has his eye on less visible matters – the particles in Beijing's air that millions breathe every day, and that many more will be breathing when they descend on the city this summer.

The assistant professor in Cornell's Sibley School of Mechanical and Aerospace Engineering is leading a project to study the air quality before, during and after the Olympic Games, which begin Aug. 8.

Zhang's general research interests lie in what happens to the particles emitted from cars, trucks and power plants.

"I am interested in how these particles are made and how they disperse – how they transport and transform in the air," Zhang said.

Although scientists have been studying the adverse effects of breathing urban air pollutants for years, Zhang notes that as combustion engines have become increasingly efficient, their exhaust particles have gotten smaller and more easily absorbed by the body.

Modern engines, he also notes, emit many more particles smaller than 100 nanometers than do older engines (a nanometer is one-billionth of a meter). And nanoparticles are rapidly transformed in the atmosphere, Zhang points out. When particles are emitted from the tailpipe of a car, they can be 50 nanometers. But after traveling just 100 meters (11 yards), the particles can shrink to about 20 nanometers.

"In that short distance, the particles you are breathing are very different from what's being emitted," said Zhang, who is originally from Qufu, China.

'I am interested in how these particles are made and how they disperse – how they transport and transform in the air.'
– Max Zhang

In 2006 the Chinese government began massive efforts to clean up Beijing before the Olympics by implementing emission controls and traffic restrictions. Zhang realized he could use the city as a laboratory to see if the efforts would work and to what extent.

Zhang and graduate student Xing Wang traveled to Beijing in the summer of 2007 to take initial measurements of airborne particles in various spots around the city, from heavily trafficked highways to residential communities – even inside restaurants. They used real-time analytical instruments to capture the changes in particle size and concentrations in a matter of seconds.

Zhang plans to repeat tests in Beijing during the Olympics, and then again a year later. The study is supported by Cornell's Jeffrey Sean Lehman Fund for Scholarly Exchange with China and the U.S. Environmental Protection Agency.

Zhang also is collaborating in an air-quality project in Syracuse, N.Y., helping to design a controlled ventilation system for a building to be placed at the intersection of interstates 81 and 690 – a major hub in downtown Syracuse. The building will house the Syracuse Center of Excellence in Environmental and Energy Systems, which is funding the study.

The ventilation's control system would turn up or down, depending on the quality of air around the building at any given time. To design it, Zhang is using cameras to measure traffic levels. He is developing computer algorithms to simulate how the plume of pollution would disperse into the building.

"I think it's novel in terms of linking the building to the surrounding environment," he said.

UNIVERSITY PHOTOGRAPHY Zhang in his Grumman Hall office.

"When people think about a building, they only think about the building alone. They never think, 'The building has to be somewhere.'"

Zhang is excited at the opportunity to work on such a project, because he has long studied traffic dispersion and how it relates to the air people breathe.

"The cities are my laboratory," he says.

He also is working on air quality studies in Rochester and in South Bronx, N.Y., where high rates of asthma in schoolchildren are believed to be caused by heavy, prolonged traffic congestion.

Background: A view of Beijing, August 2007.
Below left: The computer equipment that helps Zhang take measurements of air quality.

Xing Wang, a mechanical and aerospace engineering graduate student who works with Max Zhang, in Beijing during August 2007. The Olympic Stadium is in the background.

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Edited by Lauren Gold LG34@cornell.edu

FOCUS ON weill cornell medical college

Antioxidant therapy shows early promise for preventing, perhaps reversing, Alzheimer's disease

BY ANDREW KLEIN

Curbing harmful processes in the brain's vasculature set off by the enzyme NADPH oxidase may reverse some of the cognitive decline associated with Alzheimer's disease, according to new findings published in a recent issue of the Proceedings of the National Academy of Sciences.

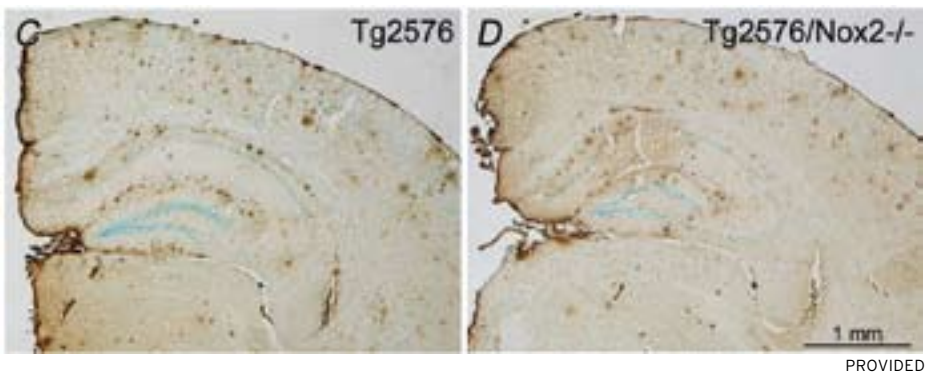
Identifying the enzyme's role in dementia could translate into a new drug target for Alzheimer's disease in humans.

Costantino Iadecola, the George C. Cotzias Distinguished Professor of Neurology and Neuroscience at Weill Cornell Medical College and chief of the Division of Neurobiology at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, led the research, which found that after the enzyme was genetically "switched off," mice with a type of dementia mimicking Alzheimer's regained important cognitive abilities.

The amount of Alzheimer's-linked amyloid plaques in the brains of the mice remained unchanged, indicating that NADPH oxidase, which produces toxic free radicals, independently influences the progression of dementia.

The researchers also genetically engineered mice that produced a mutated form of NADPH enzyme that did not produce the toxic free radicals. The result: The formerly "demented" mice regained their healthy, exploratory behaviors. According to the authors, the findings suggest that neurological damage from Alzheimer's may not be permanent and might even be reversed through antioxidant treatment.

Andrew Klein is a staff writer at Weill Cornell Medical College.



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Amyloid plaques in the brain of the mice with Alzheimer's disease. The plaques are the brown spots distributed throughout the brain.

AMELIA PANICO/WCMC/PROVIDED

Luis Quadri, associate professor of microbiology and immunology at WCMC, is developing a new way to treat tuberculosis, leprosy and other bacteria-caused illnesses.

New hope to aid compromised antibiotics comes with era of 'anti-infectives' that prevent pathogens from spreading

BY ERNIE MUNDELL

For more than six decades, doctors have been waging war against infectious bacterial illness with antibiotics, the best weapon they have. But they are losing ground as more strains of tuberculosis and other potentially fatal infections become resistant to multiple antibiotics.

Now, researchers from Weill Cornell Medical College (WCMC) say there is an alternative, potent way to treat tuberculosis, Hansen's disease (leprosy) and other bacteria-caused illnesses: by inhibiting molecular targets – the so-called "virulence factors" that help bacteria thrive once they are in the host.

The researchers have developed the first inhibitor of a key small molecule from *Mycobacterium tuberculosis*, which subverts the human host's defenses, and *M. leprae* (which causes leprosy), which damages the host's cells during infection.

"With this work, we now have proof of principle for the inhibition of this virulence factor in bacteria cultured in the lab," said lead researcher Luis Quadri, associate professor of microbiology and immunology at WCMC. "Our next step is to explore whether this inhibitor can stop these pathogens from multiplying in a mouse host, curtailing infection."

The findings, published recently in the journal Chemistry and Biology, highlight what Quadri called a "paradigm shift" in infectious disease research.

"We are moving beyond anti-microbials such as antibiotics, which kill the bacterium directly, to anti-infectives that may have no effect against the pathogen in the test tube but which do compromise its ability to infect and spread in the host," he said. "We believe that the expansion of the drug armamentarium to include such anti-infective drugs could help the fight against multidrug-resistant infection that has become such a challenge today."

Tuberculosis is among the 10 leading causes of death globally, killing nearly 2 million people annually. Multidrug resistant strains of *M. tuberculosis* – as well as even more dangerous, extensive-drug-resistant strains of the bug – are emerging each year.

"Obviously, we are going to require more than the traditional anti-microbial approach to turn this situation around," Quadri said.

In the latest study, Quadri, with co-lead researchers Julian Ferraras and Karen Stirrett, focused on particular small-molecule virulence factors called phenolic glycolipids (PGLs), which are used by various strains of *M. tuberculosis* to weaken the body's defenses and by *M. leprae* to damage and invade nerve cells during infection.

The researchers hypothesized that drugs blocking PGL synthesis would reduce their impairing effects on the host system. To test the idea, they pinpointed a key enzyme, called FadD22, that is essential to PGL synthesis. Working with Memorial Sloan-Kettering Cancer Center researcher Derek Tan, they synthesized a molecule that targets FadD22.

'... you'd ideally like to have as many pharmaceutical weapons in your armamentarium as you can ...'

– Luis Quadri

Follow-up work confirmed that the new inhibitor does block the production of PGLs. Although it was technically not possible to test the inhibitor in *M. leprae*, that pathogen is very closely related to *M. tuberculosis*, so the researchers believe their agent would inhibit production of PGLs there, as well.

Work is already under way to come up with other, even more potent PGL biosynthesis inhibitors, with an eye to testing the best candidates in an animal model, said Quadri.

"We are not saying that anti-infectives will ever replace antibiotics, but with pathogens as deadly as *M. tuberculosis* or as debilitating as *M. leprae*, you'd ideally like to have as many pharmaceutical weapons in your armamentarium as you can, to use either alone or in combination," Quadri said, noting that the findings are highly encouraging.

"Drugs targeting virulence factors … will offer patients more options in the fight against truly global killers," he said.

The research was funded by the National Institutes of Health; the Stavros S. Niarchos Foundation; New York State Foundation for Science, Technology and Innovation Watson Investigator Program; William H. Goodwin and Alice Goodwin; the Commonwealth Foundation for Cancer Research; and Memorial Sloan-Kettering Cancer Center Experimental Therapeutics Center.

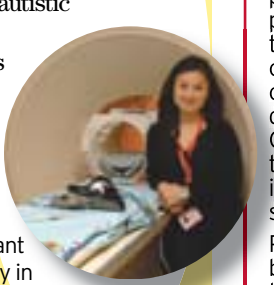
Ernie Mundell is a freelance writer in New York.

spotlight ON AUTISM STUDY

A key to helping people with autism better remember faces and distinguish facial emotion may be in training them to focus more on people's eyes.

In an ongoing study, Nim Tottenham, assistant professor of psychology in psychiatry at Weill Cornell Medical College, is examining how normal and autistic brains behave when viewing faces. While their brain is scanned in an fMRI machine, subjects look at a computer screen displaying different faces with various facial expressions. Each subject is motivated by a visual cue – a star symbol – to draw his or her attention to either the eyes or mouth on each face. Facial recognition areas in the brain are recorded by the fMRI, and eye movements are tracked with a camera.

Early data in both healthy and autistic subjects show that the facial recognition area of the brain becomes active only when a subject looks at the eyes. The research team hopes that early intervention with this technique in autistic children might help to train the brain to focus on others' eyes in order to improve facial recognition early in life.



Nim Tottenham, assistant professor of psychology in psychiatry at WCMC.

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What's happening

Postdocs of all stripes to share their work at universitywide event May 8

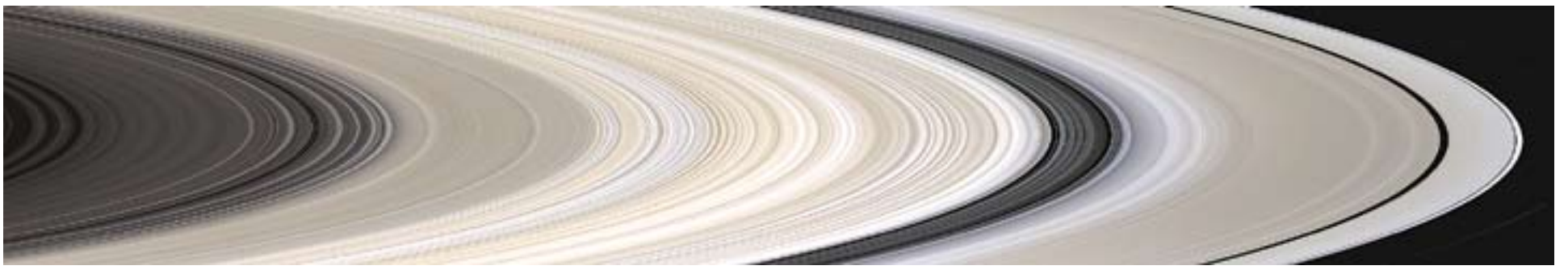
Postdoctoral researchers from Cornell in Ithaca and WCMC in New York will come together in Ithaca May 8 for the second annual Postdoc Research Day. More than 50 speakers and poster sessions will highlight the broad array of research going on across the university's campuses.

The day will begin at 8:30 a.m. in G10 Biotech with welcome remarks by Stephen Kresovich, vice provost for life sciences, and conclude at 8 p.m. with an evening reception. Joseph Vacca, executive director of medicinal chemistry at Merck Inc. will deliver the keynote speech at 5:15 p.m., which will be followed by an awards reception at the Big Red Barn. Breakfast and lunch will be provided. All events are open to the Cornell community.

"Postdoc Research Day will enable postdocs to gain valuable experience presenting their work and allow them to draw important multidisciplinary connections across the postdoc community," said Christine Holmes, director of postdoctoral studies at Cornell. "The event will also make the postdocs' research more visible to Cornell faculty and graduate students."

Postdoc Research Day is sponsored by the Graduate School and hosted by the Office of Postdoctoral Studies.

Saturn images captured by Cassini mission now on view at American Museum of Natural History



NASA/JPL/SPACE SCIENCE INSTITUTE

The natural color of pure water ice in Saturn's rings is white, but specks of other materials contaminate the ice particles to create the delicate hues of taupe and gray.

BY KANIKA ARORA

A selection of never-before-seen images of Saturn, its rings and moons are now on display at the American Museum of Natural History in New York City.

"Saturn: Images From the Cassini-Huygens Mission" features dramatic photographs captured by NASA's Cassini orbiter and the European Space Agency's Huygens lander. Launched on Oct.15, 1997, Cassini was the first spacecraft to orbit Saturn. The images, taken in visible and infrared light and radar, have been hand-picked by a team of Cassini scientists.

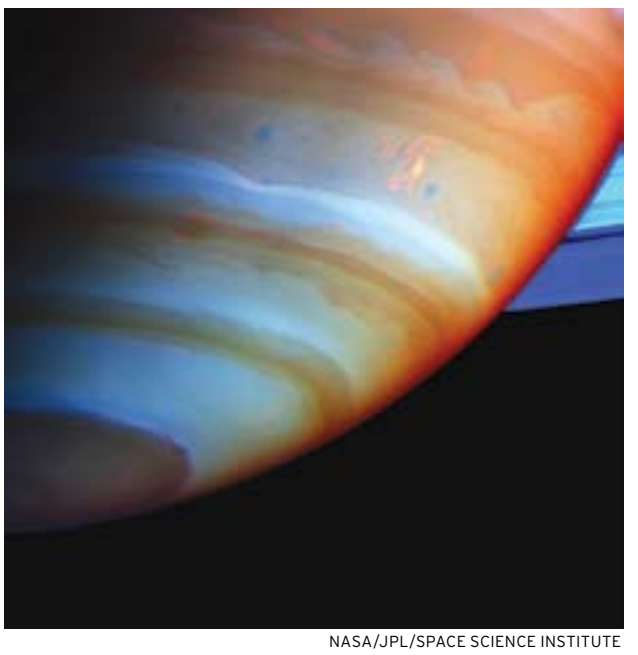
The exhibition, which features both up-close-and-personal images in small individual views and super-large mosaics, is divided into four sections: Saturn (the planet and its atmosphere), Ringed World (about Saturn's rings), Titan and Enceladus (Saturn's geologically active moons) and Many Moons (Saturn's other moons).

Among its most dramatic images are photographs of:

- Bizarre cyclones, high-speed winds and bolts of lightning, including "Dragon Storm," a photo of an Earth-sized thunderstorm in Saturn's southern hemisphere;
- Dramatic color variations of the ringed planet, including a pale orange-brown view of Saturn from Earth;
- Titan, the largest of Saturn's more than 60 moons, taken by the Huygens probe, which separated from Cassini and parachuted to the moon's surface in 2004. Images reveal an Earthlike landscape with rivers and lakes (made of liquid methane) flowing into basins and Titan's dense atmospheric cover, which is mainly made of nitrogen.
- Giant geysers of ice particles erupting from the smaller icy moon, Enceladus, whose surface temperature hovers at about -200 degrees Celsius.
- Iapetus, Saturn's third-largest moon, whose equatorial mountain range on its heavily cratered surface resembles the outer ridge of a walnut shell.
- The sun illuminating Saturn from one side, with the rings casting shadow on the planet, and the planet's shadow obscuring the rings on the other side.

Kanika Arora, MPA '07, is a Cornell Chronicle writer in New York City.

http://www.amnh.org/exhibitions/photo/saturn/

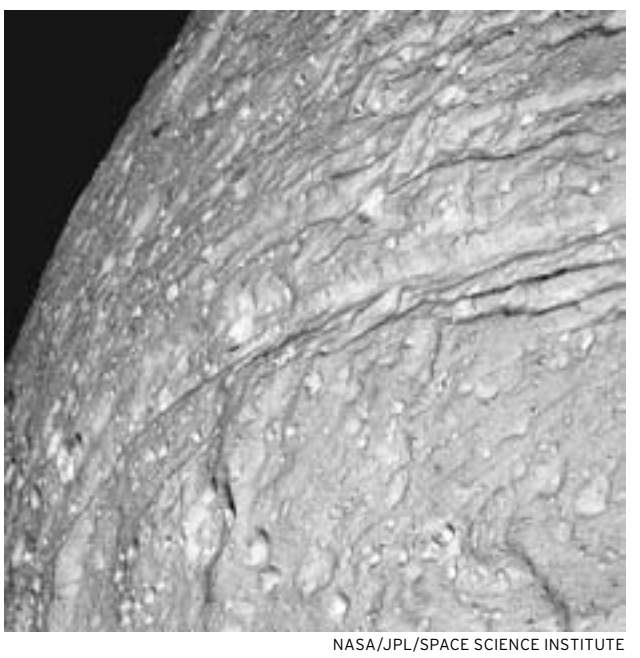


NASA/JPL/SPACE SCIENCE INSTITUTE

"Dragon Storm," an Earth-sized bright, long-lived thunderstorm, flares in Saturn's southern hemisphere.

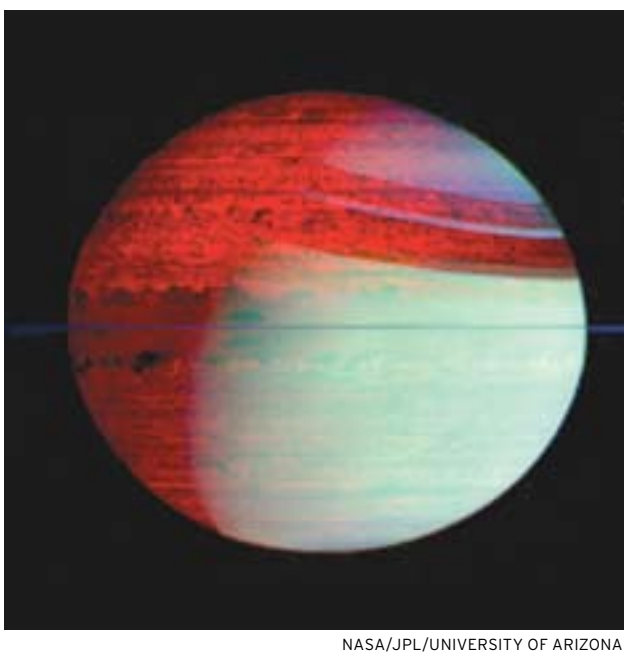
NASA/JPL/SPACE SCIENCE INSTITUTE

Craters and bright wispy streaks, which are actually ice cliffs, mark the face of Dione, Saturn's fourth-largest moon.



NASA/JPL/SPACE SCIENCE INSTITUTE

Scoured by tiny ice grains from Saturn's outermost E ring, the surface of the moon Tethys is one of the most reflective in the solar system.



NASA/JPL/UNIVERSITY OF ARIZONA

This false-color image combines pictures taken at three different infrared wavelengths. Saturn's rings, viewed edge-on, are the thin blue line across the center of the image.

Saturn *continued from page 1*

a whole. But the images have also captivated nonscientists with their sheer beauty.

Now, 62 of those images are on display at Manhattan's American Museum of Natural History, along with associated graphics and a quarter-scale model of the spacecraft. The exhibit, "Saturn: Images From the Cassini-Huygens Mission," opened April 26 and will be in place until March 29, 2009.

It was one ethereal image – of the planet and all its rings, in delicate detail and backlit by the sun – that set the planning for the exhibit in motion in 2006.

"It glowed," said Elizabeth Bilson, retired administrative director for Cornell's Center for Radiophysics and Space Research, who saw the image in Cornell Alumni Magazine. "I thought, it is not only science but also sheer aesthetic pleasure."

Bilson floated the idea of a museum exhibit to colleague and friend Joe Burns, a member of the Cassini imaging team and Cornell professor of astronomy.

"Everybody knows how beautiful the rings are," said Burns, who is also the Irving Porter Church Professor of Engineering and a vice provost for research at Cornell. "But the variety we've seen and some of the phenomena we've seen have been really surprising. The satellites have been more beautiful than we expected. And the science has been much better than we expected."

'I thought, it is not only science but also sheer aesthetic pleasure.'
– Elizabeth Bilson

With postdoctoral researchers Matt Tiscareno and Matt Hedman, Burns selected about 100 images collected by the spacecraft since 2004. Bilson, graphic designer Judy Burns (Joe Burns' wife) and other members of the Cassini imaging team added input.

"We tried to choose images that were beautiful and also contained interesting planetary findings. On this mission, that was easy to do – the show has no murky photos that might appeal only to science geeks," said Burns.

When the Manhattan museum and other institutions showed interest, the team worked with Cornell's University Photography and Eastman Kodak Co. to refine and print the images. The exhibit is supported by NASA, Kodak and the Arthur Ross Foundation. Burns is guest co-curator, with museum associate curator Denton Ebel and curator Mordecai-Mark Mac Low.

"Everybody contributed – it's been magnificent," said Burns.

Meanwhile, the exhibit, which will come to Cornell's Herbert F. Johnson Museum of Art after its Manhattan debut, may be just the beginning of Cassini-inspired art.

Using images from the mission (as well as historical Saturn images from Olin Library's History of Science collection) composer Roberto Sierra, the Old Dominion Foundation Professor in the Humanities at Cornell, will spend the summer at work on an original composition in honor of the ringed planet.

The Cornell Symphony Orchestra will debut the piece – and perform Gustav Holst's "The Planets" – at the annual meeting of the Division for Planetary Sciences of the American Astronomical Society in Ithaca in October. The orchestra is conducted by assistant professor of music Chris Kim.

And the Cassini-Huygens mission itself, which was originally scheduled to end this July, recently got the nod from NASA to continue for another two years.

Which is most welcome news, said Burns. "Because we have not seen all we want to see, by a long shot."

The mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. The Cassini orbiter was designed, developed and assembled at the Jet Propulsion Laboratory, which manages the mission for NASA.

Mother's Day special: With straw and plastic, a one-acre flower is 'painted' for sky viewers

BY CRAIG CRAMER

A group of Cornell students will unveil what may be the largest temporary artwork in Ithaca's history on Mother's Day, May 11.

Titled "Turfwork!," the flowerlike design covers more than an acre and is intended to be viewed from the air.

"Passengers flying in and out of Ithaca and people flying in to the East Hill Flying Club Mother's Day breakfast will have the best view," said Marcia Eames-Sheavly, senior extension associate in Cornell's Department of Horticulture.

Eames-Sheavly, along with artist Jeff de Castro, guided the students through a rigorous semester-long creative process that led to the design and installation of the piece.

"The students did all the work – creatively and physically," Eames-Sheavly said. "Their goal was to create a simple, powerful, sensory surprise with maternal overtones, nestled into the landscape. And they did a great job."

For their canvas, the students used a field at Cornell's Bluegrass Lane Landscape Horticulture Field Research Facility adjacent to the Robert Trent Jones Golf Course. They "painted" their design into the grass using mulch, straw and black plastic to temporarily turn the grass yellow in places. The student artists include Zach Aburahma, Pete Cadieux, Danielle Hodgins, Sven Kalim, Mary LaFrance, Michael Panich, Flisa Stevenson and Brett Welch.

"The staff and manager at the facility pitched in and offered tremendous support for the project," added Eames-Sheavly.

The work was made possible by a grant from the Cornell Council for the Arts.

Visitors can visit the site, just east of Warren Road on Bluegrass Lane, on Mother's Day from noon to 2 p.m. when students will be on hand to answer questions.

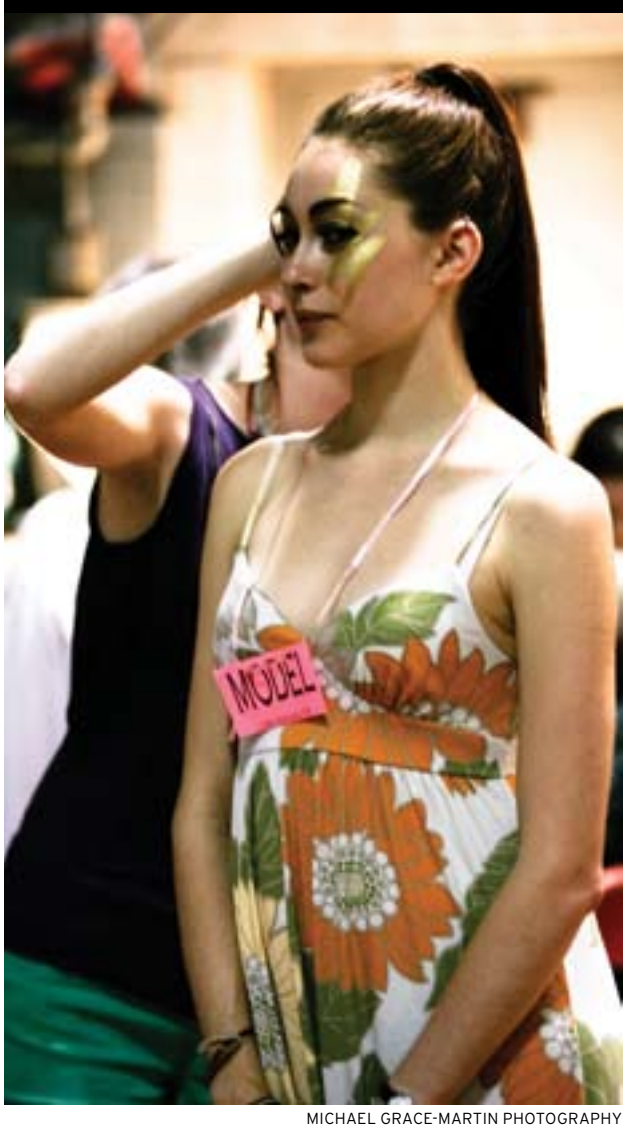
For more information, contact Eames-Sheavly at <me14@cornell.edu>.

Craig Cramer is an extension support specialist in the Department of Horticulture.

CRAIG CRAMER/PROVIDED

Above: Students begin construction of the "Turfwork!" project on a field at Cornell's Bluegrass Lane Landscape Horticulture Field Research Facility. **Inset:** A simulation of the planned design as it would appear from above (simulation/illustration by Michael Panich).

'Color Me Couture'



MICHAEL GRACE-MARTIN PHOTOGRAPHY

Claire Louge '08 prepares to model in "Free the Runway," the 24th annual Cornell Design League spring fashion show, held April 26 in Barton Hall. Some 85 designers dazzled the audience with their use of color, design, prints, wigs, masks, makeup and accessories. The designs ranged from a green paisley bathing suit (accessorized with black fur leg warmers) to a gold-metallic form-fitting evening gown, set off with a pair of wings to a T-shirt that read "Color Me Couture." For more information, visit <http://www.human.cornell.edu/che/fsad/cdl.cfm>.

A tree grows in White Plains: Blight-resistant chestnut honors Ezra Cornell and launches CCE White Plains project

BY JACQUELINE DOWDELL

A 12-foot blight-resistant American chestnut tree – with a hearty 3,000 pound mass of roots – has been planted in honor of Ezra Cornell in White Plains, N.Y., about 30 miles from his birthplace, to launch a new project to help restore the American chestnut tree to New York state.

The community-based research and educational program will attempt to develop blight-resistant characteristics in the American chestnut variety via a partnership of Cornell Cooperative Extension (CCE) of Westchester County; Elisabeth Radow '78, who initiated the partnership to establish a living tribute to Cornell; Marshal Case '64, president of the American Chestnut Foundation (ACF); Cornell alumni; and the city of White Plains.

At a commemoration ceremony in the J. Harvey Turnure Memorial Park, April 24, where the tree was planted, the Westchester community honored Ezra Cornell's vision, legacy and dedication to the pursuit of hands-on, practical knowledge embodied in Cornell's land-grant mission.

Through research and breeding, the ACF works to restore the American chestnut tree to the northeastern United States. The tree has been endangered from chestnut blight, a lethal fungus infestation, since the early part of the 20th century. Chestnut blight not only altered the landscape of the region's woodlands but also severely impacted rural economies, which depended on the American chestnut's nut and lumber harvests.

The ACF estimates that before the blight 4 billion chestnut trees covered 200 million acres of woodlands.

"This tree represents how positive forces can bring people together," said Radow, who acted as co-sponsor with the ACF to bring the Virginia-born American chestnut tree to White Plains. The tree is a product of the foundation's blight-resistant breeding program.

PROVIDED

From left, Ken Almstead of Almstead Tree & Shrub Care (and a CCE of Westchester County board member); Elisabeth Radow '78; White Plains Parks Commissioner Arnie Abramowity; Marshal Case, president of the American Chestnut Foundation and a Cornell alumnus; Barbara Sacks, executive director, Cornell Cooperative Extension of Westchester County; and White Plains Mayor Joseph Delfino.

Four White Plains employees, who graduated from CCE's Certified Tree Steward Program, will help monitor the tree, said Barbara Sacks, executive director of CCE of Westchester County. The tree steward program has taught more than 40 public employees in Westchester's departments of public works, highways and parks in the proper siting and care of urban trees.

Since the CCE chestnut program partnership began, other Westchester County organizations have become interested in planting two smaller chestnut trees in the community, said Sacks.

Jacqueline Dowdell is communications coordinator for Cornell Cooperative Extension.

Kleinberg

continued from page 6

gifted colleagues," Kleinberg said.

After graduating from Cornell with a major in mathematics, Kleinberg received his Ph.D. at the Massachusetts Institute of Technology in 2005 and joined the Cornell faculty in 2006. Along the way he developed network-optimizing algorithms at Akamai, a company that provides a mirroring service for online businesses, and that work now moves some information on the Internet a bit faster.

Microsoft established the New Faculty Fellowship program in 2005 to identify and support promising researchers who "have the potential to make a profound impact in their respective disciplines." Five applicants were selected from more than 100 nominations from universities across the United States and Canada. Kleinberg has also received a National Science Foundation Early Career Grant and an Alfred P. Sloan Foundation fellowship.

This is the second year in a row a Cornell faculty member has received a Microsoft New Faculty Fellowship. Last year Adam Siepel, Cornell assistant professor of biological statistics and computational biology, was among the recipients.

WorkLIFE

DIVISION OF HUMAN RESOURCES ONLINE: www.ohr.cornell.edu

Program for office professionals draws 1,000 staff members

BY NANCY DOOLITTLE

Twenty years ago, the late Jennie T. Farley '54, M.S.'69, Ph.D.'70, a determined champion of women's rights, co-founder of Cornell's Women's Studies Program and professor of industrial and labor relations, founded Cornell's Office Professionals Symposium to recognize National Secretaries Day. A brown-bag lunch, the symposium drew about 50 people.

This year, the annual event, which in 2003 was renamed the Jennie T. Farley Office Professionals Celebration, drew more than 1,000 people to a complimentary luncheon in Barton Hall, April 23.

Speaking before the crowd, Jennifer Tiffany Wright, Farley's granddaughter and a high school freshman in Phoenix, shared her memories of her grandmother, who encouraged young people to reach for their potential and was widely known for her work advancing the status of women managers, academics and clerical staff.

Other members of Farley's family also attended, and President David Skorton thanked Cornell's office professionals for being the "front lines" that make Cornell's working environment as optimal as possible. He noted that the office professionals are "the reason that our atmosphere is so good. ... you have a never-ending hunger and thirst to do better ... with professional excellence and caring for each other." He cited some of Cornell's recent workplace awards and achievements as indicators that "we are on the right track, not that the journey is over."

Skorton also recognized several staff members – Craig Beaver, Ray Dalton and Terri Whitaker (who had saved a student's life this past January using CPR and a defibrillator) – who had come to his attention this past year. They exemplify, he said, the caring that office professionals and other staff members bring to their jobs every day.

SHAI EYNAV/SHAI EYNAV PHOTOGRAPHY

In front of over 1,000 office professionals, staffer Oren Johnson from the Office of Student and Academic Services, College of Veterinary Medicine, awaits knife-throwing Jugglenauts, who promise to burst the balloon (and did).

Attendees were entertained by the a cappella groups After Eight and the Class Notes, and by Cornell's only student juggling group, the Jugglenauts. More than 85 prizes and 18 grand prizes were awarded by random drawing.

The annual celebration to recognize office professionals is organized by a planning committee, co-chaired this year by Traci Morse, Kathleen Snyder and Marilyn Willkens with members Paula Euvrard, Angela Hartman, Kenna Morehouse, Sandra Redfield, Sheila Robideau and Amy Sindone.

Farley – a former member of Cornell's Board of Trustees and an advocate for affirmative action – would have been proud.

Cornell again honored for its adoption benefits

For the second consecutive year, the Dave Thomas Foundation for Adoption has announced that Cornell has been named to its "Top 100 Adoption-Friendly Workplaces" list, which recognizes U.S. employers that offer outstanding employee programs for adoptive parents.

The foundation recognized Cornell's ongoing efforts to create such inclusive employee policies as awarding up to $5,000 in financial assistance for employees who want to adopt children.

'This award helps verify Cornell's wide-ranging efforts to create a welcoming work environment for people from all walks of life.'
- Lynette Chappell-Williams

"This award helps verify Cornell's wide-ranging efforts to create a welcoming work environment for people from all walks of life," said Lynette Chappell-Williams, director of Cornell's Office of Workforce Diversity, Equity and Life Quality.

In February, Cornell also was named a top place to work for prospective parents by Conceive Magazine, and in March, as a top company for women executives by the National Association for Female Executives.

The Dave Thomas Foundation for Adoption is a not-for-profit public charity dedicated to increasing adoptions for the more than 140,000 children in North American foster-care systems who are waiting to be adopted. The late Dave Thomas, founder of Wendy's Old Fashioned Hamburgers, an adoptee and longtime advocate of adoption rights, founded the foundation.

For more information about the foundation, visit <http://www.adoptionfriendlyworkplace.org>, and for more about adoption and other work and family programs at Cornell, see <http://www.ohr.cornell.edu/contactHR/workLifeDiversity/>.

Bring a Child to Work Day shows how education can be fun

More than 670 children and parents enjoyed a day of hands-on learning at this year's Bring a Child to Work Day, April 24. From its opening session, with entertainment by the student vocal group Anything Goes, through a day of such activities as learning about explosions and fire, military firepower, making ice cream, planning parties and touring the solar system, children got a glimpse of Cornell, where most of their parents work. Meanwhile, parents (or other accompanying adults) got to enjoy aspects of Cornell that are not part of their daily lives.

"My daughter, Audrey, went to the sessions on poisonous plants and the 'Holey Cow,'" said Clive Howard, interim director of the Office of Publications and Marketing. "She enjoyed being in an actual college classroom hearing a college professor, and she gained a whole new understanding about how milk is produced. She said that the cow 'grossed her out,' but that she could not believe that she actually got to put her hand inside its belly."

Cornell's annual Bring a Child to Work Day is part of the national Take Our Daughters and Sons to Work Day. The national day is designed to help children learn about what the adults in their lives do when they go off to work.

THOMAS HOEBBEL/THOMAS HOEBBEL PHOTOGRAPHY

Participants make their own ice cream in plastic bags.

What's New ...

Last day of Benefits Open Enrollment!

Today is the last day to enroll in long-term care and to enroll in or increase life insurance without needing to provide medical evidence of insurability. For more information, refer to <http://www.ohr.cornell.edu/whatsNew/whatsNewBenefits/whatsNewBenefits4-08OE.html>.

Child-care center enrollment process deadline May 8

Enrollment Interest Forms for Cornell's new child-care center will be accepted through May 8.

The forms are available online at <http://www.ohr.cornell.edu/workLife/childCareCenter/index.html> or at the service centers at Hasbrouck and Maplewood Park community centers and at the Work Life Center, 101 Day Hall, phone: (607) 255-3976; TDD/TTY: (607) 255-7066; e-mail: <childcare@cornell.edu>.

Wellness fun walk to celebrate National Employee Health and Fitness Day

Join the Wellness Program on Wednesday, May 21, 11 a.m.-1 p.m., for an event filled with fun and prizes! Start anytime between at Toboggan Lodge (across from MVR) and make your way around Beebe Lake. One in four participants will win a prize on the spot. All participants are eligible to enter our drawing. Grand drawing prizes will be provided by Fontanas, The Cornell Store, Cornell Plantations, Cornell Orchards, Robert Trent Jones Golf Course, Taverna Banfi and more. This event is open to the Cornell community. Anyone wanting more information or needing special accommodations to participate may contact Ruth at (607) 255-5060. The rain date for this event is May 23.

>Assemblies

Cornell University's Office of the Assemblies provides administrative support to the elected assemblies and trustees at Cornell, as well as any committees or activities sponsored by these groups. For more information about this office or about any of the assemblies listed, go to <http://assembly.cornell.edu>.

Employee Assembly
Meetings of the EA are open to all employees.
Next meeting: May 7, 12:15-1:30 p.m., 316 Day Hall.

University Assembly
Next meeting: May 7, 4:30-6:30 p.m., 701 Clark Hall.

exhibitions

Herbert F. Johnson Museum of Art
Open Tuesday through Sunday, 10 a.m. to 5 p.m. Free admission to all events and exhibitions. (607) 255-6464, <http://www.museum.cornell.edu>.

• "A New World: Pre-Columbian Art from the Carroll Collection," through June 15.

• "Cornell Art Department Faculty," through June 15. Biennial exhibition of work by Cornell artist-teachers.

• "Exquisite Corpus: Interacting with the Fragmented Body," through June 15.

• "Ramayana in the Arts of India and Southeast Asia," through June 15.

• "Something Old/Something New: Gifts from Alumni," through July 27.

• "Frank Lloyd Wright Art Glass from the Darwin D. Martin House," ongoing.

• Art-full Family Saturday: May 3, 10 a.m. to noon, Sue Young leads bilingual songs and stories and explores the museum's exhibition of Pre-Columbian art. Free for museum members, $5 per family for nonmembers; seating limited.

Mann Library
"Never Mind the Pussycat: The Ornithological Art of Edward Lear," through May 31, lobby.

Native American Law Association
Native American spiritual theme exhibit by Sidney Moonchild, through May 10, 9 a.m. to 7 p.m., Law School student lounge. Information: Sidney Moonchild (607) 898-3971.

Olin Library
"Queer Cornell: LGBT Student Activism, 1968 – 2008," through June 7, 10 a.m. to 6 p.m., 101 Olin Library.

films

Films presented by Cornell Cinema are open to the public; screenings in Willard Straight Theatre except where noted. Regular admission prices: $6.50 ($5 for senior citizens; $4 for Cornell students and ages 12 and under). (607) 255-3883, <http://cinema.cornell.edu>.

May 2
"There Will Be Blood" (2007), directed by Paul Thomas Anderson, with Daniel Day-Lewis and Paul Dano, 7 p.m., Uris.

"Persepolis" (2007), directed by Marjane Satrapi and Vincent Paronnaud, with voices of Catherine Deneuve and Chiara Mastroianni, 7:30 p.m.

"Pat Garrett and Billy the Kid" (1973), directed by Sam Peckinpah, with James Coburn and Kris Kristofferson, 9:45 p.m.

>May 2-11

calendar

PROVIDED

Sounds of Indonesia

The Cornell Gamelan Ensemble presents a concert of Balinese and Javanese music and dance in Barnes Hall May 5 at 8 p.m., under the direction of Bethany Collier and Martin Hatch. The performance features guest artists I Nyoman Saptanyana, Ida Ayu Ari Candrawati, Putu Bagus Krisna Saptanyana and Kadek Bagus Bhayu Saptanyana and the students of Music 245. The program includes traditional pieces for Balinese angklung and Javanese gamelan agung, as well as the popular Balinese dance selections Baris, Topeng Tua and Topeng Keras. The ensemble also presents a composition and dance choreography by visiting artist Nyoman Suadin, "Candrika," and a performance of the mythical Balinese beast, the Barong. A lively, colorful performance appropriate for all ages.

"The Orphanage" (2007), directed by Juan Antonio Bayona, with Belén Rueda and Fernando Cayo, 10:15 p.m., Uris.

May 3
"The Orphanage," 7 p.m., Uris.

"The Diving Bell and the Butterfly" (2007), directed by Julian Schnabel, with Mathieu Amalric and Emmanuelle Seigner, 7:15 p.m.

"There Will Be Blood," 9:20 p.m., Uris.

"Persepolis," 9:45 p.m.

May 4
"Persepolis," 7:30 p.m.

May 5
"The Diving Bell and the Butterfly," 7 p.m.

"There Will Be Blood," 9:30 p.m.

May 6
"Persepolis," 7 p.m.

"Across the Universe" (2007), directed by Julie Taymor, with Evan Rachel Wood and Jim Sturgess, 9 p.m.

May 7
"The Last Waltz" (1978), directed by Martin Scorsese, with Bob Dylan and Joni Mitchell, 7:15 p.m.

"Persepolis," 9:45 p.m.

May 8
"King Corn" (2007), directed by Aaron Woolf, with Ian Cheney and Curtis Ellis, 7:15 p.m.

"There Will Be Blood," 9:15 p.m.

May 9
"There Will Be Blood," 7 p.m., Uris.

"King Corn," 7:15 p.m.

Student Films 2, 8 p.m., Schwartz Center for Performing Arts Film Forum.

"The Last Waltz," 9:15 p.m.

"Across the Universe," 10:15 p.m., Uris.

May 10
"King Corn," 7:15 p.m.

"Across the Universe," 7:15 p.m., Uris.

"The Last Waltz," 9:15 p.m.

"There Will Be Blood," 10 p.m., Uris.

lectures

Africana Studies and Research Center
"Barack Obama and the Politics of Racism," Ronald Walters, University of Maryland, College Park," May 5, 12:15 p.m., Multipurpose Room, 310 Triphammer Road.

music

Department of Music
<http://www.arts.cornell.edu/music/concerts.php>.

• May 3, 3 p.m., Barnes Hall: Studio 342: voice students of Judith Kellock.

• May 3, 8 p.m., Bailey Hall: Cornell Symphony Orchestra, Cynthia Johnston Turner, conductor, with guest conductor Norbert Palej.

• May 4, 3 p.m., Bailey Hall: CU Winds: Wind Symphony; Matthew Marsit, conductor.

• May 4, 6 p.m., Arts Quad: 7th Annual Percussion Gala features the Cornell Steel Bands and the CU World Drum and Dance Ensemble, directed by Tim Feeney.

• May 4, 8 p.m., Anabel Taylor Chapel: Cornell Chamber Singers; Holland Jancaitis, conductor.

• May 5, 8 p.m., Barnes Hall: Cornell Gamelan Ensemble; Bethany Collier and Martin Hatch, directors.

• May 6, 8 p.m., B20 Lincoln Hall: Sound Art Forum: Kevin Ernste, director.

• May 6, 8 p.m., Barnes Hall: Student Chamber Music Recital.

• May 7, 3 p.m., Barnes Hall: Studio recital: piano students of Stefania Neonato.

PROVIDED

• May 7, 8 p.m., Barnes Hall: Student recital: Dara Taylor, mezzo-soprano.

• May 10, 3 p.m., Barnes Hall: Student recital: Rachel Harewood, flute.

• May 10, 8 p.m., Barnes Hall: Sezi Seskir, fortepiano, with guest tenor James Barbato.

• May 11, 3 p.m., Barnes Hall: Senior recital: Christine Marschilok, piano.

• May 11, 8 p.m., Barnes Hall: D.M.A. recital: Stephen Gorbos, composer.

'Bound for Glory'
Broadcasts 8 - 11 p.m. Sundays on WVBR-FM 93.5 and 105.5. Live concerts in Anabel Taylor Hall Café. Free admission, all ages. <http://www.wvbr.org/bfg.html>.

• May 4: Jack Williams.

• May 11 through June 15: Albums from the Studios. Information: Phil (607) 273-2121.

reading

Creative Writing Program
MFA graduation reading May 4, 2 p.m., Hollis E. Cornell Auditorium, Goldwin Smith Hall. Information: <creativewriting@cornell.edu>.

religion

Complete listing of worship services: <http://www.curw.cornell.edu/worship.html>. Cornell United Religious Work (607) 255-4214.

Sage Chapel
• May 4 at 4 p.m.: Biddy Martin, provost. Music by Cornell University Glee Club, Scott Tucker, director and the Hangovers.

seminars

Baker Institute for Animal Health
"Treatment of Visceral Leishmaniasis with Amphotericin B in Albumin Microspheres," Jose Maria Alunda, University Complutense of Madrid, Spain, May 6, noon, Thaw Lecture Theater, Hungerford Hill Rd. Lunch sign up by May 5, 11 a.m.; (607) 256-5600, <smw23@cornell.edu>.

Biomedical Sciences
"New Mouse Models for Elucidating Mechanisms of Prostate Cancer Progression," Pradip Roy-Burman, University of Southern California, May 6, 4 p.m., Lecture Hall III, Veterinary Research Tower.

Continued on page 14

The dance of yoga

>Highlight

PROVIDED

"Mandala: A Pranadhanas Yoga Dance Experience" is billed as "a live audio/visual fusion of the arts inspired by women." See it May 9 at 7:30 p.m. in Barnes Hall. The Pranadhanas, a local yoga dance group, received a grant from the Cornell Council for the Arts to perform yoga-infused dances inspired by women's experiences of inner strength, vulnerability and spirit. With live, original music by Joe Smellow and vocalist Sara High Speiser. Accompanied by visual projections of photographs and mandalas. Tickets $10, Students $8, Children $5. Information: David Shalloway (607) 254-4896, <dis2@cornell.edu>.

Calendar

continued from page 13

PROVIDED

Iranian revolution, hand drawn

Cornell Cinema presents "Persepolis" (2007), an award-winning animated adaptation of Marjane Satrapi's graphic novels about growing up in Iran during the Islamic Revolution, May 1-4 and 6-7. Lyrical comix-inspired imagery tells the story of a young girl's life in Tehran during the overthrow of the shah, the revolution and the war with Iraq. Marjane is the outspoken daughter of left-wing intellectual parents who grow increasingly fearful and embittered over the changes to their once-cosmopolitan lifestyle. Real-life mother and daughter Catherine Deneuve and Chiara Mastroianni provide the voices of Marjane and her mother.

"Impact of Nutrient Management, Planting Date and Location on Papaya Yield and Quality in Bangladesh," Jacqueline Greenwood, crop and soil sciences, May 8, 12:20 p.m., 135 Emerson Hall.

Chemical and Biomolecular Engineering
Title TBA, speaker TBA, chemical and biomolecular engineering, May 5, 4 p.m., 165 Olin Hall.

Faculty Innovation in Teaching
"Printed Matters," Graham McDougal on behalf of Elisabeth Meyer, art, May 5, 12:15 p.m., 225 Industrial and Labor Relations.

Lab of Ornithology
"Spectacular Southeast Asian Woodpeckers: Niche Evolution and Logging Responses in Highly Diverse Communities," Martjan Lammertink, Lab of Ornithology, May 5, 7:30 p.m.

Molecular Biology and Genetics
"Runx1-CBFβ Function in Hematopoiesis and Leukemia," Nancy Speak, Dartmouth College, May 2, 4 p.m., G10 Biotechnology Building.

"Regulation of Receptor Trafficking by Rab GTPases," Suzanne Pfeffer, Stanford University, May 9, 4 p.m., G10 Biotechnology Building.

Molecular Medicine
Title TBA, Jeffrey Benovic, Jefferson University, May 7, 12:30 p.m., Lecture Hall II, Veterinary Education Center.

Natural Resources
DNR Faculty Panel: Title TBD, Marianne Krasny, natural resources, May 6, 3:30 p.m., 304 Fernow Hall.

Plant Pathology
"The Extracellular Components of the Type III Secretion System of Pseudomonas Syringae," Joanne Morello, plant pathology, May 7, 12:20 p.m., 404 Plant Science Building.

symposia

Institute for European Studies
"Broad Issues of Language Pedagogy Involved in the Selection and Use of 'Authentic Video' Materials in the Language Classroom," Larry Vandergrift, University of Ottawa, Canada; and Benjamin Rifkin, Temple University, May 5-6, 9 a.m. to 2:30 p.m., Noyes Lodge Language Resource Center. Information: <http://www.lrc.cornell.edu/events>.

Institute for the Social Sciences
Biotechnology Contentions Workshop: "Intellectual Property and the Politics of Emerging Technology: Inventors, Citizens and Powers to Shape Futures," April 25-26, 229 ILR Conference Center. Information: <socialsciences@cornell.edu>.

theater

Theatre, Film and Dance
Schwartz Center for the Performing Arts <http://www.arts.cornell.edu/theatrearts>, (607) 254-ARTS.

• "As You Like It," by William Shakespeare, May 2-3 at 7:30 p.m., matinee May 3 at 2 p.m. Tickets $8/$10.

Walk, run, jump, fall together

PROVIDED

"How to Walk, Run, Jump, Fall...Together," an original dance concert featuring the work of two faculty members and five student choreographers, plays at the Schwartz Center's Class of '56 Dance Theatre, May 2-3 at 8 p.m. "This is a celebration of our senior students and also an opportunity to create dances that can be playful, serious and above all an experience in having fun together," said concert director Jumay Chu. "The concert reflects a wide array of the work being done in the department, experimenting with conventions and bringing issues and ideas that are nontraditional to the forefront." The concert contains brief nudity and adult content. Information: (607) 254-ARTS.

• Spring Dance Theatre, May 2-3 at 8 p.m., Class of '56 Dance Theatre.

miscellany

Cornell Campus Club
Spring Wildflowers at the Cornell Plantations, Mary Lee Noden, club president, May 5, 10 a.m. Guided tour of wildflowers at plantations. Meet at Cornell Plantations outside Garden Gift Shop. Parking pass available at gift shop desk.

Cornell Council for the Arts
"Mandala: A Pranadhanas Yoga Dance Experience," yoga-infused dances inspired by women's experiences of inner strength, vulnerability and spirit, May 9, 7:30 p.m., Barnes Hall. $8 students, $10 public, $5 children. Information: David Shalloway (607) 254-4896, <dis2@cornell.edu>.

Cooperative Extension
• Citizen Pruner Volunteer Training, May 5, 5:30 p.m. Free for volunteers, $5 for public. (607) 272-2292, ext. 126, <mr55@cornell.edu>.

• Primitive Pursuits - Spring Homeschool Session, through June 26, 9 a.m. to 1:30 p.m., 4-H Acres, 418 Lower Creek Road. For homeschoolers age 6-14. $330 - $450, sliding scale. <primitivepursuits@hotmail.com>, (607) 272-2292, ext. 261.

Lab of Ornithology
• Spring Field Ornithology through May 16. $150 for lectures, $150 for field trips or $290 for both. (607) 254-2452, <sfoclass@cornell.edu> or <http://www.birds.cornell.edu/sfo>.

• Birds in the Cayuga Lake region, through May 18. $150 lectures, $150 field trips or $290 for both. Terry Mingle (607) 254-2452.

• Guided Bird Walks, Saturdays through June, 7:30 to 9 a.m. Bring binoculars, meet at Visitors' Center. Free. (800) 843-BIRD, <http://www.birds.cornell.edu>.

Multicultural Resource Center
Talking circle on race and racism, May 5, 6:30-8:30 p.m., 609 West Clinton St., Suite 109. Information: Liz Field (607) 272-2292, ext. 191, <ejf79@cornell.edu>.

Museum of the Earth
1259 Trumansburg Road (Route 96), Ithaca. Admission $8, seniors/students with ID $5, ages 4-17 $3, free for members. <http://www.museumoftheearth.org/>.

"Fishing for Fossils: Exploring the Green River Formation," through June 15.

Slope Day 2008
Gym Class Heroes, Hot Hot Heat and Ted Leo and the Pharmacists perform May 2 on Libe Slope. Cornell students with ID may purchase up to two guest tickets for guests age 18 and up. Tickets or information: <http://slopeday.cornell.edu>.

Wellness Program
<http://bigred2.athletics.cornell.edu/wellness/>.

Department of Music
May 16-21: MAYFEST, Cornell's new international chamber music festival (http://mayfest-cornell.org); Xak Bjerken and Miri Yampolsky, directors; with guests Karl-Heinz Steffens, clarinet; Michal Friedlander, piano; Cynthia Phelps, viola; and the Formosa Quartet. $6 students, $10 general; at Ticket Center at Clinton House (607) 273-4497, <http://www.IthacaEvents.com> and at the door.

Johnson Museum
Celebrate the museum's 35th anniversary and groundbreaking of its new wing, May 17, 1-3 p.m. Music by the Burns Sisters and John Simon. Art activities, cake and ice cream. Free and open to all. Shuttle bus from "A" Lot runs from 12:30-3:15 p.m. Information: <museum@cornell.edu>, <http://www.museum.cornell.edu>.

Lab of Ornithology
"Migration Celebration," May 17, 10 a.m. to 3 p.m. Guided bird walks, interactive exhibits or hands-on activities for children. Volunteers needed. Orientation meetings May 8, 7 p.m. and May 10, 11 a.m. Information: Anne Rosenberg <baj3@cornell.edu>, (607) 254-2109.

sports

<http://www.cornellbigred.com>.

Baseball
May 3-4, Ivy League Playoffs

Equestrian
May 8-11, Nationals

Heavyweight Rowing
May 3, Rutgers

Lightweight Rowing
May 3, at Dartmouth

Women's Rowing
May 3, at Dartmouth

Upcoming NYC Events

Cooperative Extension
Urban Horticulture and Ecology Training Program: weekly workshops through July 2, 10 a.m. to 3:30 p.m., various locations. Mandatory pre-registration: <vtl2@cornell.edu>, (212) 340-2983.

Cornell Club
"The Thrills, Spills and Chills of Recovery Planning in the Big Easy: Lessons from Cornell's New Orleans Planning Initiative," Kenneth Reardon, city and regional planning, May 5, 6 p.m. Members only. Information: Kerry Strassel (212) 692-1381, <k.strassel@cornellclubnyc.com>.

"From British India to Guantanamo Bay: Habeas Corpus and the Limits of Imperial Power," Robert Travers, history, May 8, 6 p.m. Members only. Information: Kerry Strassel <k.strassel@cornellclubnyc.com>, (212) 692-1381.

"So You Want To Be A Freelancer," Karen Moline, journalist and ghostwriter, May 13, 6 p.m. Members only. Information: Kerry Strassel <k.strassel@cornellclubnyc.com>, (212) 692-1381.

Faculty
"Saturn: Images from the Cassini-Huygens Mission," an exhibition of photos captured by NASA's Cassini orbiter and the European Space Agency's Huygens lander, through March 29, 2009, at the American Museum of Natural History, Central Park West and 79th Street. Information: (212) 769-5100.

Industrial and Labor Relations
"Improving Time Management Skills," Union Leadership Workshop, May 2, 9 a.m. to 4:30 p.m., 16 E. 34th St., sixth floor. Information: Jennie Pramualphol (212) 340-2827, <jp424@cornell.edu>.

Strategic Research for Union Organizers workshop, May 8-9, 9 a.m. to 4:30 p.m., 16 E. 34th St., sixth floor. Information: Jennie Pramualphol <jp424@cornell.edu>, (212) 340-2827.

Weill Cornell Medical College
"Sexuality and Epilepsy," Barbara Bartlik, M.D.; "Polycystic Ovarian Syndrome of Women in Epilepsy: Diagnosis, Evaluation and Treatment," Steven Spandorfer, M.D.; "High-Risk Pregnancies and Epilepsy-Obstetrical Concerns," Stephen Chasen, M.D.; "Psychiatric Aspects and Management of Epilepsy in Women," James Kocsis, M.D.; "Bone Health in Women with Epilepsy," Alison Pack, M.D., Columbia University; "Evidence-based Guidelines of the Management of Women with Epilepsy During Pregnancy," Cynthia Harden, M.D.; and "Clinical Case Studies," Padmaja Kandula, M.D.; May 3, 8 a.m. to 1 p.m., 1300 York Ave., Uris Auditorium. Information: Brenda Tobias <nyc@cornell.edu>.

"Emergency Medicine For Seniors," N. Flomenbaum, M.D. and M. Stern, M.D., May 6, 6:30 p.m., 1300 York Ave., Uris Auditorium. Information: Agnes Peterson (212) 821-0560, <apeterso@med.cornell.edu>.

Heberden Society Lecture: "Harvey Cushing and the Birth of Neurosurgery," Michael Bliss, University of Toronto, May 8, 5 p.m., A-126, 1300 York Ave. Information: Brenda Tobias <nyc@cornell.edu>.

"Stress Reduction: Understanding the Mind-Body Connection," May 8, 6:15 p.m., Weill Greenberg Center, 1305 York Ave., second floor. Information: <womenshealth@med.cornell.edu>, (212) 821-0971.

OB/GYN Fashion Show and luncheon featuring Fashion Designers Badgley Mischka, May 12, 11:30 a.m. to 2 p.m., Cipriani, 42nd Street. Information: Julie Sanders <jug2011@med.cornell.edu>, (212) 821-0578.

upcoming

Cornell University Viticulture and Enology Experience
Weeklong program exploring the science of grape growing and wine making, July 20-25. Limited registration. Information and registration: (607) 255-7259, <cusp@cornell.edu>, <http://www.sce.cornell.edu/cuvee>.

Chronicle calendar deadlines

The Chronicle calendar deadline is 11 days (two Mondays) before publication. Items submitted for the calendar should include a contact name, e-mail address, Web address (if any) and a phone number. By campus or U.S. mail, send to: Chronicle events calendar, Cornell Chronicle, 312 College Ave., Ithaca, NY 14850. By fax: (607) 255-5373. By e-mail: <chronicle@cornell.edu>.

May 16 edition: Calendar deadline May 5

May 23 edition: Calendar deadline May 12

May 30 edition: Calendar deadline May 19

June 13 edition: Calendar deadline May 26

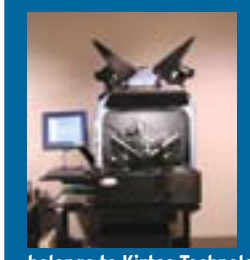
For more events, see the searchable university events calendar, online at <http://www.cornell.edu/events/>.

The essentials

ideas»people
»details»data
»happenings

Shelf Life

A gentle giant



A 200-pound, high-speed robotic scanner is hard at work in Cornell University Library's Division of Rare and Manuscript Collections.

The machine, which belongs to Kirtas Technologies, Inc. in Victor, N.Y., can scan up to 2,400 pages an hour and has, on average, scanned about 300 documents a day since arriving in Kroch Library last fall. Because it cradles books in a V-shape, uses blown air to separate their pages and has a vacuum mechanism on its arm to pick up and turn pages, the scanner is, in fact, gentler on books than a human would be.

The scanner supports the Microsoft Live Book Search digitization project, which was initiated in October 2006 when the Library entered into an agreement with Microsoft to digitize materials from Cornell's collections and make them available online.

Snapshot

Thinking outside the Cube

KRISTEN LAU

Ready, set, solve!

For members of the Cornell Cubing Club and other competitors competing in Cornell's second annual speed-solve competition April 19, the Rubik's Cube is much more than a colorful six-sided puzzle. It is a call for nimble fingers, swift memories and the ability to work under high pressure.

The competition, which was part of the World Cube Association's international speed cubing championship, was open to anyone, regardless of skill or age. About 30 competitors converged to race against time in such events as solving a 3x3x3 and 5x5x5 Rubik's Cube, working one-handedly and even blindfolded.

Three national records were broken at the event (though none by Cornell students), including the fastest speed for the 5x5x5 cube – the winner finished the puzzle in a mere 1 minute, 27 seconds.

Carlos Ramirez '10, a Cornell Cubing Club member and officer, said that he was attracted to the Rubik's Cube speed-solve community by his competitive nature. "It's like competing to set any record," he said.

There are about 43 quintillion permutations, or possible positions, for a 3x3x3 cube. Nevertheless, all of the puzzles can be solved in 25 or fewer moves.

– Jill McCoy '09

Download This

Edit your president

Cornell graduate students in the Department of Communication have launched WikiCandidate <http://www.wikicandidate08.com/>, a Web site that lets you design the presidential politico of your dreams.

Asks the site: "What if you could create your perfect candidate from scratch – their biography, their stance on the issues, even what they say and do on the campaign trail? By simply creating WikiCandidate's campaign site, you get to bring the perfect candidate into existence.

"WikiCandidate is also a social experiment, because you don't design this ideal candidate by yourself. You're in this together with everyone else who joins in, who are also imagining their perfect candidate. Edit the site alongside other users, discuss with them who this candidate is and what they stand for, and come up with WikiCandidate together. To reach agreement, you may need to promote and defend your opinions and positions on various issues, or compromise with other users on some points to gain broader support for the candidate."

WikiCandidate

Flora & Fauna

Hummingbirds are back

LAURA ERICKSON

The Ruby-throated hummingbird is a bird of superlatives. It's the tiniest bird in New York, weighing on average 3.5 grams, or just over one tenth of an ounce: you could mail nine or 10 of them with a single stamp! It's also the one with the fastest heart rate (more than 1,200 beats per minute) and respiration rate (at rest, about 143 breaths per minute).

About one-third of a hummingbird's weight is in its pectoral muscles, which power its wings. These little birds spend the winter in Central America and return to Ithaca every year around the first week of May.

This is an excellent time to set out hummingbird feeders. Use one-quarter cup of sugar per cup of water. Never use honey (it ferments too quickly) and never add food coloring.

If you're curious about hummingbirds' spring migration, watch their daily progress here: <http://www. hummingbirds.net/map.html>. Learn more about these exceptional creatures at <http://www.birds.cornell.edu/AllAboutBirds>.

Go Big Red

Olympic trials see red

A host of athletes preparing for this summer's Beijing Olympics have a Cornell connection.

Four current Cornell track athletes have already qualified, while three alumni are also preparing for their respective nations' trials.

Among the current team, Muhammad Halim '08 and Jeomi Maduka '09 (pictured) will compete at the U.S. Olympic Trials June 27-July 6 in Eugene, Ore. Halim and Maduka have qualified for the triple and long jumps, respectively, and Maduka still has a chance to qualify in the triple.

Jimmy Wyner '09 (1,500 meters) has taken a leave of absence to train after qualifying for the U.S. Trials, while Adam Seabrook '08 (400 meter hurdles) has qualified for the Canadian trials, to be held July 3-6 in Windsor, Ontario.

Other Cornellians who have qualified for the trials include Rayon Taylor '07 (Jamaica, triple jump), Morgan Uceny '07 (800 meters) and Emily McCabe '06 (10,000 meters).

Two other athletes are close to reaching qualifying standards: Toni-Lynn Salucci '07 (5,000 meters) and Aaron Merrill '08 (400 meter hurdles).

Health Watch

A call for vigilance on Slope Day

The risk of alcohol poisoning among students exists throughout the year, but your vigilance is appreciated on Slope Day.

Look for anyone who: is passed out and cannot be roused with shouting or vigorous shaking or cannot be roused for more than two or three minutes at a time; whose breathing is slow or irregular, or if there is a lapse in breathing; whose pulse is weak, very rapid or very slow; whose skin is cold, clammy or bluish; who vomits while passed out, does not wake up after vomiting or is incoherent after vomiting; has a head injury of any kind.

If a person is so intoxicated that she or he is being drawn on with markers without protest, then she or he most likely has a dangerously high blood alcohol concentration.

If you see ANY of the above, flag down EMS or a Slope Day volunteer or call for help immediately (Emergency: 911; Cornell Police: 255-1111; Gannett: 255-5155). Stay with the person until help arrives.

Alcohol poisoning can be fatal. Students should not let worry about judicial sanctions prevent them from taking action – alcohol emergencies on campus are covered by Cornell's Medical Amnesty Protocol. Learn more about alcohol poisoning and Medical Amnesty: <http://www.gannett.cornell.edu>, <http://www.medical-amnesty.cornell.edu>.

Seen and Heard

Lost in the past

Qi Wang, associate professor in human development and cognitive sciences, wrote an article titled "Where Does Our Past Begin? A Sociocultural Perspective on the Phenomenon of Childhood Amnesia" for the March 2008 issue of Psychological Science Agenda. "Childhood amnesia" refers to our inability to "consciously access personal event memories, or autobiographical memories, from early childhood." Where we are raised influences how much of our early selves we have access to. Western cultures, Wang writes, emphasize "the importance of the personal past," while in East Asian cultures "autobiographical memory is not central to self-identity." Read the article here: <http://www.apa.org/science/psa/wang.html>.

Be Essential!

Have an essentials item?

Have a tip to share on something essential, interesting, hidden, strange or otherwise worth knowing about at Cornell? Send it to <chronicle@cornell.edu> and include "Essential" in the subject line. If it's time-sensitive, let us know at least two weeks ahead of publication.

Vernal visions

Warm weather, semester's end bring a blooming of the season

Spring arrived with extra urgency within the last couple of weeks, perhaps to make up for a lethargic end to winter's stubborn temperatures. But both students and flowering plants were quick to take advantage of the sudden shift in seasons (despite this week's brief chilly period).

Allyson Spier '09, a student intern photographer for the Cornell Chronicle, captured signs of spring on campus as classes for the semester finished up and the promise of summer days appeared on the horizon.

Scenes like these should be plentiful over the next few weeks as classes end, final exams run their course and Commencement Weekend approaches. Spring does rival fall for Ithaca's most colorful season, albeit with a different palette of colors.

ALL PHOTOS BY ALLYSON SPIER '09