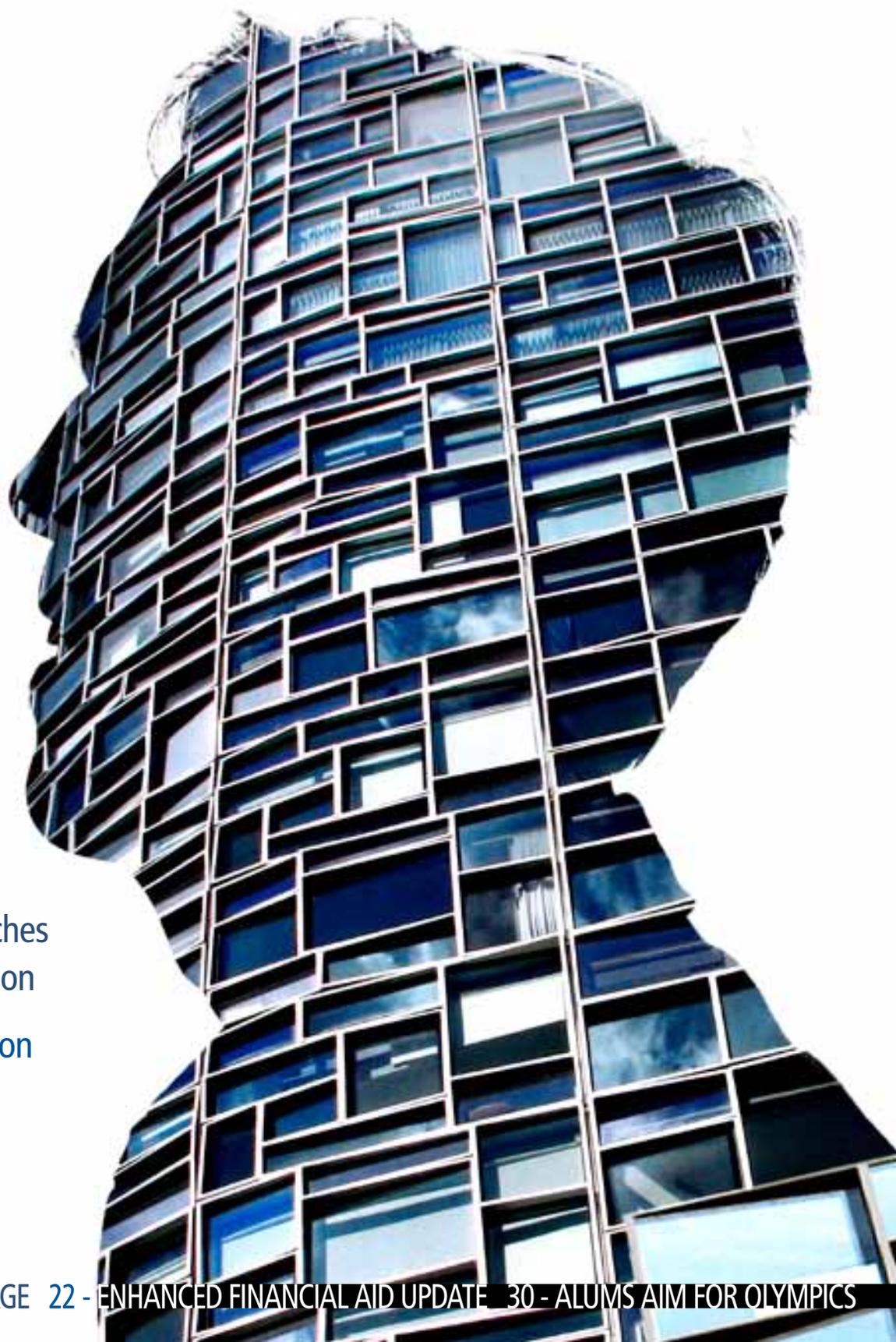


EZRA

SOARING FRONTIER FOR GRADUATE STUDENTS

CornellNYC Tech launches
with leaders and a vision

How graduate education
on the Ithaca campus
paves the way



EZRA



2 THE ESSENTIALS
 First look at Gates Hall, Romain Gary novel as reading project selection, the Big Red Bear sizes up some overalls, alumni's Oscar nominations and more.

4 COVER STORY
Real work on CornellNYC Tech campus now begins

BY ANNE JU

In December, Cornell learned it had won an intensely fought competition to build a 2 million-square-foot tech campus in New York City. The university is on track to break ground on the transformative campus in 2015.



7 Graduate students – the foundation of Cornell's future
 BY DANIEL ALOI

11 How a Cornell graduate education is funded
 BY DANIEL ALOI

13 GLOBAL
Celebrating clean water in Honduras
 BY ANNE JU

14 ARTS & HUMANITIES
A Milstein Hall montage

16 RESEARCH SPOTLIGHT
Shoals: Fieldwork on Appledore's rocky shores
 BY KRISHNA RAMANUJAN

18 CORNELL NOW
 Biggest gift in Cornell's history, 9-year-old is Annual Fund's youngest supporter, new humanities building is paid in full, and more.

20 CAMPUS LIFE
A West Campus exit interview
 BY SUSAN KELLEY

21 The Amit Bhatia Libe Café
 BY EMILY SANDERS HOPKINS



EZRA: Cornell's quarterly magazine
 Vol. IV, Issue 3, Spring 2012

Publisher: Thomas W. Bruce
 Managing Editor: Joe Wilensky
 Senior Editors: David Brand, Susan S. Lang
 Copy Editor: Karen Walters
 Contributing Editor: Emily Sanders Hopkins
 Designer: Christopher Kelly
 Project Manager: Barbara Drogo

Contributors: Daniel Aloï, Jose Perez Beduya, Evan Drexler, Corey Ryan Earle, Gwen Glazer, Emily Sanders Hopkins, Anne Ju, Susan Kelley, Barbara A. Knuth, George Lowery, Krishna Ramanujan, Diane Lebo Wallace
 Produced by the Cornell Chronicle. All photography by Cornell University Photography unless otherwise indicated.

Cornell University is an equal opportunity, affirmative action educator and employer.

Subscription information: ezramagazine@cornell.edu or call 607-255-3630.

<http://ezramagazine.cornell.edu>

Printed using soy inks on Fortune paper (FSC- and SFI-certified, 10% PCW, and chlorine free).

3/12 39M CP 120170



ON THE COVER

Cover photo: Silhouette of Dan Huttenlocher, vice provost and founding dean of the CornellNYC Tech campus. Photo by Robert Barker/University Photography. Image detail of Jean Nouvel-designed condominium in New York City photographed by third-year Cornell architecture student Lea Lee. Digital postproduction by Matthew Fondeur/University Photography.

22 **WORTH SUPPORTING**
Checking in on enhanced financial aid
BY SUSAN KELLEY

23 **Cornell's enhanced financial aid programs**
BY SUSAN KELLEY

24 **Matching aid, matching interests**
BY JOSE PEREZ BEDUYA

25 **FACULTY**
Collections, access key to library's future
BY GWEN GLAZER

26 **CORNELL HISTORY**
Ezra Cornell's legacy of innovation
and entrepreneurship lives on
BY COREY RYAN EARLE

28 **YOUR IMPACT**
Live well while doing good
BY DIANE LEBOW WALLACE

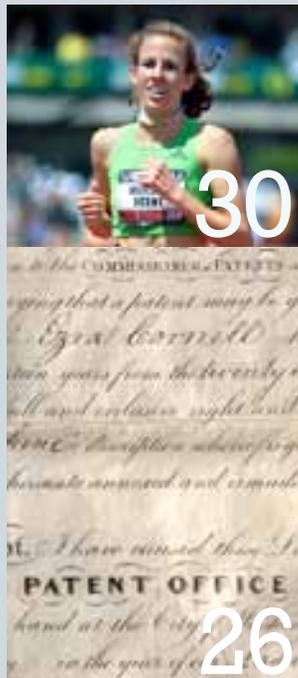
28 **Cornell Annual Fund: Gifts of any size, for any person, any study**
BY JOSE PEREZ BEDUYA

29 **You can make it happen**

30 **LET'S GO BIG RED**
Grappling – and running – for Olympic gold
BY EVAN DREXLER

32 **NEW FACULTY**
Q&A with new members of the faculty
BY EMILY SANDERS HOPKINS

33 **END NOTE**
Graduate students drive our future
BY BARBARA A. KNUTH



From the publisher

In 2006, Erika Johnson, a young engineer working for a NASA subcontractor in Florida, happened to meet Lance Collins, director of mechanical and aerospace engineering at the time and now the dean of Cornell's engineering college, at a conference. The two struck up a conversation, and Johnson learned about the college and that Collins was an expert on turbulence – one of her primary research interests.

Collins encouraged Johnson to come to Cornell to pursue her Ph.D. in environmental engineering. Today, Johnson is collaborating on vitally important research with Cornell faculty. She also has worked with undergraduates as a teaching assistant and has participated in an outreach program to interest seventh- and eighth-grade girls in mathematics.

This is just one pathway for a Cornell graduate student. But her story is not unusual, as our cover story in this issue describes. Our brilliant graduate students, says Graduate School Dean Barbara Knuth, "are the glue that draws faculty together from across the university, creating opportunities for building relationships and developing research collaborations."

This collaboration, as well as what Knuth rejoices in as graduate students' "passion and energy," will be central to the success of Cornell's creation of an applied sciences campus in New York City, CornellNYC Tech – Home of the Technion-Cornell Innovation Institute. The awarding of the contract to Cornell and its partner, Technion-Israel Institute of Technology, last December is truly a major milestone in our 147-year history and one that will challenge graduate students and faculty alike to turn the fruits of their research into commercial startups.

The unique cross-disciplinary way in which Cornell educates its students, the efforts that go into student-faculty collaboration and faculty mentoring, and, most importantly, Cornell's dedication to increasing financial support for these talented young researchers, make the future for our graduate students, both on the Ithaca campus and at the coming New York City tech campus, bright indeed.

Thomas W. Bruce
Vice President, University Communications

AROUND CAMPUS

Gates Hall: First look



Memphis Architects

With the architect's work completed, construction on Bill & Melinda Gates Hall, the new home of Computing and Information Science, is expected to begin in early spring, according to Dan Huttenlocher, dean of CIS. Construction will be accelerated to finish the building by December 2013 so that the information science department, currently housed off campus, can move in by January 2014. The new building, to rise on the site of the Hoy Field parking lot, will for the first time bring two CIS departments - computer science and information science - together under one roof.

The Bill & Melinda Gates Foundation gave the university \$25 million in January 2006 to support

the building. An additional \$15.3M was raised during a successful fundraising campaign that concluded in late 2010, which will allow completion of the \$60 million project without incurring any external debt.

Thom Mayne, winner of the 2005 Pritzker Prize in architecture, is the lead architect.

More than one-third of the building will be composed of research and teaching labs, including specialized labs for cybersecurity, human-computer interaction, computational sustainability, robotics, computer vision and other research areas.

SEEN & HEARD

Grin and bear it



The Big Red Bear's head, detached from its body, wore a bemused expression on the carpeted floor of the Marriott Washington Wardman Park hotel. Actually,

there was no body - just the empty suit of the costume laid flat. Cindy Marinaro '12, who would be wearing the costume later that afternoon, was measuring it.

Marinaro, president of The Big Red Bears, is one of about a dozen students who share the role of Touch-down, the Big Red Bear, Cornell's unofficial mascot. She was in D.C. on Jan. 28 to be the bear at the Cornell Alumni Leadership Conference.

Terry Warren '52, J.D. '56, co-chair of his class's reunion committee, had a special request for Marinaro: At his class's 60th reunion in June, he wants the bear to play a big part in the festivities - decked out in a railroad conductor costume.

The Class of 1952's Reunion theme is "All Aboard for Cornell," recaling the days Warren and his classmates took the Lehigh Valley Railroad to campus.

Warren plans to have a costume design shop outfit the bear in train engineer's overalls, a railroading cap and red bandana.

This was the first request for a special outfit for the bear, Marinaro said, noting that for a T-shirt, the bear's size is XXXL.

The train theme is close to Warren's heart. He met his wife (and class reunion co-chair), Dorothea Warren '52, on the train at the end of a Thanksgiving break as they returned to Cornell from Penn Station.

CORNELL PEOPLE

Barrett Keene is walking across America

On Jan. 28, equipped only with a backpack, laptop, cellphone and a few energy bars, Barrett Keene, Ph.D. '13, started walking north from Miami on what is expected to be an eight-month, 3,475-mile trek to San Francisco.

A doctoral student in the field of education, Keene started the "Go Walk America" project to raise funds and awareness for orphaned and abandoned children worldwide and to conduct education leadership research in schools along his route.



"I wanted to try to do something while I had a little flexibility being a Ph.D. student," said Keene, who was inspired by and is partnering with the Kansas City nonprofit The Global Orphan Project for his two-pronged initiative.

With the grueling physical challenge looming and still without a support vehicle, "I'm a little nervous," Keene admitted. "I'd be lying if I said I wasn't." He writes about his adventures on his blog, gowalkamerica.org.

"I am excited about this.... [There] are small things we can do that can literally change the trajectory of the lives of a lot of kids," said Keene. "So whatever my eight months look like, it's going to be worth it."

COMMUNITY MATTERS

'The Life Before Us' is reading project pick

The required summer reading for new students entering Cornell in the fall will be Romain Gary's novel "The Life Before Us," the story of an illiterate Arab boy and the Holocaust survivor who raised him, Vice Provost for Undergraduate Education Laura Brown announced.



During orientation in August, the New Student Reading Project will organize six presentations to explore topics, disciplines, programs and concepts related to the novel's themes. Students, faculty and staff also will discuss the book in small group seminars.

Published in Paris in 1975, "The Life Before Us" follows the relationship between the boy, Momo, and Madame Rosa – a Jewish ex-prostitute who survived Auschwitz – and the last months of their life together in the Parisian immigrant slum of Belleville. Madame Rosa makes a living by raising the children of prostitutes, and as her health declines Momo must find ways to provide for them all.

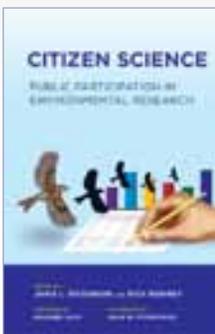
"The Life Before Us" is admired for its invention of a new literary language, an informal representation of direct speech that gives immediate access to experiences that escape description, and to an extraordinary emotional intimacy, Brown said.

For a study guide and additional resources, visit reading.cornell.edu.

OFF THE PRESS

Channeling citizen science

Already a nationwide leader in citizen science, Cornell is also the source of a book for this developing field. "Citizen Science: Public Participation in Environmental Research" (Cornell University Press) is edited by Janis Dickinson, professor of natural resources and director of citizen science at the Cornell Lab of Ornithology, and Rick Bonney, director of program development and evaluation at the lab and co-founder of Cornell's Citizen Science program.



Citizen science enlists members of the public to make and record observations, such as counting birds in their backyards, watching for the first budding leaf in spring or measuring snowfall. The large numbers of volunteers who participate in projects such as Project FeederWatch or Project BudBurst collect valuable research data that create an enormous body of scientific data.

The book addresses how to conduct citizen science projects as well as the nuances of creating a robust digital infrastructure and recruiting a large participant base. An overview of the types of research approaches and techniques demonstrates how large data sets arising from citizen science projects are used by experts.

ACCOLADES

Oscar nods



The Sundance Film Festival winner "Hell and Back Again" was nominated for a best documentary feature Oscar.

The story of an American soldier's rocky return to civilian life after service in Afghanistan was directed by photojournalist-turned-filmmaker Danfung Dennis '05. The film is set to air on the PBS series "Independent Lens" in May.

Also nominated was Thelma Schoonmaker '61, Martin Scorsese's longtime film editor, for "Hugo."



Dan Huttenlocher, vice provost and founding dean of CornellNYC Tech –
Home of the Technion-Cornell Innovation Institute.

Real work on CornellNYC Tech campus now begins



An interior rendering of part of the proposed CornellNYC Tech campus on Roosevelt Island. Photo illustration by Cornell

In December 2011, Cornell learned it had won an intensely fought competition to build an applied sciences and engineering campus in New York City. CornellNYC Tech – Home of the Technion-Cornell Innovation Institute, which pairs Cornell with its partner, Technion-Israel Institute of Technology, will have an economic development and entrepreneurship-oriented curriculum aimed at turning the best ideas of faculty and graduate students into new technologies and commercial applications.

Cornell and Technion’s proposal, which combines two of the world’s top institutions in science, engineering and technology, looks to increase New York City’s capacity for applied sciences and to transform the city’s economy.

Dan Huttenlocher, dean of computing and information science, has been named vice provost and founding dean of the CornellNYC Tech campus, and Cathy Dove, associate dean in the College of Engineering, has been named the campus’s vice president.

With the city’s \$100 million pledge in infrastructure upgrades and the land grant of an 11-acre parcel on Roosevelt Island secured, Cornell is on track to break ground in 2015. Instruction will begin in off-site locations in the city starting in September; the first on-campus operations are slated to begin in 2017.



Cathy Dove, vice president for the CornellNYC Tech campus.

“In New York City, we will build on our already top-notch multidisciplinary academic strengths that make the Ithaca campus a draw for talented students from all over the world,” Huttenlocher said. “The tech campus will draw on the strengths of Cornell’s graduate programs in Ithaca, with faculty that will span the two campuses.”

The news that Cornell and the Technion had won the competition was shared with the world at a New York City press conference in December by Mayor Michael Bloomberg, with thousands of Cornell alumni live-streamed in to help celebrate.

Now, it seems, the real work is just beginning.

On Feb. 16, President David Skorton, Provost Kent Fuchs and Bloomberg announced Huttenlocher’s appointment for an initial five-year term. Co-leaders Huttenlocher and Dove



Cornell President David Skorton and Technion President Peretz Lavie, left, at the Dec. 19 press conference in New York City.



Rendering of part of the proposed tech campus on Roosevelt Island, which includes an amphitheater and a view of Manhattan. Photo illustration by Cornell

will both report to Fuchs.

In addition, Technion computer science professor and deputy senior vice president Craig Gotsman will be director of the Technion-Cornell Innovation Institute (TCII).

“Dan Huttenlocher and Cathy Dove employed their extensive knowledge, as well as their well-recognized leadership skills, during every step of the development of our proposal, and they are continuing to drive our effort to bring the new campus to fruition, expeditiously and expertly, for the people of New York,” Skorton said. The addition of Gotsman “brings added luster to this impressive team. Cornell and the city are very lucky to have such talented people leading this new – and new type of – campus.”

TCII will be a centerpiece of the Roosevelt Island campus. After receiving accreditation from the state of New York, it will confer dual Cornell/Technion Master of Applied Sciences degrees, based on a curriculum with an emphasis on the application of sciences, entrepreneurship and management, as well as other graduate degrees.

Huttenlocher and Dove will oversee the formation of the environmentally sustainable campus, whose operational costs are expected to exceed \$2 billion over 30 years; the building of the campus’s expert faculty, planned to be about 280 strong in 30 years; its highly selective graduate student population, targeted at about 2,500 by 2043; as well as capital construction of the 2 million-square-foot campus.

“This is an unprecedented opportunity to build a new kind of university campus, focused on technology commercialization rooted in the very best academic research, with educational programs that tie fundamentals to practice, and strong ties to the tech sector of the city’s economy,” Huttenlocher said. “The planned professional master’s degrees will combine business and entrepreneurship with technology, both in the classroom and in engagements with local companies.”

“I look forward to working together with Cathy and Craig,” Huttenlocher continued. “We are already actively working towards identifying leased space for the start-up phase before we move to Roosevelt Island, gaining approvals for degree programs, involving local tech leaders in our planning, and preparing to hire world-class faculty.”

Cornell leaders of the tech campus initiative detailed immediate next steps during an open forum on the Ithaca

campus in February. Fuchs shared a partial to-do list: acquiring academic accreditation, hiring a principal designer and architect for the site, structuring the entrepreneurship-oriented curricula, hiring faculty and recruiting students – all while maintaining Cornell’s Ithaca campus and entering into key phases of the “Cornell Now” fundraising campaign.

Students will learn and companies will grow in an environment that breaks with the tradition of departments and schools. The campus will instead be organized around interdisciplinary hubs directed toward sectors of the city’s economy, currently planned as Healthier Life, Built Environment and Connective Media. These hubs are designed to change and grow with industry trends.

The year 2012 will bring work on environmental reviews of the Roosevelt Island site and master planning even as inaugural instruction begins in off-site locations in the city this fall.

The plan for the campus includes a 150,000-square-foot, “net-zero” core academic building. If built today, it would be the largest net-zero energy building in the eastern United States and among the top four largest such buildings in the entire United States.

The new campus, Fuchs said, is intended to be financially self-sufficient. A \$350 million gift from Atlantic Philanthropies, announced in the days leading up to Cornell’s winning bid, will help the university immediately start recruiting and hiring new faculty to populate the campus. Atlantic Philanthropies’ founding chairman, Chuck Feeney ’56, has been among Cornell’s most generous benefactors over the years, and his gift – the largest in the university’s history – was key to securing Cornell’s bid for the campus.

None of the Ithaca campus’s operating budget is expected to be diverted to the new campus, Fuchs said.

Fuchs went on to predict that having the tech campus in New York City will create a symbiotic flow of people and ideas that will end up attracting people – and philanthropy – to Cornell in Ithaca, not just New York City.

The Cornell-Technion proposal, Bloomberg said in December, was the boldest and most ambitious of all those submitted. He talked about the dynamic partnership between Cornell and Technion, and he praised Cornell’s established presence in New York City with Weill Cornell Medical College, its many academic and extension programs, and its active alumni base.

The campus, he continued, is expected to generate \$23 billion in economic activity over the next three decades, as well as \$1.4 billion in tax revenue. Building it will create an estimated 20,000 construction jobs and 8,000 permanent jobs to operate it.

Visit now.cornell.edu/nyctech



Above: Jillian Cohen, along the banks of the Potomac River near Washington, D.C. Below: Cohen near the U.S. Capitol building, where she will be working for a year as a Sea Grant Knauss Fellow.

Graduate students – the foundation of Cornell’s future

Maryland native **JILLIAN COHEN** discovered her mission early in life, during a time of public awareness focused on cleaning up the Chesapeake Bay watershed.

“I guess I was ingrained with an environmental ethic when I was 9,” says Cohen, a Ph.D. candidate in the field of natural resources. “I learned about the Chesapeake Bay and how interconnected the world is. I’ve always been a lover of animals, and one of the things I learned is the best way to care for animals is to protect their habitat.”

Based in Cornell’s Resource Ecology and Management facility, Cohen researches the effects of invasive plant species on amphibians in wetlands, “mostly working outdoors, setting up experimental aquatic communities and seeing how they respond to plants.” She has carried out similar experiments at the Montezuma and Iroquois National Wildlife refuges.

Her special committee chair, Bernd Blossey, is an associate professor of natural resources who has an extension appointment working with state-level wildlife managers. Working with him, Cohen says she has “gained a wider view of the importance and implications of my research.”

Cohen is one of some 5,200 graduate students at Cornell, of which the majority (3,200) are pursuing Ph.D.s.

Helping to attract top faculty and enriching undergraduate education are among the benefits accomplished graduate students provide, and they are a key factor in Cornell’s efforts to be a top 10 research university, says Barbara Knuth, vice provost and dean of the Graduate School.

Within Cornell’s system of graduate education, graduate students are not attached to academic departments – instead, they range across fields of study that span traditional departments and colleges, which gives students great mobility across disciplines.

“Our Ph.D. programs are very fluid and flexible,” Knuth says. “A student can design his or her program and field of study to meet his or her aspirations.”

The Graduate School offers 18 different degrees across a diversity of fields matched by only a few other universities, and had more doctoral research fields (61) participate in the 2010 National Research Council survey than any comparable private institution.





The school reports that 44 percent of its students are women and 45 percent are international students. (Only 10 percent of undergraduates are international.) They come from 69 countries; most prominently China, Canada and Korea. “Applications from China are skyrocketing,” Knuth says.

Essential to this educational enterprise is the spirit of collaboration and mentoring of students by more than 1,800 Cornell graduate faculty members. The field and special committee structure for graduate students fosters an environment of cross-disciplinary inquiry to integrate and synthesize knowledge – a benefit many student and faculty researchers agree sets Cornell apart.

“One thing I love most about our department is we have social scientists and natural scientists working together,” Cohen says. “I’ve always benefited from that.”

Cohen recently moved to Washington, D.C., to serve for a year as a Sea Grant Knauss Fellow with the U.S. House of Representatives Committee on Natural Resources. She is eager to see how scientists communicate science to policy- and decision-makers, and a chapter of her dissertation will be based on her Capitol Hill experience.

SIMIN WANG’S (M.Arch. ’13) undergraduate engineering training helped lead him to National Science Foundation-funded environmental building research with professor Jenny Sabin as co-principal investigator.

Reading blueprints one day at the University of Michigan to determine material costs for a building project, Wang realized he would rather be making the drawings than interpreting them. Architecture and design feed his creative interests, such as photography and drawing, he says, while his engineering and mathematics skills are a benefit in problem-solving.

“It’s more than just a sculpture or a drawing I’m rendering,” Wang says. “It should be occupiable beauty.”

After distinguishing himself in Sabin’s fall studio (“Bodies, Waves and Water: Generative Architectures of Change”), he was asked to join her research team. They are in the second year of a four-year project to develop passive-responding building materials that react to environmental conditions such as heat, sunlight, moisture and even touch.

“I really appreciate the diversity of this program,” Wang says. “It’s not just about architecture or pure design. Some of the faculty are students of [20th-century architectural theoretician] Colin Rowe; some, like Jenny, are really avant-garde. I can get feedback from the old-school faculty. This program also gave me an opportunity to see my background not as a limitation but as a tool.”

“Simin has a rare gift,” says Sabin, “for applying technology to a design process while expanding



M.Arch. student Simin Wang in Rand and Milstein halls.



Michael-Paul Robinson, a graduate student in chemical and biomolecular engineering, works in professor Matt DeLisa's research group lab space in Olin Hall.

the applications for architecture. He seems to navigate both trajectories.” On what Wang will contribute to her work, she says, “He’s going to be helping us develop a digital tool palette to catalog geometric simulations and help work on problems of scale. His diverse background is really helpful for our research team.”

MICHAEL-PAUL ROBINSON is another NSF-funded grad student, an M.S./Ph.D. candidate in chemical and

biological engineering. He is hoping to find medical breakthroughs in professor Matt DeLisa’s laboratory in Olin Hall, using bacteria to more cost-effectively produce and discover antibodies.

“It’s a good environment,” Robinson says. “The personalities in the lab really mesh. The common theme in our lab is protein engineering and there’s some overlap in our projects. In the future I want to collaborate with some of the other people in the lab.”

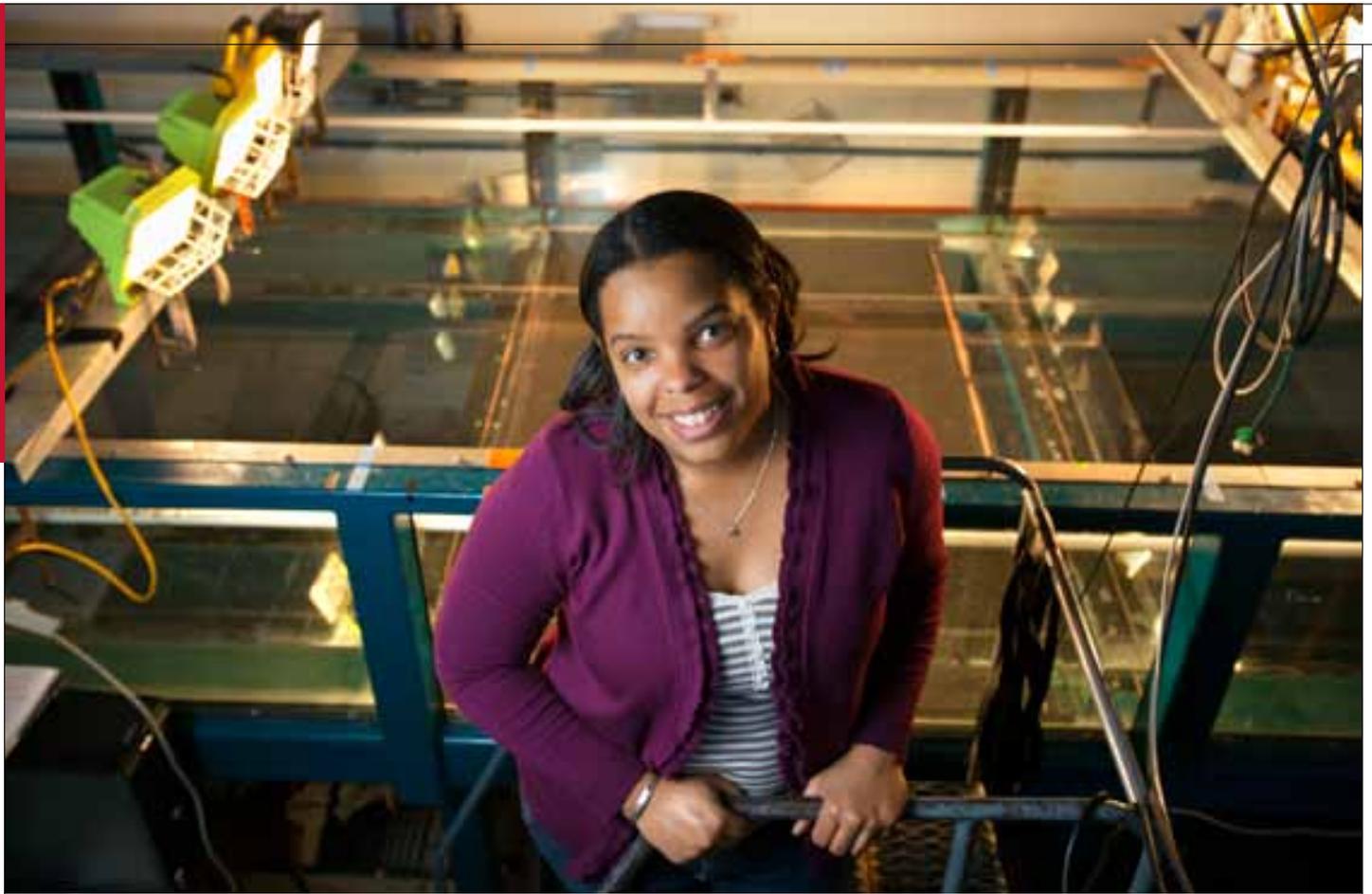
Funding is at the forefront of graduate education concerns, and the NSF is among the major external funding sources at Cornell.

“The NSF is really big for our field because of the competition,” Robinson says. “There is no way you can win the NSF by yourself; so many people in this department helped me [with the proposal]. I went through 20 or 30 drafts.”

He also has received a Ford Foundation pre-doctoral fellowship and support from Cornell, including a Colman Family Foundation Fellowship, which provides up to three years of support to underrepresented minority Ph.D. students in the College of Engineering.

Cornell is establishing a new donor-supported fellowship program that will allow graduate students, with faculty guidance, to develop mentoring skills. The university also seeks to fully fund every first-year research Ph.D. candidate





and to provide fellowship support and financial aid to help every student excel. (See related story, p. 11.)

Working as a teaching assistant (TA) is another side of academic life most graduate students know. **ERIKA JOHNSON** has taught fluid mechanics to engineering students while working on research for her Ph.D. in environmental fluid mechanics. “Being a TA is a lot of work, but certainly has a lot of rewards – they ask a lot of difficult questions,” she says.

Johnson also led seventh- and eighth-graders last year at the “Expanding Your Horizons” conference, an outreach effort aimed at “trying to get girls interested in math and science.”

Johnson was working for a NASA subcontractor in Florida when she met College of Engineering Dean Lance Collins at a conference. She came to Cornell to further her research on volumetric discharge, or the amount of water flowing in rivers and estuaries. Her work in the field and at Cornell’s DeFrees Hydraulics Laboratory will help agencies like the U.S. Geological Survey to conduct more effective and accurate stream monitoring, using remote sensing technology.

“Dean Collins is big on turbulence, and there’s a potential for collaboration with people in civil engineering and earth and atmospheric sciences,” says Johnson, whose work has been supported by Sloan and Colman fellowships.



Graduate student Erika Johnson in her Hollister Hall lab, measuring water flow rates.





MFA student Piotr Chizinski works in his studio at the Foundry on die-cut paper models for an installation in Milstein Hall.



Interdisciplinary research-oriented work in science and engineering fields is common at Cornell, but for visual artists pursuing a Master of Fine Arts (MFA) degree it is “a fairly new idea, and more reflective of contemporary practice,” says Carl Ostendarp, director of graduate studies in art. Artists produce work “directed by their intentions, regarding the relations between content and the

experience they anticipate their viewer having,” he says. “It’s still very rare in graduate art education to have a program that structures itself as interdisciplinary, which distinguishes our program from peer institutions.”

MFA student **PIOTR CHIZINSKI** uses applied research in the arts; among his projects this year is a large installation for Milstein Hall that represents future utopian/dystopian provisions for food, water and shelter. The project, inspired by the Federal Emergency Management Agency, addresses “the great modernist notion that the state will save all, and the question of humanitarian effort,” Chizinski says. It has involved extensive research and designing laser-cut 3-D paper models of trailers, water towers and grain storage buildings.

HOW A CORNELL GRADUATE EDUCATION IS FUNDED

It’s not enough for some of the nation’s most talented graduate students to want to come to Cornell. Ways must be found to finance their education.

The answers to that challenge lie in internal and external funding, as well as with academic support for skills to succeed and prepare students for professional life.

Cornell support

Graduate fellowships are a priority, both in the “Cornell Now” campaign and at the Graduate School. Their goals are to fund every first-year research Ph.D. student with a graduate fellowship and to match the number of years of merit-based fellowship support offered by peer institutions to improve Cornell’s ability to recruit the best students. Funding packages and professional development programs also are offered to attract the most diverse student body possible. Currently, Cornell spends more than \$37 million a year in total fellowship support (including diversity fellowship programs) to graduate students, enhanced with \$600,000 from the State University of New York to support diversity goals.

The Annual Fund, other gifts and foundation support such as the Sloan and Colman Family Foundation fellowships also play a role, as do teaching assistantships, research assistantships provided through external sponsors, travel grants and health insurance, this last averaging almost \$1,900 per student annually. Most fellowship funding in the humanities comes from Cornell, Graduate School Dean Barbara Knuth says, since there are fewer outside funding opportunities for these students.

External support

Only a fraction of Cornell’s graduate students are funded externally. Even in the sciences, external funding sources “wax and wane,” says Knuth. Major supporters are the National Science Foundation, the National Institutes of Health, the Ford Foundation and the Social Sciences Research Council.

“We want to continue to have strong and robust programs, enhanced with additional graduate fellowship funding, so we can support our students and continue to diversify our graduate and professional student body,” Knuth says. To this end, the campaign’s goals include raising \$88.8 million in endowed funds and \$11.2 million in current-use funds for graduate fellowships and professional school scholarships.

Visit now.cornell.edu/fellowships

– Daniel Aloj



In October 2011, Chizinski received a Jacob Javits Fellowship, usually given to Ph.D. students and rarely to artists. The fellowship allowed him to stay on at Cornell an additional year and “required me to TA one less class, to open my time up to focus on my work,” he says.

MIGUELLA PAULA ANN MARK-CAREW, a Ph.D. candidate in the field of comparative biomedical sciences, found her way to Cornell through a summer program she attended in 2000 and 2003 as a Dartmouth College undergraduate. “I wanted to pursue research, and knowing I wanted to come back to Cornell, I applied in 2006,” she says.

She researches infectious zoonotic diseases, particularly the giardia parasite affecting dairy cattle and canines in New York state and in Trinidad and Tobago. The research will help protect animal populations and safeguard watersheds, including the Delaware County reservoir that provides water to New York City, Mark-Carew says.

“I’ve always been interested in infectious diseases, and I love animals [but] didn’t want to be a veterinarian,” she explains. “This, I found, is the best way to do research and better their lives.”

Last year, Mark-Carew went to Trinidad and Tobago on a

Fulbright scholarship “to look for internal parasites in any mammalian species I could find,” she says. After narrowing her study to dairy cattle and dogs, the research led her to initiate the Roaming Dog Assessment Project, an initiative to show the public health implications of having free-roaming dogs in that country. She worked with Cornell veterinary students, the University of the West Indies and two branches of the Trinidad and Tobago SPCA to collect data over a one-year period, counting dogs and gathering stool samples.

“I was able to make it a collaborative effort, having vet students help me with sample collection,” she says.

Opportunities for graduate students to interact with or serve the Cornell community outside of research and teaching settings include the Graduate and Professional Student Assembly, other graduate and professional student associations, and living in residence halls with and advising undergraduates on West Campus.

Cohen served as president of the Natural Resources Graduate Student Association and the Biogeochemistry, Biological Sciences and Sustainability Graduate Student Association, and spent two years as a graduate residential fellow at William Keeton House, which she says “was a wonderful experience. As a graduate student you can become very entrenched in your own research. I got a chance to see the rest of Cornell [and] meet other students from different departments.”



Miguella Mark-Carew is a Ph.D. candidate in the field of comparative biomedical sciences.

Visit now.cornell.edu/graduate

Celebrating clean water in Honduras

Tamara, HONDURAS — It was a full-blown fiesta, complete with a mariachi band, platters of food and boisterous children. No one who takes clean, drinkable tap water for granted could possibly have guessed the reason for the Jan. 13 party – the “inauguration” of a water filter designed by Cornell engineering students.

The stacked rapid sand filter, developed by members of Cornell’s AguaClara research team, could well be the reason that Tamara, a working-class town of about 3,500, now has some of the best water in all of Honduras.

AguaClara team members, spending two weeks in Honduras, got to celebrate in person. Attending the filter inauguration was a highlight of the team’s Jan. 6-20 journey through the country, accompanied by their leader, civil and environmental engineering senior lecturer Monroe Weber-Shirk.

It was the seventh annual AguaClara trip; Weber-Shirk considers it an integral part of the students’ work and research. They get to see the brick-and-mortar plants, interact with the engineers and operators who build and run them, and meet the people whose lives have been changed by having clean water for the first time.

Among their other stops this year was AguaClara’s eighth and newest plant, in Atima, which is now under construction, as well as potential sites for future plants.

The sand filter is the latest chapter in Tamara’s story of clean water, which began four years ago when the town’s local water board laid the first stone of a much-anticipated AguaClara water treatment plant. The Cornell team designs water treatment technologies in partnership with the Honduran nonprofit organization Agua Para el Pueblo (APP), which supplies technical expertise and education to municipalities about clean water.

The stacked rapid sand filter’s design team included Mickey Adelman, M.S. ’12, who lived in Honduras this past summer to help oversee construction and implement it, along with Anderson Cordero ’10, M.Eng. ’11, and Jeff Will ’10, M.Eng. ’11, who is a Fulbright scholar and AguaClara engineer stationed in Honduras.

The filter is truly like no other, Weber-Shirk said: “Slow sand filters were first used in 1829. Rapid sand filters were invented around 1890. Stacked rapid sand filters were invented by Cornell in 2010.”

Adelman and Will explained that the filter works like filters in the U.S. but with an innovative geometry. It is essentially six mini filters stacked on top of each other, whereas conventional filters typically consist of only one sand bed. The stacking allows for sufficient velocities during backwash, which is a process to clean the contaminants that collect in the filter every day – without the use of pumps.



Top: AguaClara students visiting Honduras Jan. 6-20 toured existing water plants and helped improve others, including one in Marcala, where they installed a new inlet manifold. From left, AguaClara faculty leader Monroe Weber-Shirk; Jordanna Kendrot, M.Eng. ’12; Breann Liebermann ’14; and Patrick Farnham, M.Eng. ’11. Bottom left: Annie Newcomb ’13 listens to Agua Para el Pueblo engineer Santiago Garcia describe the Atima construction site to AguaClara students visiting Honduras. Bottom right: Finished water is chlorinated and sent to distribution tanks at the AguaClara plant in Tamara, Honduras.

Tamara is now producing water that exceeds World Health Organization standards. On Jan. 12, it was producing water at 0.5 NTU, which is a universal measure of the water’s turbidity, or clarity; the World Health Organization’s standard is 1.

The water is so pure that as soon as AguaClara students arrived in Tamara, they began filling their water bottles straight from the tap.

Video: www.cornell.edu/video/?videoID=1877



A Milstein Hall Montage



The composite image, above right (with detailed views at left and opposite), is a unique creation. Made by photographer Brett Beyer from 250 separate images taken on three dates last semester, it gives a bird's-eye view of the expansive studio space in Milstein Hall's L.P. Kwee Studios.

The College of Architecture, Art and Planning's Milstein Hall, designed by Rem Koolhaas and OMA, fully opened in October and features a 250-seat, state-of-the-art auditorium, public spaces for exhibitions and 25,000 square feet of flexible studio space. The open second floor houses architecture studios and can accommodate approximately 200 students. The floor offers connections to the adjacent Rand and Sibley halls and the building's hybrid steel truss system, developed by Silman Associates (headed by Robert Silman '56), allows for the open floor plan with 12-foot ceilings and also supports the building's cantilever that juts out over University Avenue.

For more information about Milstein Hall, visit aap.cornell.edu/milstein

For an interactive version of the composite image, visit aap.cornell.edu/milstein/studio-overhead.cfm



Brad Feinkopf '86



Brad Feinkopf '86



BY KRISHNA RAMANUJAN

Shoals: Fieldwork on Appledore's rocky shores



Joe Simonis



Jan Factor



Jan Factor

Top left: Kara Pellowe '12 takes a water sample from an intertidal rock pool on Appledore Island as part of a research project. Pellowe took two courses at Shoals in 2009 and was a research intern at Shoals in 2010 and 2011. Bottom left: Willy Bernis '76, right, professor of ecology and evolutionary biology and director of Shoals Marine Laboratory, holds a sea raven (a bottom-dwelling fish) aboard the John M. Kingsbury research vessel with Shoals teaching assistants, instructors and students. Right: Students at Shoals aboard the R/V John M. Kingsbury. All courses at Shoals include field trips to neighboring islands and offshore cruises.

Water covers more than two-thirds of the planet's surface, so it makes sense that Cornell students have the option to study marine biology even if Ithaca is some 200 miles from the closest ocean.

That is now possible, after such students as Elizabeth McDonald '13 lobbied for a formal program in marine biology. Many of the courses were already in place, but the field of study lacked a unifying structure. In late October, Cornell announced its new marine biology concentration for biology majors – as well as a marine biology minor available for non-biology majors.

“There are so many things about the ocean that we don't know,” McDonald says. “We know more about the land, but the majority of the ocean is unexplored. I find that fascinating.”

Students can enroll in the concentration starting in fall 2012, though advising has already begun. Courses will be spread across nine departments on campus, including microbiology, ecology and evolutionary biology, natural

resources, earth and atmospheric sciences, and at Cornell's Shoals Marine Laboratory on Appledore Island, six miles off the New Hampshire coast, where students can get valuable fieldwork experience. Students who have already taken many marine biology courses can have those credits applied toward the concentration.

Biology majors who choose a concentration in marine biology must fulfill a 15-credit requirement: An introductory class related to the marine environment – Introduction to Oceanography or Ecology and the Marine Environment – and 12 credits taken in two groups of courses. The first group will give students an appreciation for the diversity, anatomy, physiology, ecological interactions, evolution and adaptations of marine organisms to their environments. The second

Lauren Quevillon '10 holds “periwinkles” (snails in the genus *Littorina*), which are plentiful along the rocky shore of Appledore Island. Quevillon took courses at Shoals in 2007, worked as a Shoals research intern in 2008 and served as a teaching assistant at Shoals in 2009. Jim Kozubek



A view, looking north, from Shoals Marine Laboratory showing the Appledore Island coast. The Maine coastline is visible in the distance.

group will provide advanced knowledge of biological and ecological dynamics of marine ecosystems, biogeochemistry and such current threats to marine organisms as climate change and topics related to humans' impact on the oceans.

"The new concentration will be very focused on marine biology as distinct from oceanography and will be more at the organismal level," says Ian Hewson, assistant professor of microbiology and director for undergraduate studies for the marine biology concentration. "It provides students with a multifaceted experience more like other concentrations that students can enroll in as well."

A final requirement of the concentration is fieldwork, as most marine biologists engage in field research. The fieldwork can be pursued through an internship, volunteer work, a semester abroad or classes at Shoals Marine Lab, such as Ecology and the Marine Environment, or a new course that will be offered beginning this summer, Evolution and Marine Diversity.

"Shoals is a focal point and a nurturing ground for marine biology on campus," says Hewson, who is also assistant director for research at Shoals. "We do a lot of recruiting through Shoals for our courses on campus and this concentration." Taking classes at Shoals, however, is not required for the concentration.

"I am very happy to have increased awareness of marine biology at Cornell under any possible



Jan Factor

"Intertidaling" is the term that describes going out onto the rocky shoreline of Appledore Island at low tide to identify organisms, discover the rhythms of the tides and to collect data as part of a decades-old, ongoing monitoring study. At the beginning of most courses at Shoals, faculty and teaching assistants take students intertidaling as a rite of passage.

scenario, because 70 percent of the planet is ocean, and the ocean literally influences everything related to life on Earth," says Willy Bemis '76, the Kingsbury Director of Shoals Marine Laboratory. "This new concentration will help us bring the ocean to Ithaca and no doubt inspire many future generations of Cornellians."

The new marine biology concentration will help prepare students for graduate studies in marine biology, fisheries and oceanography that lead to positions in academic institutions, museums, aquariums and government agencies; aquaculture and marine resources management; natural products chemistry and pharmaceuticals; environmental or maritime law; and veterinary science.

Shoals Marine Lab, www.sml.cornell.edu, is an undergraduate teaching facility operating under the College of Agriculture and Life Sciences at Cornell in cooperation with the University of New Hampshire. For more information about the new marine biology concentration, see biology.cornell.edu/academics/marinebio.html.



CORNELL NOW 2015

ANNUAL FUND

Nine-year-old is annual fund's youngest supporter

Zach "Big Red" Russell, a third-grader from Greenwich, Conn., listened as his father, Stewart "Stew" Russell '87, made fundraising phone calls to classmates for their



25th reunion campaign. The elder Russell reminded alumni, one by one, of the importance of giving back, the pleasure of supporting one's alma mater, and the impact their combined giving could have on current students.

Swayed by his father's pitch, Zach sent a short note and a \$20 bill to the Cornell Annual Fund. His note began, "I am nine years [sic] and I visit Cornell every year and I want to make a donation."

Thanks to his dad's efforts and those of his classmates, the Class of 1987 has raised more than \$3 million for Cornell. And with his gift, Zach probably became the youngest Annual Fund donor this year, joining 20,000 alumni, parents and friends.

"This is really touching," says Joe Lyons '98, director of the Cornell Annual Fund. "When alumni pass down their love for Cornell and their habit of generosity and involvement, I feel confident in our nation's future and our university's future. I hope to see Zach at Reunion in June to thank him in person."

NYC TECH CAMPUS

The biggest gift in Cornell's history

Some gifts change the course of an institution's history instantly and forever. Such a gift, of \$350 million, was made by the Atlantic Philanthropies and Chuck Feeney '56 to Cornell last December for the CornellNYC Tech campus.

The gift was announced in mid-December, while Mayor Michael Bloomberg's committee charged with selecting a winning bid to build a tech campus in NYC was still deliberating. Three days after Cornell announced the then-anonymous \$350 million gift, the committee announced that Cornell University and its partner, Technion-Israel Institute of Technology, were the winners.

"This is a once-in-a-generation opportunity," said Feeney, "for Cornell University and Technion-Israel Institute of Technology, together with the city of New York, to create economic and educational opportunity on a transformational scale."

NEW HUMANITIES BUILDING

Paid in full!

"By enabling us to relaunch the design phase for a new humanities building, Cornell's Board of Trustees, by its January vote, has affirmed the centrality of the humanities to a Cornell education," says President David Skorton of the building that will become a gateway to the Arts Quad. "It's a very big deal."

The building's cost (\$61 million) has been fully funded by gifts from alumni, parents and friends. Detailed design work is under way and expected to continue through the summer. Then construction documents will be drafted, and the university will issue a call for bids. In summer 2013, construction will begin, with a completion date projected for the close of Cornell's sesquicentennial year, 2015.

"This new building will be truly transformative in several ways," explains Peter Lepage, the Harold Tanner Dean of the College of Arts and Sciences. "It demonstrates to the world at large Cornell's substantive and deep commitment to humanities scholarship. It will be home to faculty, departments and classes that serve students in our college and in every other college at the university. And it will strengthen our ability to recruit prominent humanists for decades to come."

In the past year, more than 20 humanities professors have been hired, and the college aims to hire 40 to 60 more by the building's completion.

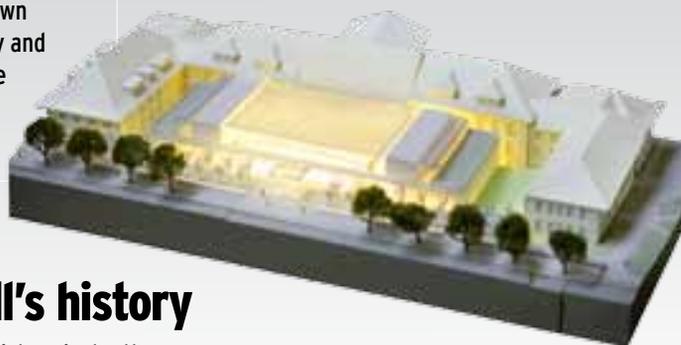
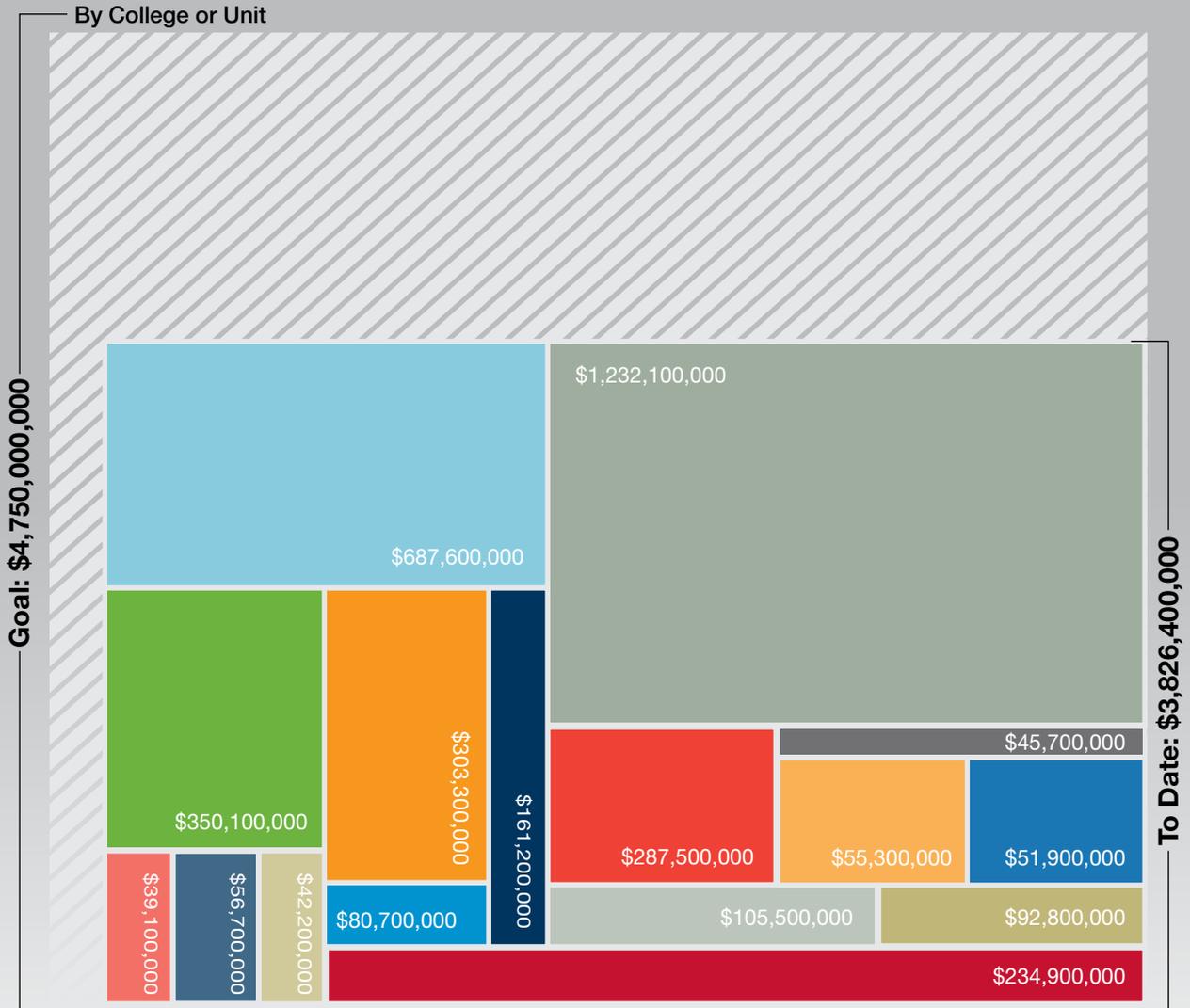


Photo illustration by Cornell

NEW GIFTS AND COMMITMENTS as of January 31, 2012



- College of Agriculture and Life Sciences
- College of Architecture, Art and Planning
- College of Arts and Sciences
- College of Engineering
- College of Human Ecology
- College of Veterinary Medicine
- Cornell University (general)
- Cornell University Library
- Division of Student and Academic Services
- Faculty of Computing and Information Science
- Law School
- CornellNYC Tech
- Samuel Curtis Johnson Graduate School of Management
- School of Hotel Administration
- School of Industrial and Labor Relations
- Weill Cornell Medical College

Faculty Renewal



Student Financial Aid



BY SUSAN KELLEY

A West Campus exit interview

West Campus soon will mark a significant changing of the guard. This spring, the last two of the original five house professor-deans will wind down their final semesters



as their houses' intellectual leaders. Ezra magazine recently sat down to talk with William Keeton House's **Jefferson Cowie**, associate professor of labor history, and Flora Rose House's **Shirley Samuels**, professor of English and American studies.

What's the most important room in the house?

Shirley Samuels: The dining room, as far as I'm concerned, is the fireplace of the house. It's where you want students to come and warm themselves up and feel at home. This is a place where they gather.

What have you learned about how to inspire students?

Jefferson Cowie: With almost all my "Conversations at Keeton" (biweekly salons in my apartment) I have a pop tie-in. It has to be something kind of edgy. I realized this when we had a guest from Tulane University who studies the idea of "cool." The room was packed. The students learned about jazz, film noir, race relations, post-war history, gender. That's when the light bulb went off for me. Ever since then, the conversations have always been on some kind of broader idea that can draw in everyone, from engineering majors to philosophy majors.

Who else has been an exciting guest?

Cowie: Last year we did a theme: Cornell's most interesting and influential. I thought, which professors are you going to want to have experienced by the time you leave Cornell? So we basically brought in anyone who won a Nobel Prize, a MacArthur "genius" award, a Pulitzer. We've had Roald Hoffmann (theoretical chemistry), Walter LaFeber (history), Jon Kleinberg (computer science). It was great to have LaFeber sit up there and talk for an hour without notes and give an airtight presentation to 70 students.

What intellectual or cultural programming have you emphasized?

Samuels: Issues of sexuality, feminism and domestic partnerships. I recruited house fellow Laura Weiss, director of Cornell's Women's Resource Center, who hosts the Feminism: Food for Thought weekly dinner discussion here, and house fellow Matt Carcella, director of the LGBT Resource Center. I encourage activity to make this a safe space for alternative ideas about lifestyle choices and

feminism. ... It means a sense of compassion and openness that can include a great deal of diversity. I care about feminism. But I also care about student happiness and well-being. To have students come to class from a place where they feel at home is to have students who are able to engage and draw on the best of their thinking and creative possibilities.

How do you keep students thinking?

Cowie: Once a semester I invite someone who has written something critical of this generation, like author Mark Bauerlein, who wrote "The Dumbest Generation," arguing that the Internet has diminished students' critical thinking skills. ... It's a chance for the students to think about who they are in history, what makes their generation different or the same from other generations, and what their burdens and missions may or may not be.

How have you helped students feel they belong?

Samuels: This year we instituted something that was in place at some of the other houses: an active citizen program, where the students who express the most commitment to working with the programs of the house have dibs on returning. ... That makes a difference for the long-term health of the house, in terms of people's sense of community.

How do students benefit from living on West Campus?

Cowie: The debates are happening in a way that you cannot get anywhere else. Everywhere else on campus, it's 'here is the information' through a lecture. Or if it's a seminar, it's going to be graded, so it's full of anxiety [for the students]. If a house fellow is at a meal and sitting down with students, there's a little anxiety, but they come to the table more as equals than they will anywhere else on campus. They're coming together to have a discussion. ... This is a place for them to do that. For days afterward you hear the students talking about ideas that were planted.

Visit www.westcampushousesystem.cornell.edu



Students study, socialize and eat in the Amit Bhatia Libe Café in Olin Library. Below: Bhatia shows off the café's new sign.

The Amit Bhatia Libe Café

On a visit to campus one snowy day last March, Amit Bhatia '01 brought his wife, Vanisha, and two toddlers to introduce them to his old haunts. "My time at Cornell was probably the best four years of my life," says the 32-year-old founder of Swordfish Investments, a private equities and capital management company in England. Bhatia proudly led his family from one deserted campus landmark to the next. It was a holiday and students were nowhere to be seen, but the stillness did not dampen his excitement at being back.

Bhatia stands out as one of Cornell's youngest donors to endow a scholarship, the Amit Bhatia Scholarship in the College of Arts and Sciences, which he established in 2007 at the age of 28. Every year the university sends Bhatia (and all donors who endow scholarships) reports on the students supported by his gift. The reports, he explains, have opened his eyes to the impact philanthropy can have on individuals.

Last fall Bhatia decided to make a new gift, this time to the library. According to University Librarian Anne Kenney, Bhatia's was among the four largest gifts to the library last year.

In recognition of his support, a prominent gathering space on campus, Libe Café in Olin Library, was renamed the Amit Bhatia Libe Café.

"We are using his support to maintain the popular and

lively café," explains Kenney, "and to build first-rate research collections that continue to bring scholars and students to Cornell every year. Recently, a student defined the library as the place where 'great minds think together.' The Amit Bhatia Libe Café offers wonderful space for great minds to meet."

Meeting and building relationships with fellow Cornellians is what drew Bhatia to the university in the first place. "I was lucky enough to be accepted to four or five Ivy League universities," he remembers, "and I chose Cornell because of its campus. I always loved the common spaces, which bred harmony amongst us."

Although his financial support for his alma mater is uncommon for someone his age, Bhatia believes that every Cornellian can feel the same satisfaction from philanthropy that he does. On his next campus visit, he hopes to organize a fundraising discussion with his friends and classmates at The Nines in Collegetown.

"Maybe a group can give back as a group. I was in Mary Donlan Hall, and we had a great bond, so maybe we could give back as a group or a floor," he says.



Provided

BY SUSAN KELLEY

Checking in on enhanced financial aid



Financial aid made it possible for Dan Kuhr '13 to attend Cornell.

Dan Kuhr '13 spent months in fearful anticipation during his senior year of high school, wondering which colleges would accept him – and just as important, how much financial aid they would offer.

Kuhr's family, which owns a small consulting business, earns \$70,000-\$100,000 annually, but most of their assets are not liquid in savings and securities.

"I was afraid of getting into the schools of my dreams and not being able to go ... just because I don't come from a family that owns a yacht and summers on Martha's Vineyard," says Kuhr, the first person on his father's side to attend college. "I was afraid of the disappointment."

Two other top-tier schools admitted Kuhr but with little financial aid; Cornell offered to cover half his costs, including tuition, room and board, books, mandatory fees, personal expenses and a small travel stipend.

"Cornell came through," Kuhr says. "If [my family] were getting no aid, I just straight up wouldn't be going to Cornell right now."

Kuhr is among the half of all Cornell undergraduates benefiting from the university's financial aid program, which has been substantially expanded since 2008. While the cost

of an undergraduate education at Cornell's endowed colleges has increased an average of 4.6 percent yearly since then, Cornell's financial aid has grown on average nearly 20 percent annually during the same period. Cornell now spends some \$224 million annually on financial aid that benefits roughly 7,000 undergraduates.

Ensuring Cornell's affordability regardless of financial need has been a top priority of President David Skorton.

"Cornell is the original 'opportunity university,' and we still carry forward our founder's vision of inclusion," he said in his October 2011 State of the University Address. Even during the "Great Recession" of 2007-09, Cornell didn't just maintain its need-blind admissions policy but also enhanced financial aid to low- and middle-income students (see sidebar), "so that they could graduate without a crushing burden of debt,"

'CORNELL CAME THROUGH. IF [MY FAMILY] WERE GETTING NO AID, I JUST STRAIGHT UP WOULDN'T BE GOING TO CORNELL RIGHT NOW.'

– DAN KUHR '13

Skorton said. "We are proud of this commitment to access and to the diversity within our student body it fosters."

The expanded financial aid has resulted in greater access for students from lower- and middle-income families, says Lee Melvin, Cornell's associate vice provost for enrollment. For example, children from families with incomes less than \$75,000 a year pay less to attend Cornell than they did a decade ago.

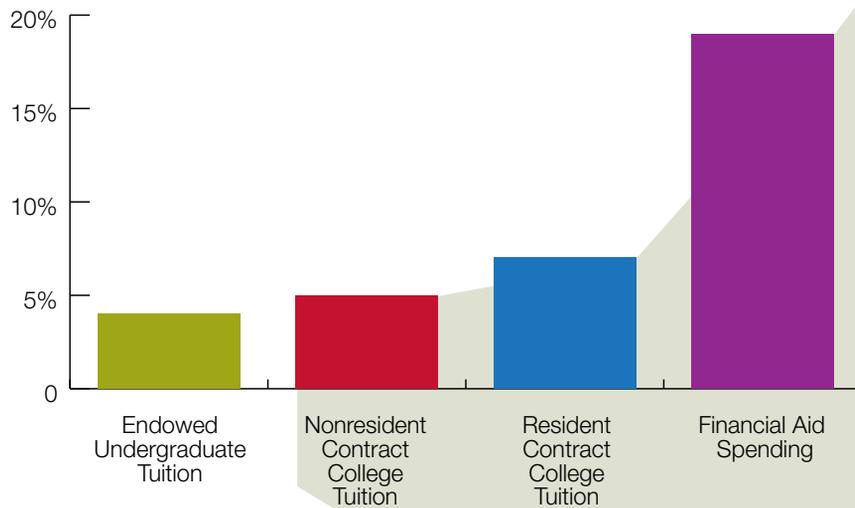
The new policies benefit both low- and middle-income

students. Nearly 28 percent of students receiving financial aid are from the lowest 40 percent of household incomes nationwide – those earning less than \$48,000 per year. More than 42 percent of students receiving aid come from families earning \$74,000-\$114,000.

The enhanced financial aid has also made the student body more geographically and ethnically diverse. For example, students in the Class of 2015 hail from 48 states as well as Washington, D.C., and Puerto Rico, and more than 36 percent identify themselves as students of color, Melvin says. “Our financial aid supports highly qualified students regardless of their social status, ethnicity or geography,” he says. That diversity attracts a broader pool of candidates, which in turn enhances the university’s selectivity, Melvin added.

Financial aid is a key component of the university’s \$4.75 billion fundraising campaign, “Cornell Now.” The campaign seeks to raise \$350 million for undergraduate and international student scholarships, says Charlie Phlegar, vice president for alumni affairs and development. “Compared with other schools with aggressive aid plans, Cornell has a larger student body and enrolls a greater number of lower-income students. This means that Cornell must spend more to reduce loans for students,” he says. “However, it also means that Cornell has the chance to change many more lives.”

Average annual spending increases on financial aid compared with average annual tuition increases since 2007-08



CORNELL’S ENHANCED FINANCIAL AID PROGRAMS

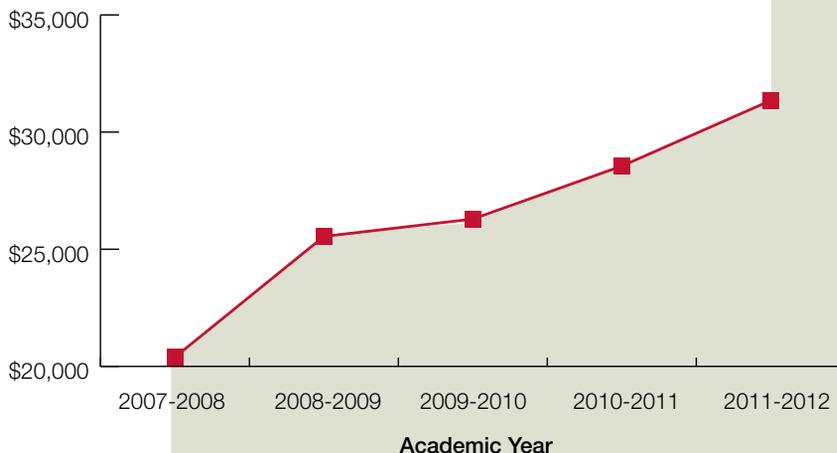
Starting in 2008, Cornell expanded its financial aid programs over a two-year period. In 2008-09, the university replaced need-based loans with grants for undergraduates from families with incomes less than \$60,000; it capped loans at \$3,000 annually for students from families with incomes \$60,000-\$120,000.

In 2009-10, the program took full effect, replacing need-based loans with grants for students from families with incomes up to \$75,000, and capping annual loans at \$3,000 for students from families with incomes \$75,000-\$120,000. Loans were capped at \$7,500 for students from families with incomes above \$120,000 who qualify for need-based financial aid.

In 2011-12, Cornell began matching the need-based financial aid of other Ivy League schools for applicants who were also accepted at those schools. And it began striving to match the financial aid for students also accepted at Duke, MIT and Stanford. (See story, page 24.)

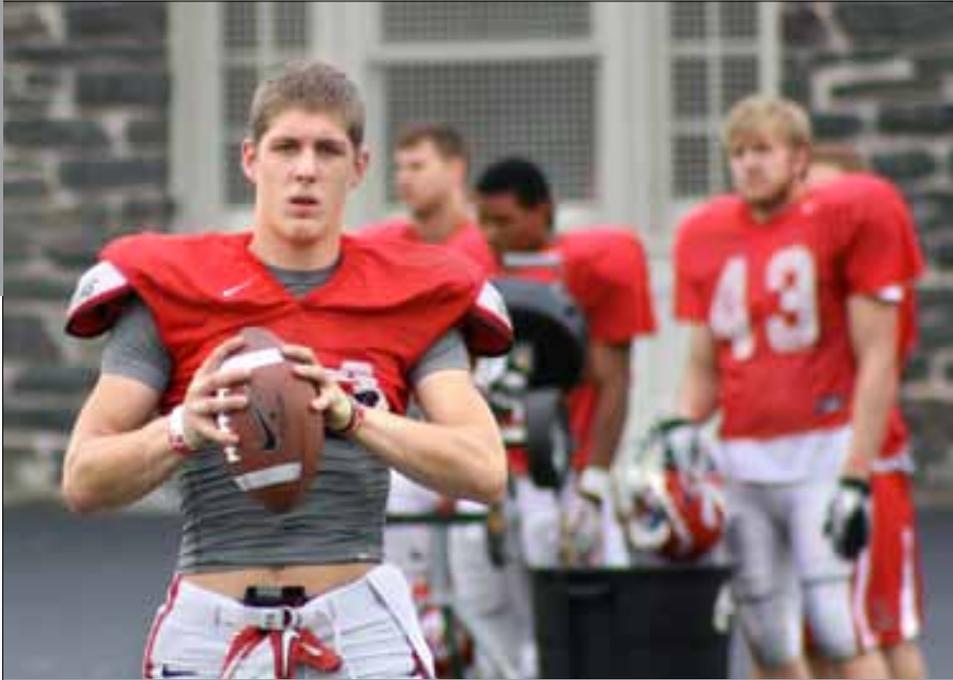
Cornell Undergraduate Grant Aid

Average grant amount



BY JOSE PEREZ BEDUYA

Matching aid, matching interests



Above: Lucas Shapiro '15. Middle: Andy Noel, the Meakem*Smith Director of Athletics and Physical Education. Right: Kent Austin, the Roger J. Weiss '61 Head Coach of Football.



of \$3.5 million to \$4 million, to be funded by endowment payout and current-use gifts from alumni, parents and other supporters.

According to Noel, football has benefited significantly from the initiative and has matriculated one of its best classes. Kent Austin, the Roger J. Weiss '61 Head Coach of Football, views the initiative as “the single most important factor in our ability to successfully recruit at Cornell” and points to the team’s current 5-5 record, an improvement from the 2-8 of the previous season.

On the defensive end alone, he adds, “you will see five freshmen on the field at any given time,” a testament to the high level of athleticism of the new recruits.

Rich Booth '82 – a former Cornell baseball player and chair of the Trustee Task Force on Athletics and Financial Aid, as well as a generous supporter of the initiative – considers student-athletes “difference makers on and off the field.” He adds, “in many ways they are Cornell’s most visible ambassadors” who generate excitement for Cornell wherever they compete. He sees the Award Match Initiative as a critical step in Cornell’s drive “to be competitive with other schools who are going after the best students.”

Lucas Shapiro '15, a wide receiver from De La Salle High School in Concord, Calif. – home of one of the top high school football programs in the country – would have enrolled at Stanford if Cornell had not been a contender. “When Cornell came into the picture and gave me the great financial aid package, and I got to meet Andy Noel, and all the great coaches and the team, that really sold the school,” he says.

Shapiro adds that he also was lured by the nation’s top agriculture and life sciences college and the Charles H. Dyson School of Applied Economics and Management’s nationally ranked undergraduate business program. The first thing that went through his mind when he received Cornell’s offer: “Cornell’s a great academic school, and my family has always been ‘academics first, athletics second.’”

The Award Match Initiative – announced in fall 2011 – strengthens Cornell’s need-based financial aid by offering to match need-based aid packages from other Ivy League schools as well as Duke, MIT and Stanford. By enhancing Cornell’s ability to recruit the most qualified and talented students, it aims “to remove any barriers that might exist that are purely financial to allow students to choose the university based on what their interests are,” says Barbara Knuth, vice provost and dean of the Graduate School, whose duties include overseeing undergraduate enrollment through the Undergraduate Admissions Office and the Office of Financial Aid and Student Employment.

In the initiative’s inaugural year, 85 of 165 students offered matching financial aid packages found their interests better served at Cornell and enrolled, placing the total matching funds at \$800,000, with the average cost of approximately \$10,000 per student.

As the initiative helps the university vie for the most academically competitive applicants, it also boosts athletics recruitment. “Cornell athletics yielded a third of its recruited athletes who had received a more generous initial financial aid package from another Ivy League school or Stanford,” says Andy Noel, the Meakem*Smith Director of Athletics and Physical Education.

For Noel, the initiative is a long-awaited corrective to “the increasing gap between the financial aid packages that resulted from our needs-analysis calculations compared to the formulas used by Harvard, Yale, Princeton and other schools.” In coming years, he expects the number of matched students to increase and anticipates a yearly need

Collections, access key to library's future

Ambitious doesn't begin to describe the task Kraig Adler embarked on three decades ago: writing an encyclopedic tome cataloging every single reptile and amphibian in China.

It would be the first book of its kind in any language, and Adler – who chairs Cornell's Department of Neurobiology and Behavior and co-authored the book with a visiting researcher – was sure the books and journal articles he needed as references would be impossible to find. Much of the literature originated in China, in five different languages and specialized publications like universities' tiny in-house journals. Adler worried that the literature was “unbelievably obscure.”

Enter Cornell University Library.

“Cornell had what I needed, right here, almost every time,” Adler says. It took him nearly 10 years to finish “Herpetology of China,” but speed was still a key factor.

“When you're writing a 522-page book ... you don't want to waste time. I have no idea how much longer it would have been if I'd had to somehow track down that literature myself,” Adler says. “With the library, we could have all the literature we needed right here.”

Faculty members, as well as students and staff, are using Cornell's library more than ever. In 2011, the library posted its highest-ever use statistics: Physical facilities saw more than 4 million visits and digital resources were accessed more than 7 million times.

Mary Beth Norton, the Mary Donlon Alger Professor of American History, calls Olin Library her “second home,” but the library's role in her intellectual life goes far beyond its physical presence. Some of her newest research would be impossible without the digitized materials that now serve as a cornerstone of the library's collections.

Norton's most recent book addressed public roles of women in the early 18th century, and databases of early printed documents allowed her to comb original sources for the words “public” and “private” near the words “woman” or “family.” Searching electronically enabled her to prove that English speakers commonly used the terms “private” and “woman” or “family” together by the 1730s, as the concept of women's private sphere developed for the first time.

“It's ironic that someone who works in the early modern period is now so reliant on technology – but I could never have known that without the digital collections,” she says.

Norton's experience highlights a tension between online and print formats that can hamper librarians trying to build strong collections and stretch a budget to its breaking point.

“In the digital age, libraries maintain a tricky balance. It's not only determining what people need, it's also figuring out



Above: Mary Beth Norton, the Mary Donlon Alger Professor of American History. Below left: Kraig Adler, chair of the Department of Neurobiology and Behavior. Below right: Michael Tomlan, Ph.D. '83, director of the Historic Preservation Planning Program in the Department of City and Regional Planning.

what format – and it doesn't always follow the traditional lines drawn by disciplines. Historians need databases; biologists need books,” says Anne Kenney, the Carl A. Kroch University Librarian. “The idea



of collections goes beyond physical ‘stuff,’ and it really speaks to the deepest needs of the people who use the library.”

More than half of collections funding goes toward online materials, and the library is embarking on a \$15 million campaign to raise funds for the collections that faculty members need not only for research, but for teaching as well.

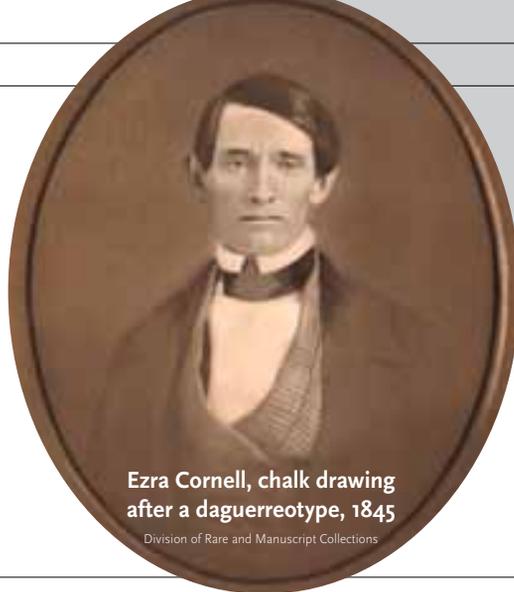
Michael Tomlan, Ph.D. '83, director of the Historic Preservation Planning Program in the Department of City and Regional Planning, teaches international students about national architecture from their home countries through the library's blueprints, maps, photographs and other original sources.

“The library is what distinguishes our institution,” Tomlan says. Students find collections that give them “the means by which they understand their own world. Without the growth of our collections, that connection is impossible to make. ... As alumni, we have a responsibility to make sure the library can provide for them.”

Visit now.cornell.edu/library and now.cornell.edu/faculty

BY COREY RYAN EARLE

Ezra Cornell's legacy of innovation and entrepreneurship lives on



Ezra Cornell, chalk drawing after a daguerreotype, 1845

Division of Rare and Manuscript Collections



Willis Carrier, Class of 1901

Division of Rare and Manuscript Collections

If Ezra Cornell were to peruse the headlines of *The Cornell Daily Sun* or *Cornell Chronicle* today, he undoubtedly would be impressed with the breadth and depth of achievements and innovations by his namesake university. But would he be surprised?

As an engineer and entrepreneur, Ezra spent his life improving the world around him. He was a Renaissance man whose interests ranged from agriculture to education, politics to philanthropy. Cornell University, one of the top research universities in the world, is a fitting legacy to the man who “would found an institution where any person can find instruction in any study.” Today, the university continues to excel at precisely what Ezra was best at: innovation and entrepreneurship.

Young Ezra Cornell arrived in Ithaca in 1828, taking on work as a carpenter and mechanic. Having worked in the cotton mills of Otis Eddy (namesake of Eddy Street), he became manager of plaster and flour mills owned by Jeremiah Beebe. Ezra demonstrated his aptitude for engineering in this position, overseeing the damming of Triphammer Falls to create Beebe Lake as a water source for the mills. He also

blasted through 200 feet of

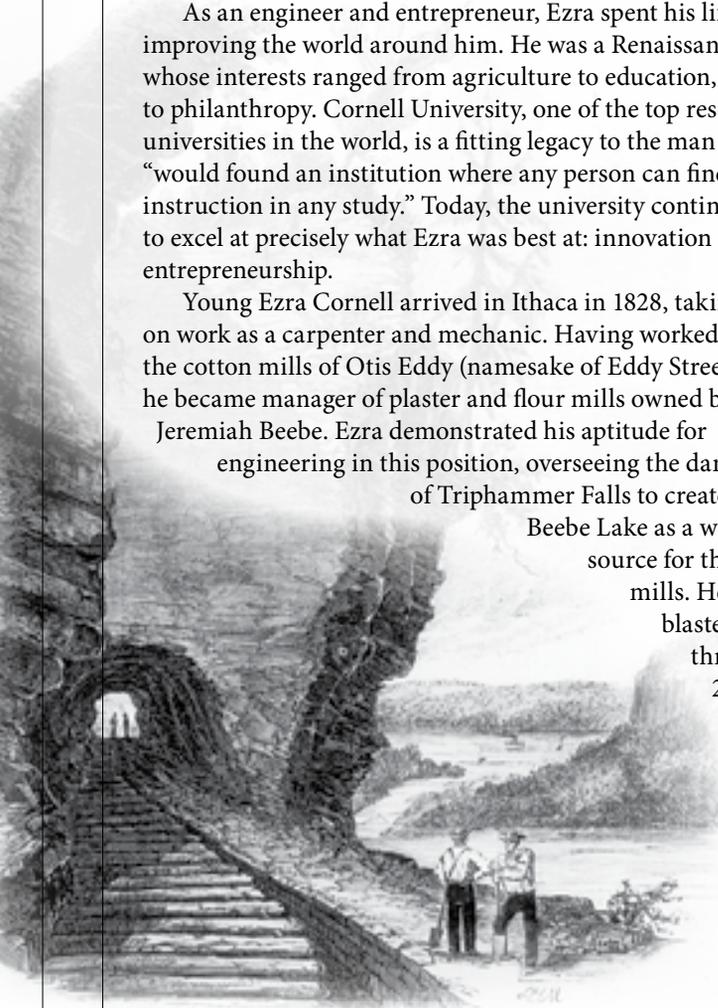
solid rock to create a tunnel off Fall Creek gorge that would carry water to the mills downtown. This feat required blasting the tunnel from opposite sides, yet Ezra’s precise calculations allowed the two ends to meet in the center with fewer than two inches of variation.

But it was Ezra’s ingenuity and involvement in the fledging telegraph industry that earned him a fortune. Having designed a plow that could dig a trench and lay telegraph cable underground, Ezra was hired by telegraph inventor Samuel Morse to lay the first telegraph lines. When the cable insulation was found to be defective, Ezra researched electricity and magnetism and suggested stringing wires on glass-insulated poles above ground, which he then built throughout the northeastern United States. By taking much of his pay in stock, he became the largest stockholder in Western Union. The success of the telegraph, thanks to Ezra’s technical savvy and keen business sense, made him a very wealthy man and enabled him to found Cornell University in 1865.

The fledging university emphasized Ezra’s ideals of technical innovation and applied science. In 1885, the country’s first department of electrical engineering was created at Cornell, and its faculty, students and alumni have been credited with patents and inventions including one of America’s first high-voltage transformers. Cornell became one of the first, if not the first, campus in the country to be lit with outdoor electric lights.

More than a century later, in 1994, a Cornellian played a role in influencing Microsoft Corp. to shift its focus to the Internet when Microsoft employee Steven Sinofsky ’87, now president of the company’s Windows division, sent an email telling Bill Gates about how his alma mater was taking full advantage of computer networks.

Ezra’s pioneering spirit lives on in alumni who have excelled in technical innovation and business acumen. Kate Gleason, Class of 1888, was the first woman elected to the American Society of Mechanical Engineers and the first woman president of a national bank in the United States. The “father of modern air conditioning,” Willis Carrier, Class of 1901, founded the Carrier Corp., which remains a global leader in commercial refrigeration. Nora Stanton Blatch, Class of 1905, was America’s first female civil engineering



A self-educated civil engineer with a knack for “ciphering,” Ezra Cornell designed and supervised construction of this tunnel to bypass Ithaca Falls and deliver water to the mills below. Excavations starting from both ends of the 200-foot tunnel met at the center in near-perfect alignment. College of Engineering



wikimediacommons

**Jeff Hawkins,
Class of 1979**



Division of Rare and Manuscript Collections

**Kate Gleason,
Class of 1888**



NASA

Mae Jemison, M.D., 1981



Division of Rare and Manuscript Collections

**Laurens Hammond,
Class of 1916**



Microsoft Corporation

**Steven Sinofsky,
Class of 1987**



Original telegraph receiver, used in Baltimore for the receipt of the first telegraph message, May 24, 1844. College of Engineering

graduate; in addition to her work as a suffragist, she assisted husband Lee de Forest in developing and popularizing radio broadcasting. The 110 patents granted to Laurens Hammond '16 include everything from the Hammond electric organ to military altimeters, 3-D movie systems and a card-shuffling bridge table.

Today, the tech industry overflows with Cornellians, as demonstrated by the success of Cornell Silicon Valley and its well-attended alumni events. On campus, the Entrepreneurship@Cornell program includes over 150 courses across all fields, as well as more than 50 faculty members, several student organizations and a student-business incubator.

From Palm Pilot inventor Jeff Hawkins '79 to Jon Rubinstein '78, M.Eng. '79, who helped develop the Apple iPod, Cornell University continues to train bright innovators and entrepreneurs. Qualcomm co-founder Irwin Jacobs '54 and Peoplesoft and Workday co-founder David Duffield '62, MBA '64, have both taken their technical expertise into the business world, while

Mae Jemison, M.D. '81, the first black woman in space, now leads DARPA's 100-Year Starship project.

The December 2011 announcement of a new applied sciences campus to be built in New York City in collaboration with Technion-Israel Institute of Technology is a perfect representation of Ezra Cornell's legacy. In some ways, Mayor Michael Bloomberg's gift of Roosevelt Island and additional funds parallels the Morrill Act of 1862, in which the federal government granted land to support universities like Cornell that would provide training in agricultural and mechanic arts (or engineering). In today's digital world, the need for engineering and applied sciences education is even more acute. Once again, Cornell University has stepped forward to address that need.

I think Ezra would be proud.

Corey Ryan Earle '07 is associate director of student programs in the Office of Alumni Affairs.



Willis Carrier, Class of 1901, with his 1921 centrifugal chiller.

College of Engineering

BY DIANE LEBOW WALLACE

Live well while doing good

For two Cornellians, helping Cornell is important, but so is charitable giving that benefits them or their family members.

Phyllis Blair '53 discovered that her financial assets would allow her to enjoy a second career as an artist and also make a gift to Cornell. In 1992, the University of California–Berkeley faculty member retired from teaching and a research career in oncology, virology and immunology. While comfortable in her retirement, Blair says that making a large cash gift to her alma mater was out of her reach. But by establishing a charitable gift annuity, she receives payments that are significantly higher than what she received from other fixed investments. Cornell will one day benefit from the gift of her principal, which she has designated to support graduate students.

Like Blair, **Tom Weissenborn '49, MBA '50**, also chose to set up a life income gift, in his case to provide his three children with income throughout their lifetimes from charitable remainder unitrusts. At the time of his gift, he received a charitable deduction on his taxes. The remaining principal balance of the trust will eventually support colleges and programs across Cornell, as well as his fraternity, Psi Upsilon.

“Cornellians who would like to act on their charitable impulses sometimes feel deterred from giving to organizations that matter to them if they believe that other commitments – say the care of elder family members or the desire to secure the future of their children – are too onerous,” says Chip Bryce '81, director of Cornell’s Office of Trusts, Estates and Gift Planning.

“With forethought and planning, however, many individuals find they are able to take care of those that mean the most to them while also making an impact through charitable gifts. The assets of many Cornellians are often sufficient, or amply sufficient, for them to live well while also doing good,” he says.

Blair says she has always been grateful for the support she received at Cornell and the foundation it provided her for graduate study. She attended Cornell tuition-free and worked for her room and board. “I had a splendid education,” she says. “But times have changed, and an education is no longer cheap. You’ve got to have help.”

Setting up her charitable gift annuity was “absolutely the logical way to go,” she says. “I put my investments in a place where I know what will happen to them when I don’t need them anymore, and in the interim I get an income. It’s win-win for me and Cornell, especially in these troubled times.”

Blair and Weissenborn point out that relying on Cornell makes sound financial sense. Weissenborn, a private portfolio manager, says he appreciates “tapping into the brain power” of Cornell’s investment team as well as its continuity over time when compared with today’s fast-changing financial players. “The advantages for me are Cornell’s above-average returns in its long-term investment pool, diversified investments and

sound risk management. Plus, working with the university is seamless and very easy,” he says.

For Blair, “There is a certain security knowing that your money is in good hands, hands that will pay a lot of attention to good investments.



Sam Foreman Photography



Photo: [unreadable]

Yes, I feel generous, but gift planning is also just perfect for my situation and for Cornell. Cornell is managing my gift and making better decisions than I would be making if I handled my own accounts.”

According to Bryce, planned gifts to Cornell represent some 15 percent of all giving to Cornell, and the university hopes to step up this figure over the course of the “Cornell Now” campaign. Gifts of this type include charitable gift annuities, trusts, donor-advised funds, and gifts of securities and property, as well as bequests and beneficiary designations, which provide Cornell more than \$25 million each year.

To learn more, contact Chip Bryce at wlb5@cornell.edu, 800-377-2177 or go to alumni.cornell.giftplans.org.

CORNELL Annual FUND

**GIFTS OF ANY SIZE,
FOR ANY PERSON, ANY STUDY**

Whether given to specific colleges or to the university in general, unrestricted Annual Fund gifts offer tremendous possibilities, helping to provide immediate and flexible resources for a variety of Cornell’s needs and priorities. These include scholarships and faculty recruitment, as well as a wide range of the university’s operations. Here is a small sampling of areas supported by Annual Fund gifts.

You can make it happen Spring 2012

Out standing in a field

Fund one undergraduate student research or fieldwork project in anthropology. **\$5,000**



Keep up tempo

Get the library a subscription to Oxford Bibliographies Online: Music, which allows faculty to check on publications in their area of study and teaching. **\$6,360**

Beam them up, Scotty

Buy three much-needed infrared spectrometers for the Department of Chemistry and Chemical Biology's undergraduate instructional labs. **\$25,000**



Encourage entrepreneurial spirit

Provide the prize money and modest administrative costs for the popular annual Cornell Hospitality Business Plan Competition. **\$30,000**

Hablas Icelandic?

Through a gift to the Einaudi Center, fund teaching of one rare language for three years. The federal government has announced that it will reduce funding for "critical languages" by nearly half. While Cornell will continue to offer instruction in the 11 languages affected (Thai, Khmer and others) in the short term, new funding is critically needed to sustain these programs. **\$150,000**

Build a better race car

Pay for one year of all engineering student teams' activity. Approximately 400 students – or 15 percent of engineering undergrads – participate in teams that provide valuable hands-on experience. For instance, Cornell Formula SAE pits its race car against 140 schools from 12 countries in a contest of speed, endurance, design and cost. **\$200,000**

Train lawyers, 'in the best sense'

Endow a fellowship at Cornell Law School for a graduate who intends to practice law in the public interest. Help bridge the gap between modest salaries and loan repayment/cost-of-living obligations. **\$250,000**

Have knowledge, will travel (to Ithaca)

Deepen, widen and energize faculty (and students) in the College of Architecture, Art and Planning by endowing a visiting lecturer/critic position, which will bring pre-eminent design scholars and critics to campus for temporary appointments. **\$750,000**

Help orphaned puppies and kittens

Maddie's Shelter Medicine Program in the College of Veterinary Medicine is a national leader in providing training, research and outreach in shelter medicine. Create an endowment to fully support one of two internships the program offers each year providing advanced training for veterinarians. **\$1 million**



Student teams

The Annual Fund enables student teams to participate in competitions across the nation and overseas. In the College of Engineering alone, it has supported three prize-winning student groups: the Cornell Autonomous Underwater Vehicle team, the Cornell Baja SAE team and the Cornell Chemical Engineering Car team.

Engaging communities

Last year, the Herbert F. Johnson Museum of Art used Annual Fund monies to provide learning kits and conduct guided museum tours for more than 5,000 K-12 schoolchildren from more than 50 schools across central New York. Similarly, the Cornell Lab of Ornithology used Annual Fund dollars to promote environmental awareness in cities through its Celebrate Urban Birds program.

Promoting service learning

The fund helps provide opportunities for students to gain valuable lessons through immersive experiences outside the classroom. These include alternative spring breaks through the Public Service Center, where students serve various communities – planting urban gardens for a low-income housing complex in Brooklyn, and assisting in the operations of a homeless shelter in Cape Cod, just to name two. In addition, the fund also supports ILR School internships, such as the summer Global Service Learning Internships, which recently sent 12 students to work for a nonprofit organization in Bangalore, India.

To learn more about the power of the Annual Fund, visit www.alumni.cornell.edu/fund and now.cornell.edu/annualfund.

– Jose Perez Beduya

BY EVAN DREXLER



Mack Lewnes '11, right, with volunteer assistant wrestling coach Mike Grey '11, who was one of Lewnes' teammates when they were undergraduates. Grey is now assisting Lewnes in his attempt to qualify for the 2012 Summer Olympic Games. Below: Lewnes is declared the winner of a match against Michael Cannon of American University during the 2008 NCAA Wrestlebacks semifinals.

Grappling – and running – for Olympic gold

Looking back on it, the moment seems silly. But when Mack Lewnes '11, as a middle schooler, finally pinned big-man-on-campus and good friend Dave Dulski, he knew he could become an excellent wrestler.

"He was a big name in junior league," Lewnes says. "He was the top dog. I remember thinking, 'Whoa! This is an upset!'"

More than a decade later, Lewnes has more than followed through on the promise of toppling a fellow preteen. Lewnes is the all-time winningest wrestler in Cornell history. He won four consecutive Eastern Collegiate Wrestling Association titles during his time in Ithaca. Now he's ready for an even bigger step in April when he and several former Cornellians attempt to qualify for the 2012 Summer Olympic Games in London.

Three former Cornell track athletes – Max King '02,

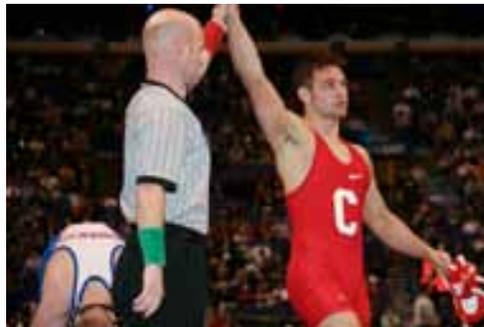
Zachary Hine '09 and Sage Canaday '09 – tried to qualify for the Olympic marathon in January. All three came up short but turned in times that were among their career bests. Another Big Red track veteran, Morgan Uceny '07, will be making an effort to qualify for the Olympics, as well. Uceny was a distance runner during her time on the Hill. She recently was named the world's best 1,500-meter runner by Track & Field

News and also claimed the 1,500 title in 2011 at the Diamond League. Those honors – while putting additional pressure on her as top dog – might make Uceny seem like a shoo-in to make the Olympic Games.

When qualifying comes around in late June, though, Uceny expects the competition to be much tougher than she faced in 2011.

"I think I definitely have a target on my back because I was running very consistently last year and did kind of have a breakthrough season," Uceny says. "But with an Olympic

year, people come out of the woodwork where everyone is trying to bring their 'A' game. I understand that it's going to be harder this year, so I'm not giving myself any breaks."



Cornell Athletics

Uceny started her Cornell career as a freshman who didn't make the varsity squad. She went home that summer and vowed to make herself more accountable for her progress. Every year after that in college, she set personal records. Now she's one of the best in the world.

Training with coach Terrence Mahon and wearing her signature colorful beaded necklace during races, Uceny has a solid chance to be on the other side of the Atlantic when the Olympic torch is lit.

Uceny and her coach "are not trying to rewrite history or anything," she says. "We're just doing what we know works and trying to stay healthy so that by the time June rolls around, we'll be in peak form."

Lewnes too has dreams of London. He has always been the type of athlete who sets his goals high – sometimes incredibly high.

"When I came to Cornell, my goals were [that] I never wanted to lose," Lewnes says. "I wanted to go out there winning every match. I would have loved to win NAAs every year."

While he wound up not winning a national crown in his four years with the Big Red, he still accomplished quite a bit. He was an All-American in 2008 when he finished the NCAA Tournament in fourth place. He also was named the Ivy League's freshman of the year that season. For the next two years he was honored as the league's player of the year. He finished his Cornell career with more wins than anyone in school history.

Now, though, it only gets harder.

In preparation for the Olympic qualifiers, Lewnes had to gain mass to wrestle in a higher weight class. In college he fought at 174 pounds; now he's wrestling at 185 pounds (84 kilograms). To gain the weight, he has spent countless hours lifting weights and working out, eating right and training with former Cornell teammates. Current Big Red wrestlers Cam Simaz '12, Steve Bosak '12 and Kyle Dake '13 have all played a role in keeping Lewnes ready to face the opposition at the trials.

And what opposition it will be.

"It's the highest level of competition in the United States," Lewnes says. "There are no easy matches."

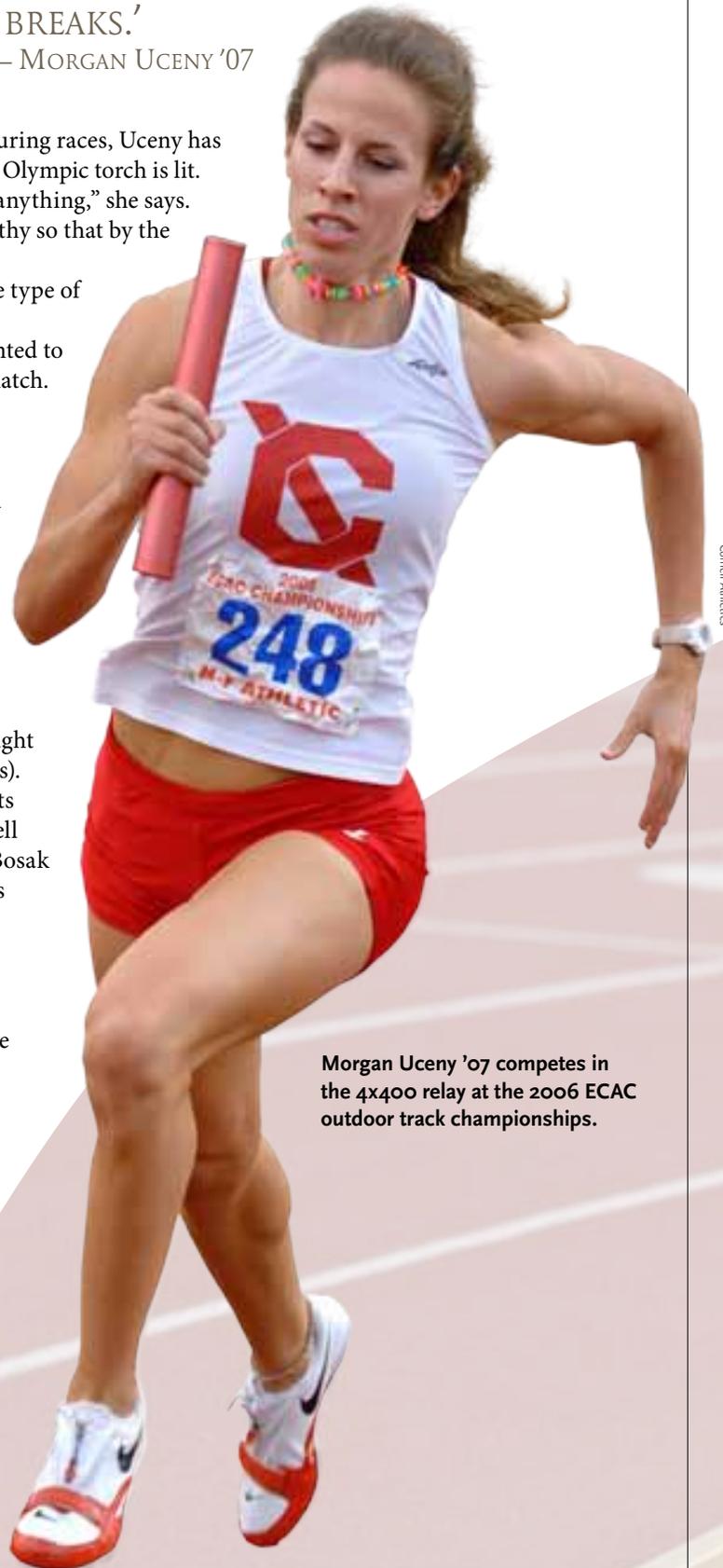
Twelve competitors will vie for one 84-kilogram slot in the Olympics. While Lewnes spent his college career performing folkstyle wrestling, international tournaments use freestyle. There are many differences between the two styles, with freestyle wrestling emphasizing throws more than at the college level. Lewnes spent one year between high school and college at the Olympic Training Center in Colorado Springs, Colo., fine-tuning his freestyle abilities, which should help him come time for the Olympic Trials.

"I set my goals so high – and it's something I'm thankful for – that when I fail, it's an accomplishment still," Lewnes says. "I'd have to stop right now if my goal wasn't to win. You don't go in thinking, 'I'd love to get top three and not make it to the Olympics.' I'm going for it. Even if The Hulk shows up, I'm going to try to beat him."

Visit now.cornell.edu/athletics

'I UNDERSTAND THAT IT'S GOING TO BE HARDER THIS YEAR, SO I'M NOT GIVING MYSELF ANY BREAKS.'

– MORGAN UCENY '07



Morgan Uceny '07 competes in the 4x400 relay at the 2006 ECAC outdoor track championships.

Q&A with new members of the faculty

Of the approximately 70 new faculty members hired this academic year, seven have been appointed to named professorships, an honor accorded to a handful of eminent scholars. Here are four of them and their answers to Ezra's questions.

CAROLINE O'DONNELL

is the first Richard Meier Assistant Professor of Architecture in the College of Architecture, Art and Planning. She first came to Cornell in 2008 as a visiting critic.



Under her direction, last year the college revived its architecture journal for the first time in eight years.

Why Cornell?

Why I came and why I am still here is simple: It's the best school of architecture in the country and is internationally renowned. I am surrounded by fantastic students and faculty, and together we produce some of the best design work, writing and conversations in the architectural world. I am interested in the combination of practice, teaching and writing, on issues related to context, and this seemed like the ideal place for that.

MURILLO CAMPELLO

the new Lewis H. Durland Professor of Management at the Samuel Curtis Johnson Graduate School of Management, was most recently a professor at the University of Illinois at Urbana-Champaign.

How do you describe your work to non-academics?

I like to find (often hidden, overlooked) links between financial decision-making at firms and the larger macro-



economic environment. I think this second-nature approach to research is rooted in my experiences as a young man in Brazil, where the corporate sector was so dependent on developments in the macro and global economy (think hyper-inflation, currency devaluation, debt crises, intervention). The business environment and even the rules of business decision-making change almost every day in emerging economies.

JONATHAN I. LUNINE is the David C. Duncan Professor in the Physical Sciences in the Department of Astronomy in the College of



Arts and Sciences. Lunine comes to Cornell from the University of Rome and the University of Arizona.

What's new in your area of expertise, planet formation?

Astronomy has gone through a revolution. One development is the enormous number of planets outside of our solar system. It was not unexpected that we would find planets, but the number and variety are amazing. This challenges our ability to make models of how they form. We don't have cubical or triangular planets – they're all spherical – but in terms of density and how they orbit their stars, nearly everything is possible.

In our own solar system, particularly in the outer system, we've discovered several environments where life might exist. That gives us an impetus to go back to those places with new missions. Around Saturn, for instance, the Cassini mission has for nearly eight years been in orbit around Saturn. I'm involved in designing a new mission to land on Titan, the largest moon of Saturn, where there are vast seas of liquid methane the size of Lake Superior. We want to land there and see what's in those seas. We know already that they contain 10 times more natural gas than the known reserves on Earth (too expensive to extract, of course!). This would be the first nautical expedition on another world.

THEODORE SIDER is the new Frederick J. Whiton Professor of Philosophy in the College of Arts and Sciences. One of the most prominent American philosophers of metaphysics and the philosophy of philosophy itself, Sider is the author or co-author of four books, including "Riddles of Existence," which The New York Times called "a series of hors d'oeuvres for intellectual diners." He comes to Cornell from New York University.

Are you designing any new courses for Cornell students?

I am planning a new course called Logic for Philosophy, which will be offered to graduate and undergraduate students. It's based on a textbook I wrote, by that same title.



Formal logic – the mathematical study of correct argumentation – is a tool that's used throughout philosophy. It's important for philosophy students to be fluent in the language of logic, since lots of contemporary philosophy uses that language; but logic can sometimes be daunting to students, especially those who haven't studied much mathematics. The idea of the course is to introduce students in a user-friendly way to the kind of logic they need to get by in philosophy.

Graduate students drive our future

As a faculty member at Cornell, I've had the privilege of working with top-notch graduate students whose creativity, leadership and exceptional problem solving have inspired my own research and discovery. These students are attracted to Cornell by our faculty and our unique system of cross-disciplinary graduate education.

In turn, top faculty are attracted, in part, by top students and our approach to graduate study. On search committees, we encourage prospective faculty to meet our graduate students, as we know this is one of the key factors they will use to weigh their decision about whether to join Cornell. Prospective faculty understand that graduate students will work with them to teach, mentor and inspire undergraduates and to drive the research agenda of the university.

Graduate students are the glue that draws faculty together from across the university, creating opportunities for building relationships and developing research collaborations.

Early in my career at Cornell, two of my graduate students' special committees included faculty from the fields of applied economics and management, development sociology and communication. Working together in the context of my graduate students' work, we developed scholarly relationships that led to co-teaching an environmental policy course and to externally funded research collaborations from a multidisciplinary perspective. Long after my graduate students had graduated and gone on to their own productive careers, their legacy remained through my continuing work with these faculty colleagues.

Graduate students enrich Cornell's undergraduate experience through their countless interactions in classrooms, teaching and research labs, and the residential communities. As an undergraduate, I benefited tremendously from the mentoring and friendship of an advanced Ph.D. student who took me under her wing and enlisted me as her field assistant in her study of agro-ecosystem ecology. Later, as a graduate student and the only woman working on a Ph.D. in fisheries science in the entire southeastern United States (it was a long time ago!), I recalled my Ph.D. student-mentor's model of intellectual investment, commitment, good humor and career drive, and I knew that I, too, could attain my aspiration of earning a Ph.D.

To recognize and foster this critically important partnership between graduate and undergraduate researchers, the Graduate School has developed a special fellowship that will formalize the mentoring relationship between undergraduates, graduate students and faculty. The Cornell Research Mentor Fellowships will allow graduate students, under the guidance of faculty, to develop effective mentoring skills. In turn, undergraduate students will learn about



Barbara Knuth, vice provost and dean of Cornell's Graduate School, chats with graduate student leaders in her office.

graduate study and research from successful graduate students. Each will bring a different perspective to the research group, with the potential for generating new ideas and creative perspectives to advance research developments.

Our graduate students will have an enormous impact at the CornellNYC Tech campus as well. With their characteristic passion and energy, our students will work side by side with faculty and industry leaders using cross-disciplinary and integrative perspectives to drive technology-infused research into entrepreneurial ventures. Excellent graduate students at an innovative campus will attract top faculty, industry partnerships and government funding.

Competition among our peer institutions for the most talented students is intense. Every year we lose students to institutions that offer more comprehensive funding packages. Unlike undergraduates who receive need-based financial aid in the form of scholarships and loans, graduate students receive merit-based aid packages that are awarded as part of the admissions offer to attract the very best students.

We are committed to increasing our support for graduate students, particularly for Ph.D. students. We seek to fund every first-year research Ph.D. student with a graduate fellowship; match the duration of merit-based fellowship support offered by peer institutions; and provide attractive funding packages and comprehensive professional development programs to encourage the best and most diverse students to accept an offer of admissions to Cornell and to excel while they are here. Graduate students are the foundation of Cornell's future as a leading research university.

Barbara A. Knuth is a professor of natural resources, vice provost and dean of Cornell's Graduate School.

GRADUATE STUDENTS ARE THE GLUE THAT DRAWS FACULTY TOGETHER FROM ACROSS THE UNIVERSITY.



Cornell University

Ezra magazine
Circulation
130 E. Seneca St., Suite 400
Ithaca, NY 14850

Non-Profit Org.
U.S. Postage
PAID
Cornell University



Reunion

JUNE 7–10, 2012

Illustration by Birgitta Sif. Sif '03 (AAP) currently lives in Reykjavik, Iceland, and works as a freelance illustrator. Her first children's book, *Oliver*, will be published in the fall of 2012. More of her work can be seen at www.birgittasif.com.



Watch the Reunion video!

For more Reunion information please visit:
alumni.cornell.edu/reunion
Registration materials will arrive at the end of March