Chestnut Street, Transformed

The Academy Turns 200

A Gameday Pictorial

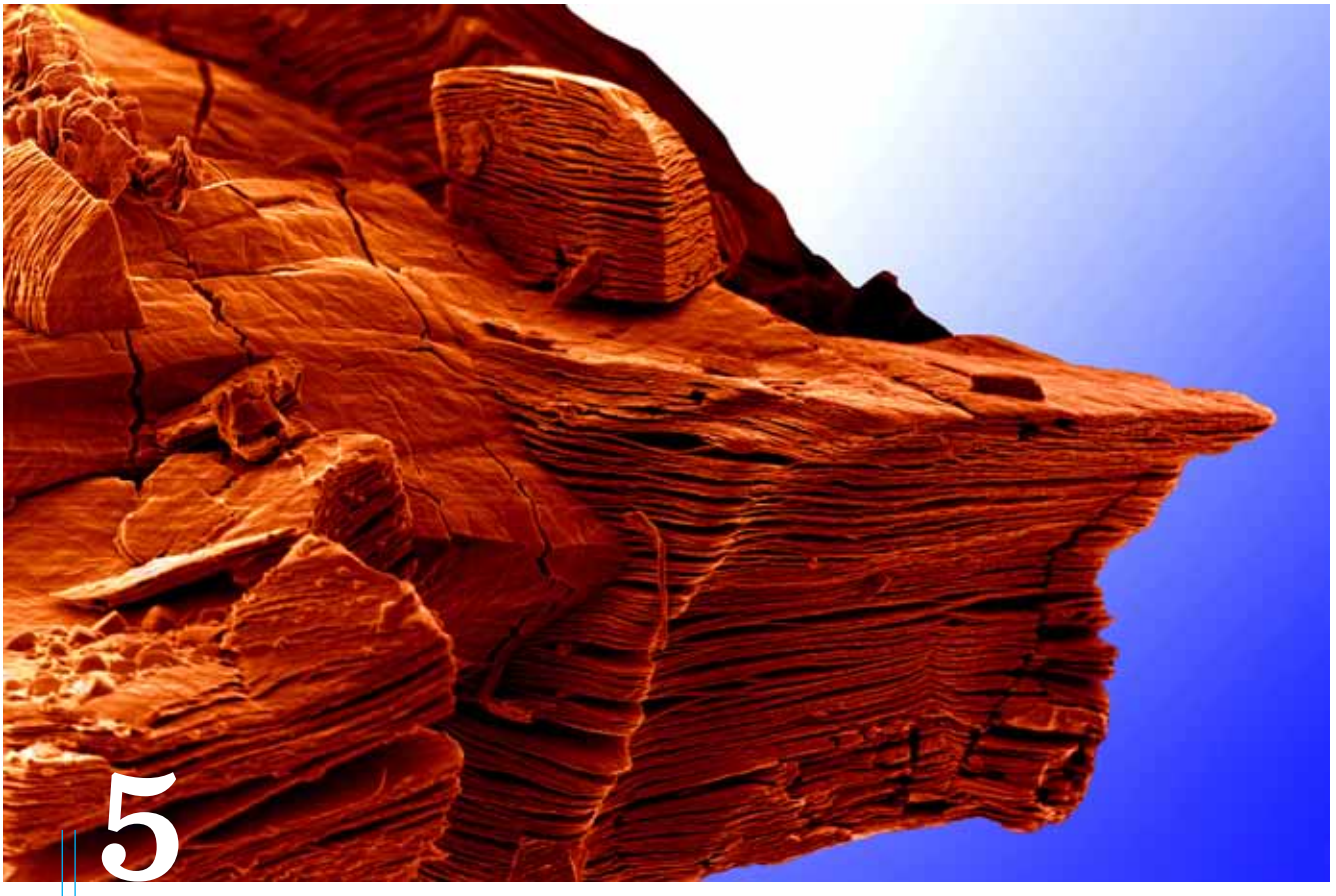
[DREXEL]

SPRING/SUMMER 2012 /////// MAGAZINE /////// VOLUME 21 NO. 2

MEET THE HUBOS

DREXEL'S MUSICAL HUMANOIDS OFFER A GLIMPSE INTO THE FUTURE OF ROBOTICS

SEE PAGE 30



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Thickness, as measured in atoms (yes, *atoms*), of the titanium-based compound successfully photographed by a team of Drexel engineers including doctoral students **Babak Anasori** and **Michael Naguib** and professors **Yury Gogotsi** and **Michel W. Barsoum.** The image won the "People's Choice" award in the National Science Foundation's International Science & Engineering Visualization Challenge.

THE LEDGER

[A NUMERICAL ANALYSIS OF LIFE AT DREXEL]

97.6	Dollars, in millions, that American Campus Communities will spend to build Chestnut Square, a residential and retail projects that will completely transform Chestnut Street between 32nd and 33rd streets and bring even more excitement to Drexel's campus. (See story, Page 26)
5	Percent of the world's human-generated carbon dioxide that is created in the manufacture of Portland cement. Thanks to two Drexel researchers, however, that number could be reduced in years to come; Professors **Michel W. Barsoum** and **Alex Moseson** say they've developed a new cement-making process that can decrease carbon dioxide-related production by 97 percent. Says Moseson: "This is a unique way to limit the environmental consequences of meeting demand."
19	Number of games that the Drexel men's basketball team won in a row, before eventually having their amazing streak end at the hands of rival VCU in the CAA Championship Game.
7	Number of "humanoids"—that is, highly sophisticated humanlike robots—that were introduced to the world by associate professor of electrical and computer engineering **Youngmoo Kim** during Engineers Week in early February. The hope is to eventually train the robots to act as assistants to humans. "We are envisioning a world where robots can help everyday people in their daily lives," Kim said.
464	Pages that make up *A Glorious Enterprise: The Academy of Natural Sciences of Philadelphia and the Making of American Science*, a newly published book about the Academy of Natural Sciences of Drexel University by Academy historian **Robert McCracken Peck** and historical biographer Patricia Tyson. The book was written on the occasion of the Academy's bicentennial, which it is celebrating this year. (See story, Page 6).
.82	Goals-against average posted by Drexel freshman goalie **Eve Badana** during her rookie campaign in 2011. Badana led the Colonial Athletic Association in that category, and was so impressive that she was called up to play with Ireland's Senior Women's National Team for the 19th Algarve Cup this spring.
12	Number of disaster preparedness experts from around the world, including Drexel professor of sociology **Mimi Sheller,** who were invited to Japan early this year by the World Bank's Global Facility for Disaster Reduction and Recovery to discuss the issues raised by last year's massive earthquake and tsunami. Said Sheller: "Ultimately, we hope that lessons from Japan can help developing countries to better prepare for future natural disasters in order to save as many lives as possible and to help the recovery process proceed quickly."

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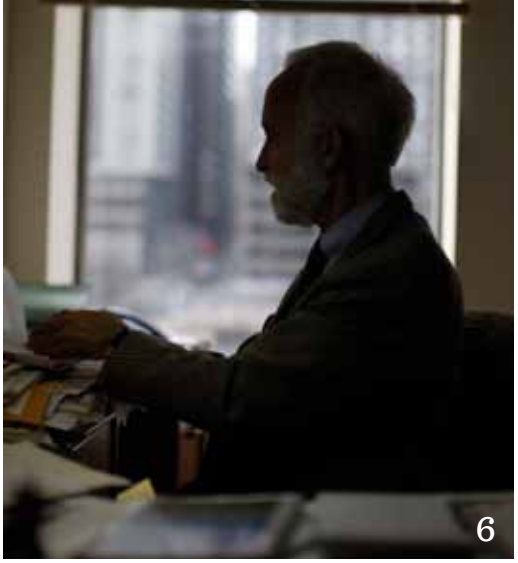

FEATURES

THE VIEW FROM MAIN

As I have gotten to know Drexel's alumni, I have learned that you think as much about the future of the University as you do about its past. So I hope you share my excitement as Drexel puts the finishing touches on a comprehensive strategic plan that will guide the institution for the next five years.

This plan builds on Drexel's great strengths, such as co-operative education, translational research with real-world impact and our leadership in online education. It meets our challenges head-on. And it envisions exciting new frontiers for the University, in our neighborhood and around the world.

The plan is the product of more than a year of intense collaboration among Drexel's faculty and professional staff, administrators and trustees, students and alumni and other stakeholders. More than 200 people participated directly in the planning process, and hundreds more provided input and feedback. They brought every possible viewpoint to the plan, but a single goal: to chart the path by which today's newly comprehensive, continually innovating Drexel University will become a model 21st-century urban research university.

The completed strategic plan will be available by mid-May in print and online. In the meantime, our atrategic planning website (drexel.edu/strategicplan) offers insight into the wide-ranging and participatory process of developing the plan.

Even as we prepare to celebrate the release of this informative and I hope inspiring document, we must remember that the hard work is just beginning. We will need the expertise and commitment of the entire University community to meet the ambitious goals of the plan. Alumni have a special role, as Drexel's most effective ambassadors to the world at large. I hope I can count on your advice, outreach and philanthropy on behalf of the University at this critical juncture.

Sincerely,

John A. Fry
President

EDITOR'S NOTEBOOK

"This has got to be most entertaining thing that's happened here in a while."

So said one of the research assistants in Drexel's Music and Entertainment Lab, as *Drexel Magazine* staff writer Maria Zankey and I went about the work of attempting to dress up "Hubo," one of Drexel's seven remarkable humanoid robots, as ... John Lennon. Circa 1971.

And I assure you: This was no easy task.

From almost the first moment that I knew we would be writing about Professor Young-moo Kim's robotics project for this issue of the magazine, one question lingered in the back of my mind: How in the world could we photograph these musical robots (they can dance, and they can play music, and very soon, they may be able to do a whole lot more) in a way that would make clear to our readers just how amazing they are?

It was a question I lingered over for a week or so. Then, one day while walking through the halls of the Main Building, the proverbial light bulb turned on. "Hey, these are musical robots," I thought to myself. "So why not shoot them as the most famous pop group in world history? Why not recreate the Beatles' *Abbey Road* cover?"

And so began our strange odyssey here at the magazine: Finding a photographer brave enough to take on such a challenging assignment (in the supremely talented Melissa Marie Hernandez, we found precisely that person); walking the streets of University City, trying to find an intersection that kinda-sorta looked like the one on the famous cover (there aren't many, I assure you); examining that cover image down to every last detail, figuring out which visual cues needed to be there to make this thing work (we borrowed that white Volkswagen, by the way); and, finally and most perplexingly, attempting to find clothing that not only matched the items worn by the Fab Four for *Abbey Road,* but also fit the Hubos themselves. Mind you, these robots stand at the height of your average four-year-old, but are built like your average weightlifting champion.

Which brings us back to that day in the MET-lab, where Maria and I laboriously went through a bag of thrift-store clothing and struggled to fit too-small jackets (white for John, blue for Ringo, brown for Paul, denim for George) over Hubo's too-broad shoulders. It was a quite a scene, as was the day that we actually attempted to get this shoot done out at 35th and Baring Streets, with the Hubos lined up in the city crosswalk and passersby by wondering what on earth we were doing out there, fussing over and photographing four-foot-tall robots dressed up in ancient, dingy clothing.

But in the end?

Well, I think it all worked out. Hernandez delivered a beautiful *Abbey Road*-ish image (and a few other amazing images, too), and my silly idea became reality: There were the Hubos, as the Beatles.

We hope you got a kick out of the image, and we hope, too, that you'll enjoy this issue of *Drexel Magazine.* As always, we invite you to share your thoughts, criticisms, comments and more by writing us at magazine@drexel.edu, or by sending snail mail to the address at right.

Thanks for reading.

Sincerely,
Tim Hyland / Editor

[DREXEL MAGAZINE]

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LETTERS

Last fall, we debuted the completely redesigned (and renamed) *Drexel Magazine,* and we are pleased to report that the new look was a hit with pretty much everybody—including a few readers. Here's a sampling of their responses.

The Transformation Continues

Thank you for the copy of the Fall/Winter issue of the *Drexel Magazine.* It gives a fine account of the Drexel University of today—and its splendid transformation from the modest institute I entered in 1934.

The evolution is a monumental achievement, one due in large part to the late President Papadakis and evidently one that is continuing under President Fry.

—***Ellis Lapin,*** Larkspur, California

Praise for the New Look

I just got the *Drexel Magazine* (with the new look!).

Outstanding. Great. What else can I say? Keep up the good work!

—***J. Eugene W. Connor,*** Englewood, Colorado

And More Praise ...

I just received the *Drexel Magazine,* Fall/Winter 2011 issue. This magazine is terrific!

I am so glad that I am on the Drexel University mailing list. I am a Drexel University graduate, B.S. in Chemical Engineering, Class of 1961, and M.S. in Environmental Engineering, 1974.

I am going to give this magazine to my best friend, Carmen V. Serno, Class of 1961. Sorry to say, Carmen is not on the mailing list. You may want to drop Carmen a line?

Again, let me say, your new *Drexel Magazine* is terrific.

—***James P. Donnelly,*** Willow Grove, Pennsylvania

EDITOR'S NOTE: *Thanks for the letter, James. And yes, we will certainly make sure that Carmen receives the magazine from now on. —T.H.*

Our Contest Winners

In our last issue, we asked you, our devoted readers, to respond to two unique challenges.

First we asked you to tackle the Back-Page Puzzle, authored by noted crossword artist Brendan Emmett Quigley. Second, we invited you to submit your photos for the first ever Where's Mario? photo contest.

Here, we are pleased to announce the winners.

Elizabeth Haberkorn, of Stow, Massachusetts, was among the many of you who successfully completed Quigley's puzzle and was chosen at random among all of the entrants to receive her special prize—a Drexel coffee mug.

Robert Ellis, '89, didn't send the most far flung of Mario photos (that honor goes to **Aron Davidson, '69, '72,** who sent in a shot of Mario straddling the hemispheres in Quito, Ecuador), but his image—which shows Mario hanging out on the precipice of the Grand Canyon—was the one that caught our eye. He also receives a coffee mug.

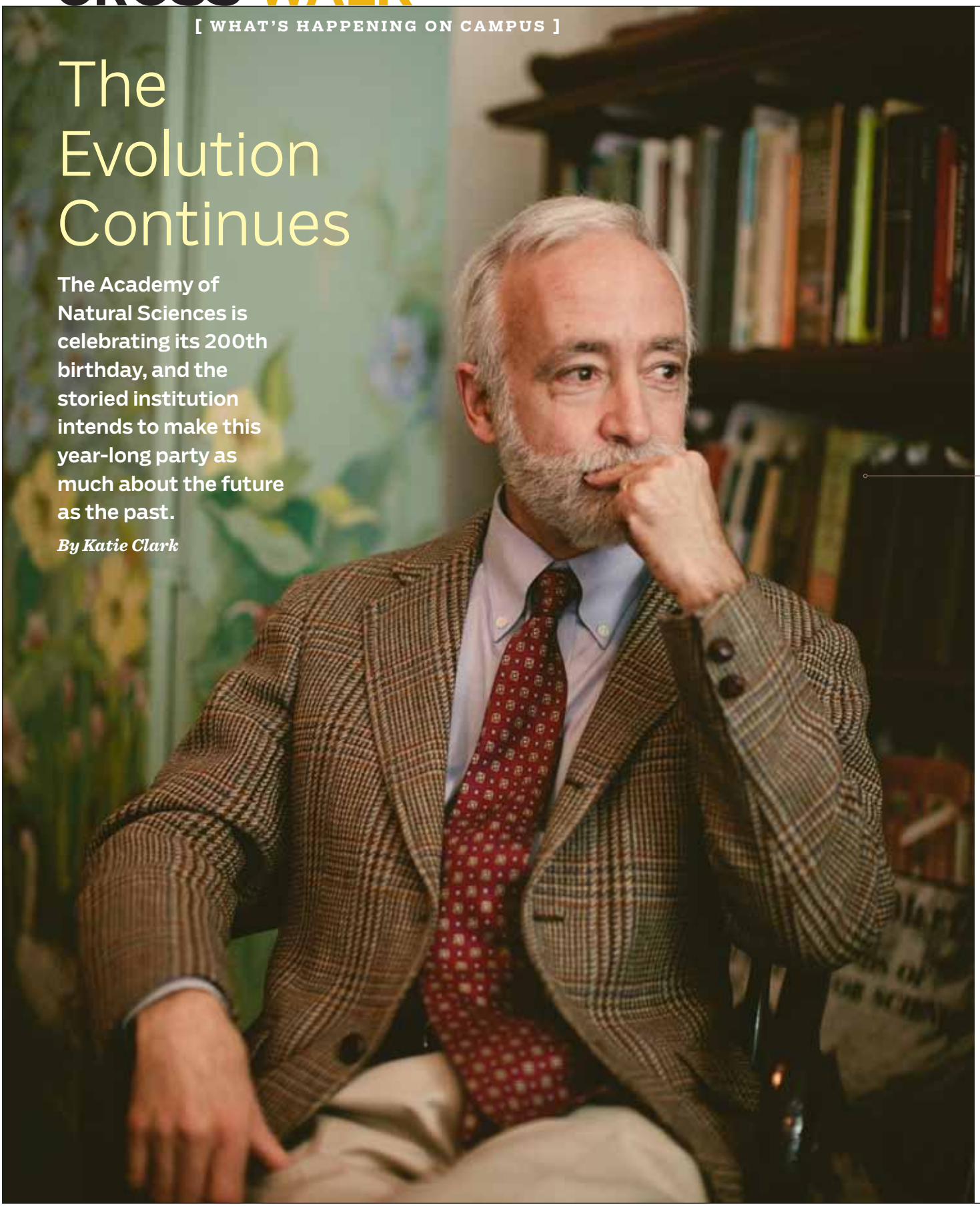
Thanks to everyone who participated. Keep sending in those Mario suggestions (the contest continues!), and feel free to test yourself against Brendan Emmett Quigley's latest puzzle. which you can find on Page 56.

Mario on the precipice of the Grand Canyon

The Evolution Continues

The Academy of Natural Sciences is celebrating its 200th birthday, and the storied institution intends to make this year-long party as much about the future as the past.

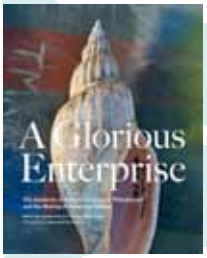
By Katie Clark



IN HONOR OF ITS ILLUSTRIOUS BICENTENNIAL YEAR, the Academy of Natural Sciences of Drexel University has kicked off a yearlong celebration with commemorative events, programs and exhibits for all ages. But while a bicentennial typically suggests a look to the past, the Academy plans to give equal weight to its relevance in the world of science today—and also where it's headed in its third century.

This bicentennial year pays tribute both to the Academy's discoveries over the past two centuries and its ongoing efforts to answer today's questions about our natural world. The institution's scientists, and its educators and administration, are on a mission to tell the Academy's story and invite the public to be a part of its next chapter.

With preparations for the big celebration under way this winter, *Drexel Magazine* met with three Academy "storytellers" to discuss the ways they'll be working to the share the remarkable story of this remarkable institution—an institution that is fully part of the Drexel family.



***A GLORIOUS ENTERPRISE: THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA AND THE MAKING OF AMERICAN SCIENCE* IS NOW AVAILABLE THROUGH AMAZON, BARNES & NOBLE AND OTHER LEADING BOOKSELLERS.**

THE PAST Robert McCracken Peck, Academy Historian and Senior Fellow

People have always told Bob Peck that he was born into the wrong century.

A polished, well-spoken gentleman with a fiery passion for books, literature and history, Peck carries the demeanor of a 19th century scholar. Perhaps this is what makes him the perfect storyteller for the Academy's first two centuries.

Three years ago, with the Academy's bicentennial looming, Peck took on one of the grandest research projects of his life—authoring a complete history of the Academy. Peck knew there would never be a more perfect time to tell this story than the Academy's 200th anniversary.

> "Few people who work at the Academy consider it a job. For many of us, it stands next to friends and family as the focus of our lives."

Along with colleague and historical biographer Patricia Tyson Stroud, who, like Peck, has a decades-long connection to the Academy, he authored *A Glorious Enterprise: The Academy of Natural Sciences of Philadelphia and the Making of American Science,* a 464-page history of the institution. The book is the result of countless hours spent in libraries and archives, where Peck and Stroud sorted through a flurry of materials documenting the evolution of the Academy and its contributions to science in America.

The book examines the people of the Academy—the individuals who helped it become a leading light in natural sciences research—instead of providing a chronological history. This approach was intentional, Peck says.

"It's often said that history is all about biography—that was the approach we wanted to take," Peck says. "It's a very lively, personal story about the interesting characters of the Academy and the work they did here to advance science."

A Glorious Enterprise, affectionately described as a "family history" of the Academy, profiles important Academy figures associated with the museum such as William Bartram, Thomas Jefferson, Alexander Wilson, John James Audubon, Ernest Hemingway (who collected fish for the Academy), and the real James Bond (the Academy ornithologist whose name was borrowed by British author Ian Fleming for his 007 spy thrillers). Others whose contributions are explored include paleontologists Joseph Leidy and Edward Drinker Cope and limnologist Ruth Patrick.

History has its share of villains and the Academy is no exception—the book touches on the few bad apples who used the Academy and its reputation for their own gain. Fortunately, these "charlatans and scoundrels," as Peck calls them, never did any permanent damage.

The specimens in the Academy's collection also have their own story to tell. The book is filled with stunning images of minerals, birds, fish, mammals, plants and other specimens from the collection, all captured by internationally acclaimed photographer Rosamond Purcell.

"We wanted items from the collection to be as much a part of the story as the people," Peck says.

Much has changed since the Academy's founding in 1812, Peck says. Still, other things have remained the same.

"The passion and love of natural history that you see in everyone associated with the Academy—that has lasted," he says. "Few people who work at the Academy consider it a job. For many of us, it stands next to friends and family as the focus of our lives."

THE PRESENT Jennifer Sontchi, Acting Director of Exhibits

If the Academy's exhibits had a voice, Jennifer Sontchi would want them to say just one thing: "Come closer."

As acting director of exhibits, Sontchi is charged with the task of choosing for display items from the Academy's massive collection of 17 million biological specimens. More importantly, she's responsible for telling the story of why these specimens are so important, why the Academy has so many and why they must be protected so dutifully.

For the bicentennial, Sontchi was given an 80-foot wall in which to display some of the gems of the collection in a new exhibit, "The Academy at 200: The Nature of Discovery."

"We selected classic natural history specimens that people would recognize like skulls and shark teeth and famous historical specimens like Thomas Jefferson's personal fossil collection," Sontchi says. "But we didn't want to shy away from the more mysterious items—the ones you might not recognize unless you look more closely."

Sontchi uses the exhibit to explain that these beautiful and strange specimens are more than just eye candy.

"The Academy is so well known for having all of these cool things, but we're also an active research institution. We use our collections every day in our work," she says. The exhibit illustrates the life and purpose of a specimen, from its collection in the field, to identification, to curation into the collection and, finally, its use in scientific research and public education. Far from dusty relics, Sontchi says, "these collections are relevant to the lives of each and every one of us every day."

The exhibit also invites visitors on five "immersive" experiences to illustrate what life is like "in the field" for Academy scientists.

Scientific expedition is also highlighted in another new exhibit at the Academy: "Secrets of the Diorama." Here, Sontchi and her team of exhibit developers offer a behind-the-scenes look at how and why the Academy's famous natural history dioramas were made.

The Academy's dioramas are a unique combination of science and art—all 37 dioramas are the result of scientific expeditions on the part of Academy scientists and other natural history explorers with ties to the institution.

"We want people to know that nothing in these dioramas was

THE FUTURE Sara Hertz, Vice President for Strategic Initiatives

Long before the clock struck midnight on December 31, 2011, marking the start of 2012, Sara Hertz was already thinking about 2013. For her, the Academy's bicentennial marks the end of an era—and the start of an exciting future.

"In celebrating this occasion, we certainly want to be respectful of our history, but I don't want us to be stuck in time. We really want to define the Academy's future," she says.

One theme that will continue to expand in the coming years at the Academy is the institution's ardent commitment to sustainability, she says. With the establishment of the Center for Environmental Policy (CEP) in 2009, the Academy has been solidifying its reputation as a leader in sustainability and a destination for people seeking a forum for critical environmental topics. "People will see this year more than ever our commitment to sustainability, not only in our own operations, but in being the place where people can come and learn about important issues around sustainability and the environment," Hertz says.

A special town square series designed for the bicentennial will examine four important topics, including climate change and energy use, food policy, water quality and green building and urban design, according to CEP Director Roland Wall. "The Academy is moving into the future," he says. "These critical environmental issues affect the whole planet and they are in our focus."

Already the Academy has made a big move in defining its future self—its affiliation with Drexel University, Hertz says.

"The Academy's affiliation with Drexel is a remarkably happy coincidence. It puts us in an incredibly strong position to enter into our third century," Hertz says. "I'm looking forward to seeing the power of the dinosaur and the dragon."

Hertz is heavy into the planning for the Academy's grand Third Century Gala, scheduled for March 2013, which will serve as the finale to the bicentennial year. It will be one of the Academy's largest fundrais-

invented," she says. "That vista that you're looking at is a direct reproduction of what the scientist saw."

These three-dimensional illusions were installed at the Academy in the 1920s through the 1960s. "Secrets of the Diorama" details the creation of the diorama's foreground, background and animals, which, contrary to popular belief, are not actually stuffed. Instead, the animal skin is stretched over a form custom made for each animal. "Secrets" is the first exhibit to fully explain all three components of the diorama.

Will knowing the secrets behind a lifelike diorama change how the visitors see them?

"Absolutely. It makes for a richer experience if you understand the scientific work and the painstaking artistry behind them," Sontchi says.

---

ers to date and the official start of its next century. The Academy will host another fundraiser this fall, called Cuisine From the Collections, where guests will enjoy delicacies inspired by, but not necessarily made from, the Academy's collections.

Despite this whirlwind of bicentennial events, exhibits and programming, Hertz and her colleagues all work toward a common goal: share the Academy's past, present and future with as many people as possible.

"We're part of the fabric of this city. More and more people are realizing that we're relevant, dynamic and fun. They know that we have great programs and amazing art and that we have a real impact, regionally and beyond. We intend to keep that going."

A Smart Idea, Whose Time Has Come

Nearly five years after first being proposed, the Drexel Smart House project is finally moving forward. Students—and faculty—say its impact could be enormous.

By Maria Zankey

Just north of campus, at 3425 Race Street in Powelton Village, sits a 19th century Victorian twin home, the stone-fortified former Pi Lambda Phi fraternity house that has sat vacant since the 1990s.

Thanks to a $1.1 million pledge from the University, though, the long-languishing building—now dubbed the Drexel Smart House—has taken one step closer to becoming a full-fledged student residence, sustainable urban-living model and innovation classroom.

Exterior renovations on the building are set to begin in May, and project organizers have hopes of adding on an addition that would provide lab space and new meeting space as well. With a fluctuating group of students participating in the student organization-driven project—anywhere from 12 to 25 in a given quarter—the Smart House concept is holding strong as it approaches its five-year anniversary.

"We've been planning as much as we can," said Kevin Malawski, current Smart House president and sixth-year architecture student. "We want students to be able to live and learn in the same place, but it's more than that. Our student research is very applicable. We're thinking about the long-term here."

Since conception, the project has garnered volunteers from various Drexel disciplines, Powelton community support and input and nearly $300,000 in grants from external organizations, including the Environmental Protection Agency.

Malawski said the primary research goal of the project is to promote sustainability within urban residential living.

"It was a perfect fit, to take this old, completely abandoned residence, and show if you can make this old Victorian sustainable, the same model can be applied to the rest of the neighborhood," Malawski said.

The vision for the Smart House project, a student-led, faculty-supported and multidisciplinary initiative, has been in the University's peripheral since then-student Jameson Detweiler pitched the idea to Provost Mark Greenberg in 2006.

"One of our challenges initially was, would there be the vitality to keep it going?" said LeBow College of Business professor and Smart House faculty adviser Joan Weiner, who was also involved in the early phases of the project. "The fact that we are now onto our third president of Drexel Smart House with the fourth to be identified soon is an indication of the interest and support that goes into the project.

"President John Fry saw this as a very positive example of student initiative that truly had impact with its experiential learning

component, the interdisciplinary component and the community engagement component."

The Smart House aims to obtain the highest level of Leadership in Energy and Environmental Design (LEED) certification, setting precedent for future construction projects in the area.

"Teachers will talk to you about the sorts of things the industries are doing—sustainability, responsibility," Malawski said. "But this project allows us to come around in our own way and do it together as students, delving into these deep issues and putting sustainability in the forefront of our mission."

> "It's about engineers working with business professionals, business professionals working with architects, architects learning from psychologists who are interested in studying how people interact with the technology in the house."

One way they hope to do so is by implementing a "green roof," covering the structure with a waterproof white membrane and then with vegetation. Currently, the Smart House team is working to develop a 10 lbs.-per-square-foot model as opposed to the typical 30 lbs.-per-square-foot roof, which is too heavy for traditional Philadelphia homes.

"Once the green roof is fully in place, we want to monitor its performance and prove it can be successful on average houses," Malawski said.

The green roof will help regulate the building's temperature—maintaining heat in the winter and repelling warmth in the summer—while also helping to manage the city's stormwater by reducing the building's impervious coverage.

But Malawski said architecture students are not the only ones who can learn something from developing the Smart House.

"We've been multidisciplinary from the beginning," Malawski said. "It's about engineers working with business professionals, business professionals working with architects, architects learning from psychologists who are interested in studying how people interact with the technology in the house. We want to encourage mingling between the disciplines."

While students are often transient in the immediate neighborhood, Malawski said house organizers have sought input, guidance and critique from some of the Powelton neighborhood's permanent community members.

"From the very beginning, at every stage of design and project development, we've invited the community to come in and analyze the design, offering up what they want or need to happen on this property to meet their expectations," Malawski said. "We truly do need and value their input."

Weiner said each facet of the Smart House's reach is part of a bigger picture: providing excellent learning experiences to the talented students Drexel attracts.

"A real value of this is that it truly is a way to give meaning to community engagement, interdisciplinary and student-focused education," Weiner said. "This project has impact not only in the grants we write and the research that is done, but on the University's curriculum and students."

Hope for the Leatherbacks?

Drexel professor of biology James Spotila, a leading sea turtle expert, recently helped lead a study that could reduce deaths among endangered leatherback turtles.

Leatherbacks are the widest-ranging marine turtle species and are known to migrate across entire ocean basins. These long-distance migrations are likely to increase the risk that these animals may be caught in fishing gear, undermining conservation efforts to protect turtles on their nesting beaches. Interaction with fisheries is believed to be a major cause of death, which is of particular concern in the eastern Pacific Ocean, where the number of leatherback turtles has dropped by more than 90 percent since 1980.

"Leatherback turtles are long-lived animals that take a long time to reach maturity, so when they are killed in fishing gear it has a huge impact on the population," said Spotila. "Their numbers are declining so rapidly it is critical that measures are taken quickly to ensure these animals don't go extinct."

Spotila and his colleagues used state-of-the art satellite tracking, the largest satellite telemetry data set ever assembled for leatherbacks, to track 135 turtles.

The study found that the western Pacific population traveled to many different feeding sites. This wide dispersal allows for a greater likelihood to find food. It also means that the turtles are more vulnerable to being caught unintentionally by fishing gear in coastal and offshore areas.

The eastern Pacific population had a very different migration pattern, traveling from their nesting sites in Mexico and Costa Rica to the southeast Pacific. These turtles tended to feed in offshore upwelling areas where their food, almost exclusively jellyfish, may be concentrated. The more limited feeding areas of the east Pacific turtles makes them more vulnerable to any changes that occur to the distribution or abundance of jellyfish. Deaths caused by human activities, such as being caught in fishing gear, also pose a greater risk of causing this population to go extinct because they have a smaller range than the western leatherbacks.

Said Dr. Helen Bailey of the University of Maryland, lead author of the study: "This information ... is essential for identifying hot spots and assessing where limiting fishing at particular times of year may be effective for protecting leatherbacks."

DRAGON QUOTES

"It's very difficult to model the real world well. The robotic system has the real world at its disposal, so we get much more complex and real world responses."

—**DR. KEN LACOVARA,** an associate professor in the College of Arts and Sciences, in a *Popular Mechanics* article about about using 3-D printing to turn fossilized bones into dinosaur robots.

"I don't think you can say that you offer a first-rate education to students and not try to make it intensely global in its outlook and in its experience. Really, we want to inculcate in our students a broad view, an appreciation for what we find throughout the world."

—Drexel President **JOHN A. FRY** in an interview that appeared on Forbes.com.

"It's important for students to have a high-quality residence where they can congregate, be it academically or socially. It sort of rounds out the whole academic experience."

—Drexel President **JOHN A. FRY** in a *Philadelphia Inquirer* article about the $97.6 million Chestnut Square development.

"The retention of college-educated talent will determine the success of cities."

—**JOAN McDONALD,** Senior Vice President of Enrollment Management, on the importance of education in a knowledge-driven economy.

"If you asked the Wright brothers, 'Hey, what's the practical application of the airplane?' or if you asked what was the application of going to the moon, a lot of the people dreaming these things weren't thinking that way."

—**DR. PAUL OH,** Mechanical Engineering and Mechanics Department Head, on the place of robotics innovation in society.

"People have lived here for generations, and it's a high priority for them to be able to continue living there. Our vision is to improve the quality of life in local neighborhoods."

—**LUCY KERMAN,** Vice Provost of University and Community Partnerships, on a $5,000 grant to help existing West Philadelphia residents pay for material costs.

"I am very surprised at how my season has gone. My approach was to come in and just do anything that coach Bru needed me to do."

—freshman guard **DAMION LEE,** on the men's basketball team's season exceeding expectations.

From Center to Institute

Drexel's Laurence A. Baiada Center for Entrepreneurship is slated to enter the next phase in its history of cultivating Drexel's entrepreneurs.

After more than 10 years as a center within the LeBow College of Business, the Baiada Center will transition to a university-level institute.

Mark Loschiavo, senior executive in residence and executive director of the Baiada Institute, said the new Baiada Institute will be dedicated to elevating the center's current mission: educating and training students, faculty and alumni in the areas of innovation and entrepreneurship, assisting in the cultivation of ideas and companies, and becoming a valuable contributor in the creation of a more vibrant, regional entrepreneurial ecosystem.

"With this change, we are hoping to build even more meaningful interdisciplinary programs and initiatives that will drive innovation and foster entrepreneurship at Drexel and in the region," Loschiavo said.

The Institute will pursue initiatives including the development of proof-of-concept labs for visualizing, prototyping and testing ideas. A new behavioral laboratory environment for increased experiential learning opportunities in sales, negotiations and additional business practices will be integrated once the Institute is housed in the 12-story LeBow College of Business building, for which construction is currently underway.

The Institute will also pursue more micro-grant opportunities, enabling students' venture pursuits while connecting companies with private investors, economic development groups and Small Business Innovative Research (SBIR) grant consultants to assist them in their funding endeavors. An Angel Club will also be developed to facilitate the pairing of investment opportunities in seed and early stage companies with accredited angel investors.

"The Institute includes a full-function business incubator that is available to Drexel alumni, faculty and students on a selective basis," Loschiavo said.

Loschiavo said entrepreneurial curricula will be developed and encouraged across the academic spectrum, with cutting-edge coursework in addition to guest speaking engagements from experienced and innovative entrepreneurs and business executives.

"From the very beginning, we have worked hard to make everything we do multidisciplinary, serving the needs of every college in the University," Loschiavo said.

The formation of the Baiada Institute was made possible by a donation of $500,000 from the Close Foundation, which was formed by the late 1936 alumnus Charles Close—one of the center's original benefactors.

The gift from the foundation also inspired generosity among fellow Institute supporters, including a $250,000 pledge from trustee Mel and Mark Baiada, whose father Laurence is the Institute's namesake, along with the recent $200,000 gift from trustee Dick Hayne. —M.Z.

The Fate of the Cosmos

Dr. Brian P. Schmidt believes our universe is expanding. The expansion is being pushed by an unknown force called Dark Energy, and eventually, the unyielding expansion will simply disappear in a phenomenon called the Big Rip.

So that's the bad news.

The good news? The Big Rip won't happen for another 100 billion years.

Schmidt spoke about the ever-expanding universe before a packed Main Auditorium in March at the 17th annual Kaczmarczik Lecture. The lecture series was established in 1995 to honor Paul Kaczmarczik, a key player in building the Physics and Atmospheric Science Departments. The series welcomes leading scientists to lecture on topics at the cutting edge of physics research.

Schmidt, a 2011 Nobel Laureate in Physics, served as leader of the High-Redshift Supernova Search Team in the late 1990s. He and his team used observations to trace back the expansion of the universe over 13 billion years and discovered that it was accelerating, a startling discovery that suggests that more than 70 percent of the cosmos is contained in dark energy. The team not only looked billions of years into the past, but also pondered the ultimate fate of the cosmos.

Schmidt explained that he and his team measured the expansion of the universe by observing exploding stars, or type 1a supernovas, which are excellent indicators of distance over time.

"Measuring distances in space can be difficult; you can't just lay down a ruler," Schmidt said. "But we know that a light source becomes fainter as it moves away. The faster the galaxy was moving away, the fainter the stars were."

These observations were used to determine if the expansion of the universe was slowing down, staying the same or speeding up over time. Slowing down meant the universe could end in another Big Bang phenomenon; no change in the expansion meant the universe could likely go on forever; and acceleration meant the universe could face the Big Rip.

Scientists' best guess is that dark matter is responsible for the expansion. But what dark matter actually is remains a mystery. "There is a lot of material out there that we can't account for," Schmidt says.

The bottom line?

In about 100 billion years, the Big Rip will likely be the undoing of the universe. But, humans of the future need not worry—Schmidt believes it will happen rather quickly. *—Katie Clark*

FROM THE COLLECTION

Japanese Woodblock Prints

Among the many treasures of The Drexel Collection are 200 beautiful and unique 19th-century Japanese woodblock prints that were donated to the Collection by James W. Paul, Jr., husband of Frances Drexel Paul, and son-in-law of Anthony J. Drexel. Here, we share 11 of them, some of them depicting (fittingly) scenes of spring, sunny, rainy or otherwise.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1. New Year's Eve Foxfires at the Changing Tree, Oji, Utagawa Hiroshige (1797-1858) 2. Onoe Kikugoro, Utagawa Kunisada I (Toyokuni III) 3. Girl and Flying Birds, Utagawa Kunisada I (Toyokuni III) 4. Sawamura Gennosuke (Actor), Utagawa Kunisada I (Toyokuni III) 5. Yoshimori War Scene, Artist Unknown

If the artist has two names shown, i.e., Utagawa Kunisada I (Toyokuni III), it reflects the method by which an artist pays homage to his teachers and mentors.


6


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6. Mother of an Emperor who is not Herself an Empress, Artist Unknown 7. Evening Rain in Karasaki, Artist Unknown 8. Daikoku Soroku, Character in Play, Utagawa Kunisada I (Toyokuni III) 9. Untitled, Utagawa Kunisada I (Toyokuni III) 10. Cave of the Goddess of Mercy, 1853, Utagawa Hiroshige (1797-1858) 11. Great Poet of the Entertainment Banquet, 1825-1845, Utagawa Kunisada I (Toyokuni III)

EXPERT ANALYSIS

IT'S THE ECONOMY

... And Everything Else, Too.

Yes, economic issues will play a key role in the 2012 Presidential election. But two Drexel experts warn that it would be far too simplistic to say that this race will hinge on "the economy" alone. ***By Doug McInnis***

When Americans go to the polls, they tend to vote with their pocketbooks. So for the next few months you'll be hearing a lot about the country's financial issues from the presidential candidates—and plenty of talk from both parties about how the other one is to blame. But even as the struggling economy figures to stand at the center of the race, two Drexel election experts say it wouldn't be entirely true to say that voters will base their pick on the economy alone.

In a series of interviews with *Drexel Magazine* in late February, Bill Rosenberg, a professor of political science, and Paul Harrington, director of Drexel's Center for Labor Markets & Policy, pinpointed several different economic sub-issues—and a few non-economic issues as well—that they believe will ultimately shape this election year.

OBAMA'S ECONOMIC RECORD (OR LACK THEREOF): For the past three years, President Obama has wrestled with the worst economy in eight decades, and has claimed progress in bringing down unemployment and reviving the economy. In turn, Republican primary candidates say the President has failed; his successes, they say, haven't been nearly enough.

But voters may not be swayed by rhetoric from either candidate. They may be watching the economic barometers instead.

"If the economy is bad, that would play well for the Republicans," says Rosenberg. "They would say again that Obama doesn't have business experience. But if the economy gets better, the Republican argument will get undercut."

In fact, as of this writing, some parts of the economy were improving. Payrolls were up, the jobless rate was down. "If you look at the outlook, you would say the jobs numbers are turning toward Obama," says Harrington. "While 200,000 new jobs a month isn't a lot, it's a lot better than we had been doing. If people look on that as an improvement, it may be enough to get the President reelected."

But of course, the economy isn't exactly booming. And as Rosenberg says: "Obama can't run on a platform of 'Are you better off now than you were four years ago?' as Ronald Reagan did in the 1984 election." Reagan carried 49 states on his way to a second term. But Obama simply can't make the same claim.

"Obama could argue that we're better off with him at the helm instead of somebody else," Rosenberg says. "But a better option would be to say, 'Look at what I said I would do, and look what I did.'"

In particular, Rosenberg says, Obama could point to the Dodd-Frank overhaul of financial industry regulation and the pullout of U.S. troops from Iraq, says Rosenberg. "He also got bin Laden, which was a really big thing."

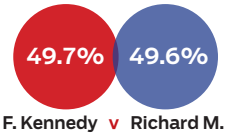
UNEMPLOYMENT: The army of unemployed Americans represents enough votes to swing the election, and neither party can afford to ignore them, says Harrington.

He estimates the Great Recession and the weak recovery have left the U.S. about 11 million jobs short of where it otherwise would

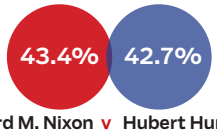
Every Vote Counts

In a close election, any issue that costs a candidate even a small number of votes could cost them the election as well—and history bears this out. A number of U.S. Presidential elections have been cliffhangers, decided by the smallest of margins in either the electoral vote or popular vote. Here are some examples:

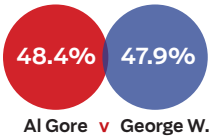
The Popular Vote



John F. Kennedy v Richard M. Nixon
1960



Richard M. Nixon v Hubert Humphrey
1968



Al Gore v George W. Bush
2000 *
*(Gore lost in the Electoral College)

have been. "We've got over four unemployed workers for every job opening," he says. "And half those available job openings are part time."

Harrington adds that the real unemployment rate, which counts the unemployed, part-time workers, and job-market dropouts, is between 16 and 17 percent. Troubling numbers for Obama, indeed.

NICHE ECONOMIC ISSUES: While the economy is a front-burner topic for many Americans, no single economic issue dominates their concerns. For example, Harrington notes that voters are concerned over falling housing prices, manufacturing and other unskilled jobs lost to automation and the high cost of higher education. For that reason, the candidates are likely to tailor niche proposals designed to appeal to small groups of voters.

"The President is now talking about how to contain costs in higher education," Harrington says. "So he's trying to go after voters who are worried about the price of college for themselves or their kids."

Niche issues could tip a state toward one candidate or another, and thus tip the election, says Rosenberg. No one wants to lose an election by a hairsbreadth, as Al Gore did in 2000. Had Gore notched a few hundred more votes in Florida, he would have carried the state and won the presidency.

WHO WILL PAY THE PIPER WHEN IT COMES TO THE FEDERAL BUDGET DEFICIT?: The next President and next Congress will have to confront long-running budget deficits and the absolutely staggering $15 trillion national debt, says Harrington. The battle to find solutions to the problem could spark some of the ugliest partisan squabbling the nation has seen in years.

"I'm reluctant to use the term class warfare," he says. "But I think this is going to be a fight over whose entitlement programs get cut and whose taxes get raised. This will be the ugliest campaign in my lifetime."

THE BATTLE FOR UNDECIDED VOTERS: To date, the Republican contenders have been too busy attacking each other in the primaries to focus on the fall campaign. But as the fall campaign begins in earnest, both parties will be expected to focus on the independents and swing voters who will help determine the outcome, says Rosenberg.

The independents are, as the name suggests, politically unaligned. The swing voters, by contrast, at least nominally identify themselves as Republicans or Democrats but could be convinced to switch sides. Rosenberg notes that Ronald Reagan's success in attracting Democrats was key to his election triumphs.

SOCIAL ISSUES: While financial issues may top the list of voter concerns, non-monetary issues may surface, particularly on hot-button social issues.

For instance, Rosenberg cites two recent controversies that reignited the reproductive rights issue. One was the Susan G. Komen foundation's short-lived decision to yank funding from Planned Parenthood. The second is Obama's effort to force religious organizations to provide contraceptive coverage in their health insurance policies. Critics accused the President of trampling on religious freedom in that case, and he quickly sought a compromise; even the compromise didn't please all voters, however, and so the issue may linger into the summer and fall.

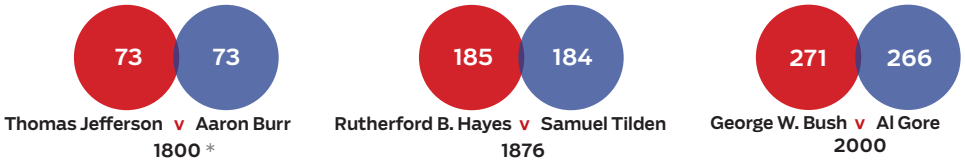
WHO DOES THE PUBLIC ACTUALLY TRUST?: It sounds simple, but one of the most important issues in this election will be the public's perception of the candidates, says Rosenberg. "They want to know who this person is, whether they are adaptable, and whether they can think on their feet," he says. The long-term effort that's required to win the nomination and the presidency allows the public time to find out, he says.

"It's this incredibly frenetic pace where for almost two years the candidates are constantly traveling, sleep deprived and stressed," says Rosenberg. "We have an opportunity to see how they do—how they're going to confront issues and crises. And that's a good thing. When they're president, they're going to be sleep deprived. And they're going to have to confront new issues all the time."

THE UNEXPECTED: Ultimately, the election could hinge on a sudden turn of events, says Harrington. He cites 2011 as an example of how quickly things can change.

"Economists thought 2011 would be a big year for the U.S. economy," he said. "Then we had the Arab Spring, which jacked up oil prices, the Japanese Tsunami, which upset worldwide industrial supply chains, and the European sovereign debt crisis. By August, people thought the U.S. was on the edge of a recession. Then we had a good fourth quarter and no one knows why. So in this election, unknowns could undermine one side or another."

The Electoral College



(The U.S. House of Represents broke the tie, giving the presidency to Jefferson.)

The Hanging Gardeners

The Biowall inside the Constantine N. Papadakis Integrated Sciences Building is most certainly stunning. But keeping it lush and green is no easy task.

"The height's not so bad," said Bryan Thomsonowak, dangling from a harness nearly 70 feet above ground at Drexel's biowall in the Constantine N. Papadakis Integrated Sciences Building.

Thomsonowak, along with his colleague Andrew Lee, are employees of Parker Plants, the company tasked with maintaining the biowall, the largest living biofilter in North America and the only such structure installed at an American university.

Once a month, Thomsonowak and Lee devote a full Saturday to pruning and inspecting the 80-foot-tall, 22-foot-wide biowall.

"We usually split the wall in half vertically, and it takes us each about four hours to work our way from top to bottom," Lee said.

To reach the top of the wall, Thomsonowak or Lee is hitched to a harness and a small wooden seat at the top floor of the building. Using a pulley system, the other person slowly pulls the seat to the wall. Once situated in the center of the wall, there are two ropes attached to the pulley system that allow them to move to either direction as needed. "We've been doing this for almost a year now, and I think we're finally getting the hang of it," Lee said with a laugh.

The towering height of the wall might prove to be daunting for most, but for Thomsonowak, an arborist, and Lee, an avid rock climber, the process of mounting the wall is routine.

"I was lucky enough to find them on Craigslist," said Jay Satava, national service manager at Parker Plants. "This is like nothing for them.

"We inspect the wall regularly; we make sure it's getting enough light and that everything's working properly. And it does need to be pruned. But for the most part, it's making this building—the science building—better by its own design."

40 UNDER FORTY

WE WANT TO HEAR FROM YOU...

As we all know, Drexel alumni are a dynamic, entrepreneurial, energetic and innovative bunch. They are hard-working. They are focused. They make a difference.

In an upcoming issue of *Drexel Magazine*, we'll take a look at some of the most prominent and promising alumni working in the world today.

Later this year, we will unveil our "Drexel 40 Under 40" edition—a first-of-its-kind issue that will feature profiles of 40 young alumni who are making a name for themselves and making a real impact in their industries and communities.

We have a few people in mind already (of course, finding accomplished young Drexel alums is not exactly a difficult task) but we also want you, our readers, to share your nominees for this exciting issue as well.

ELIGIBILITY

- **Must be 40 years or younger as of November 1, 2012.**
- **May be self-nominated or nominated by another person.**
- **Should have achieved demonstrated success in business, the public sector, the nonprofit sector, community involvement or advocacy.**

Nominations should be sent to **magazine@drexel.edu** or to the following mailing address by **July 1**:

DREXEL MAGAZINE
40 Under 40 Nominations
3141 Chestnut Street
Philadelphia, PA 19104

TIME & PLACE

2.23.12 THE CORNER OF 32ND & MARKET STREETS

It's a time of building here at Drexel, and perhaps no building project is more dramatic—or more important—than that of the new LeBow College of Business building. Last fall, Drexel broke ground on the $92 million project, which will ultimately rise 12 stories along Market Street, giving LeBow students a stunning new home and radically reshaping Drexel's Market Street "gateway." The building should be complete by 2014, but in the meantime, what we have on campus here is one enormous hole. A crater, actually. But an impressive crater nonetheless.

1 /// THE HOLE: Of course, you must be wondering, "Just how deep is this hole, anyway?" Your answer? At its deepest, it reached a full 25 feet below street level. At roughly 21 feet, construction crews hit the water table and had to begin pumping water up and out of the crater.

2 /// THE NEIGHBOR: Built in 1967, the orange-brick-clad Disque Hall currently dominates the campus quad (vertically speaking), with a total height of 140 feet. The LeBow Building will eventually rise past that, however, at a total height of 195 feet, making it the tallest on campus.

3 /// THE FREE PREVIEW: If you want a preview of what this beautiful new building will ultimately look like, look no further than the massive sign that stands at the corner of 32nd and Market. Besides offering a glimpse of LeBow's eventual appearance, the sign also serves a more practical function: The box-shaped structure encases the iconic statue of Anthony Drexel, which needed to be protected during the build.

4 /// THE POUR: The day this photo was taken was an important one, as Keating Construction, the lead contractor on the project, moved forward with the concrete pour for the foundation of the planned 177,000-square-foot facility. In all, approximately 1,160 tons of concrete were to be used in the project, and the foundation pour lasted for more than a month.

5 /// THE HOME OFFICE: Yes, the storied old Main Building is home to the humble publication you currently hold in your hands. We're on the third floor, Suite 309. Stop by and say hi sometime.

6 /// THE CREW: With the folks from Keating in charge, the LeBow project is certainly in good hands. The Philadelphia-based firm has handled such high-profile projects as the Hyatt Regency at Penn's Landing, the landmark 3401 Walnut Street project at Penn (a property once overseen by none other than Drexel President John Fry, during his days as Penn's executive vice president) and the Pennsylvania Convention Center.

7 /// THE LAST REMNANTS OF MATHESON: Somewhere down here, back in September, the demo team tearing down Matheson Hall unearthed something of a surprise: A time capsule dating to 1964, which had been planted there when Matheson was built. The contents? The three issues of a publication called *The Ledger,* a copy of *The Triangle,* a short profile of the university, a course catalog, a textbook on the federal tax system (thrilling reading!), an empty examination "blue book" and cigarette butts inscribed with the names Ed Martin, Macaulay, Helpin, Barre, Lucke, McNamara. Alas, no gold. Or prescient investment advice.

To follow the progress of the exciting and important LeBow building project, visit www.buildinglebow.com.

It's Outta

PAIGE COLLINGS, DREXEL'S RECORD HOLDER FOR MOST HOME RUNS IN A SEASON, ISN'T JUST THE DRAGONS' BEST PLAYER. SHE'S ALSO A HAZARD TO DRIVERS ON THE SCHUYLKILL EXPRESSWAY.

By Mike Unger

FROM THE NANOSECOND

Paige Collings connected with the pitch, everyone knew it was gone. As it sailed over the wall, only one doubt remained: would the softball injure an unsuspecting driver on I-76?

"You could definitely tell by the sound," says Drexel Coach **Kim Camara.** "It was one of those things that kept rising and rising. It didn't just clear the fence. It was monstrous. And pretty awesome to see."

The towering home run over Penn's version of the fabled Green Monster, nestled right along the Schuylkill Expressway, might have been Collings' signature shot, but it was anything but a fluke. During her first three seasons she blasted 20, putting her just five short of the all-time school record as she enters her senior season.

"It feels so smooth and pure," she says of a perfect power stroke. "It's definitely one of the best feelings in the world."

Few Drexel athletes have traveled farther to wear the blue and gold. A native of British Columbia, Collings grew up in the Vancouver suburb of Delta aspiring for success in either soccer or her country's collective obsession, ice hockey. She

Here.

(Really.)

"It didn't just clear the fence. It was monstrous. And pretty awesome to see."

only played softball because her two older sisters, whom she emulated, did.

"I was always at the ballpark with them, and I just picked up a ball and bat and started playing," she says. "Honestly, at first I didn't really like it that much. I stayed with it because my sisters did it and I wanted to be like them. It wasn't until I was 12 or 13 that I actually started to like the sport."

It certainly took a liking to her. Collings' powerful bat was evident to Camara when she first saw the player on a highlight film. After Camara scouted her at a club tournament in Florida, Collings became a Dragon.

"She was really fundamentally sound," Camara says. "A powerful kid, strong, athletic, and had all the fundamentals down. Paige has been a leader since she's gotten here. She has that kind of personality. She's one of our captains this year, and she's definitely someone who steps up into that leadership role for us on and off the field."

Collings has improved steadily throughout her career. A First Team All-CAA catcher for all three of her seasons, last year she set Drexel's single-season home run mark with nine, breaking her own record. A biological sciences major (just like both of her sisters), Collings was also named to the Philadelphia Inquirer's Academic All-Area Softball Team. To be eligible, a student-athlete must earn a cumulative grade-point average of 3.20 or higher.

Collings' softball IQ is sky high on the diamond, too; as catcher, she is entrusted with the task of calling the game for her pitchers.

"I like being able to call the pitches," she says. "You see the whole game in front of you as it unfolds. It's kind of a natural leadership role and I really like that. Your teammates are always looking to you. I like having so much control."

Last summer she took her game to a new level, playing her way onto the Canadian national team. Though she didn't participate in the Pan Am Games, she played in two tournaments, including one near and dear to her heart—at home in British Columbia.

"It was amazing, especially because one of the tournaments was at a softball park in B.C. about half an hour away from my house where I played a lot of my youth ball," she says of the experience.

Collings has one season left to help her team qualify for the Colonial Athletic Association tournament for the first time in her career. As a co-captain, she's determined to make that happen.

To an incoming freshman, four years can seem like a lifetime. To a senior with just one season left, it can feel as though an entire career slipped by in the blink of an eye. As her college career concludes, Collings is unsure whether she'll rejoin to the Canadian national team, pursue coaching, get a job working in an environmental field, or return home to Canada.

But no matter what she decides, she'll have left an indelible mark on Drexel softball.

And possibly on the windshield or hood of a car.

[IN THE SPOTLIGHT]

Once a promising soccer player, **Amanda Fleischut** spurned The Beautiful Game in favor of the unique challenge of being a field hockey midfielder.

NAME: Amanda Fleischut **POSITION:** Midfielder

YEAR: Junior **HOMETOWN:** Doylestown, Pa. **MAJOR:** Health Sciences

CRED: Started in all 20 games during the 2011 season ... selected to Longstreth/NFHCA Division I All-Region second-team ... knocked in five goals and registered seven assists ... ranks fourth on the team in points and shots ... earned an individual game high of two assists in the 7-0 victory over Penn ... received the CAA Commissioner's Academic Award.

"I get more excited from making the assists. I love distributing the ball. It really makes sure your head's up and you're always in the game thinking ahead."

Always On The Move

WHEN DID YOU START PLAYING FIELD HOCKEY? In seventh grade. I was a big soccer player, and I also played basketball and softball. I liked to play a sport every season. When it came to middle school, soccer and softball were at the same time [in the spring], so they asked me to try field hockey [in the fall]. At first I was like, 'No way, I'm not going to play in a skirt.' But it's the same exact concept as soccer mentally.

WHY DID FIELD HOCKEY WIN OUT OVER SOCCER? Everyone always asks me that. I think it's because, honestly, I love challenges, and the fact that I'd been playing soccer since I was 3, I needed a new challenge. I love pushing myself.

WHAT BROUGHT YOU TO DREXEL? Nicky [Hitchens] and Denise [Zelenak], my coaches here, came to watch our old goalie, Jenna Phillips, play, and they saw me. It was a big joke, because I scored against Jenna and they came to my coach and asked who this Amanda girl was.

YOU'RE A MIDFIELDER. IS THAT MORE OF AN OFFENSIVE OR DEFENSIVE POSITION, OR BOTH? I think it is 50/50, because as much as I [move] up and play with the forwards, I really have to get my butt back and play on defense.

DO YOU GET A BIGGER CHARGE FROM SCORING A GOAL, MAKING A GREAT PASS THAT LEADS TO ONE, OR TURNING IN A GREAT DEFENSIVE PLAY TO PREVENT ONE? I get more excited from making the assists. I love distributing the ball. It really makes sure your head's up and you're always in the game thinking ahead. You really have to know where you're going with the ball before you get it. Scoring a goal is great, but I think being the playmaker is more exciting.

WHAT'S YOUR PERSONAL GOAL THIS YEAR? Since it is going to be my senior year, stepping up to be that leader, to fill the shoes of all the seniors that left. There's only going to be two of us this year. We're a very young team, so I really need to step up vocally. I like to show by example, so I also need to make sure I show verbally as well.

IS THERE A PARTICULAR ATHLETE YOU LOOK UP TO IN TERMS OF THE WAY THEY APPROACH THEIR SPORT? Two years ago I was on the junior national high performance team, and this past summer I was on the senior high performance team, so I got to play with Rachel Dawson from the Olympic team. We ended up winning the whole tournament. She would take the time to teach as she played. It was unbelievable watching her. She is not only amazing on the field, but she is mentally always in it. While she's making a play or pass she is still teaching.

HOW DO YOU BALANCE ACADEMICS WHILE EXCELLING IN FIELD HOCKEY? All my life I've been playing sports while managing school, while managing my family and clubs and different events. I've always had to learn to time manage. Through that I've definitely been able to handle school with a D-I sport. It is hard, but especially here at Drexel we have so many things to help us if we ever need it. But basically it's a lot of time in the library.

WHY DO YOU WANT TO BECOME A PHYSICIAN'S ASSISTANT? I've always been a big science and math person. I'm all about getting an exact answer. I kind of get bored easily, and the medical field is always changing. I enjoy helping people, and ever since I was little I can't really imagine myself doing anything else.

DO YOU THINK THAT CONTRIBUTES TO THE FACT THAT YOU LIKE PLAYING MIDFIELD? I'm always involved in the play. Even if I don't have the ball I'm always having to move, always having to look for the next pass, trying to talk to people, getting them in the right positions. You definitely don't get bored. —*Mike Unger*

'Better Late Than Never.'

After his January call-up, it's official: Jeff Parke can proudly call himself a 'U.S international.'

BY MIKE UNGER

Three days into 2012, Jeff Parke received the call he'd been waiting a lifetime a lifetime for.

The former Drexel soccer star was watching TV in his Abington home, recovering from his morning workout and resting for his afternoon one, when the phone rang. On the other end was Jurgen Klinsmann, coach of the U.S. national team. The next morning Parke boarded the first flight from Philadelphia to Arizona, where the team was training, and three weeks later, he took the pitch against Panama, earning his first U.S. cap and fulfilling his life-long dream.

"It happened so fast," he said. "I was sitting on the bench, I didn't know if I was going to get in. ... Once the guy on our team got a red card I was like, 'Oh man, I think I'm going to be going in.' Literally 10 seconds later the one coach comes up and says 'Get ready, you're going in.'"

If Parke's entrance into the game was sudden, his ascent to international competition was anything but. By the time the Downingtown native left Drexel after four years to pursue professional soccer, he was recognized as one of the finest defenders in the country. Major League Soccer's New York Red Bulls took the defenseman with the 60th and last overall pick in 2004 SuperDraft. He became a Seattle Sounder in 2009, and last year had one of his best seasons yet. He was named the club's 2011 Defender of the Year.

Klinsmann took notice. When Omar Gonzalez, the MLS Defender of the Year, was injured, Parke was tapped to replace him. The defender played about 35 minutes in the Americans' 1-0 victory in Panama. Though he didn't see the field in a later game against Venezuela and wasn't among the 21 players selected to face Italy on February 29, Parke holds out hope that he'll get another shot with the national team.

"I'm always looking forward to possibly getting called in," he says. "At the end of the day, I'm also 29 years old. I know the direction the U.S. team is going.

"I'm just happy that I got a cap. If anybody ever asks, I can say I played in a game for the U.S. ... It's funny how things happen. Nothing for me is really the easy way, but somehow I got there. I always believed

that I was good enough to get called in. I just never got the opportunity. Better late than never."

DREXEL SOCCER COACH DOUG HESS TALKS ABOUT HIS PLANS FOR THE PROGRAM, THE RISING POPULARITY OF THE GAME IN THE U.S., AND COLLEGE SOCCER'S SEARCH FOR ITS VERY OWN OMAHA.

TIME FOR CHANGE

CHANGE. It's the theme of the moment not only for Drexel soccer, but for U.S. soccer as well.

Doug Hess, now entering his second season in charge of the Dragons, is working to remake the image and on-the-field style of a program that, for 17 years, was capably led by Lew Meehl. Meehl enjoyed good deal of success in West Philadelphia, but Hess has his own ideas on how the game should be played; the trick, of course, is selling those ideas both to his current players and the nation's top young recruits.

The good news?

The latter task has been made somewhat easier by the fact that Philadelphia (and the United States as a whole) is experiencing something of a soccer renaissance. If Drexel can tap into that energy—and Hess is hopeful he can help the program do precisely that—there's no telling how high the Dragons can climb.

To start with, what's your take on the state of Drexel soccer today? We're going through a bit of a transition phase. I'm trying to create my own culture here, and that's a process. Like anything else, culture isn't created overnight. We're going to have keep working on it.

What are the current strengths of the program? I'm looking at our roster and I see we're returning 27 guys from last year, out of 28 roster spots. So we have the very basic makings of our team on campus right now, and that's definitely a strength. It's just a question of trying to forge our identity and figuring out what kind of team culture we're going to have come fall.

Beyond that, I think we have strength in the fact that we have a long-standing program with a lot of tradition. We've just finished our 65th year. It's a long soccer tradition and in that long history we've had a lot of success. We've had All-Americans, we've had guys go on to play professionally after college, we've won conference championships. We also have a big base of alumni. We're trying to pull some of those guys back in here and get them excited about Drexel soccer, because we're going to need the financial help of those alums if we want to be able to recruit the way we want to be able to recruit and play the games we want to play.

What are some of the big changes you've brought in to the program? First, I've changed the way we schedule. We used to have a very regional schedule. This year, though, we went out to Nebraska and played Creighton. There were 5,500 people in the stadium. Our guys had never seen anything like that in their lives. Next year, we're going to take the team out and play Denver. We're going to play Virginia, which is one of the three biggest programs in the country along with UCLA and Indiana. Those are the kind of programs we're going to out there and play.

In college sports, winning starts with recruiting. Is this is a good recruiting area to be in? Where do you find your talent? And what's your sales pitch? Yes, there's a lot of good soccer in this region and all throughout the Mid-Atlantic—New York, Philly, Baltimore, New Jersey. It's a huge pocket for soccer talent, but we're looking across the board—California, Texas, North Carolina. There's good soccer to be found in big cities everywhere, too—Detroit, Chicago. We've got to cast our net pretty wide, but the good news is that we're in a top conference. This is a very attractive thing about the program. We're in a top 5 league, and we're in a very rich soccer culture here in Philadelphia. We're trying to take advantage of that.

Speaking of the soccer culture here, the Philadelphia Union of the MLS are enjoying tremendous support. Is that something you can sell recruits on? Definitely. The reality is, there are only a handful of MLS cities in this country, and so that's a massive thing for us. You better believe that I'm telling kids, 'Hey, within a two-hour radius, you've got three MLS teams.' Not a lot of other college coaches can say that. There's a strong culture here for the sport, and that's why you're seeing 19,000 fans down there for Union matches.

It's been said for years that soccer is nearing a breakthrough here in the U.S. But with the MLS doing so well and TV ratings for the English Premier League on the rise, it does seem that we've reached a tipping point. What do you think? It all goes back to the '94 World Cup. That's when it really picked up. But the MLS has now sustained itself for 16 years, and that really says something. It says that the sport is gaining significance, and grabbing more of an audience. You are seeing more of those European clubs coming here to the States to train and start their preseason with U.S. tours, and you can see what a huge following some of those clubs have—Real Madrid and Barcelona and Celtic. These teams are selling out football stadiums here. So obviously we're gaining more significance.

I know there's been some discussion about how to both restructure college soccer and also give the championship weekend more of a national profile—something more on par with the College World Series in Omaha or the lacrosse final four. Is this possible? It would make sense to have the championship the same weekend as National Soccer Coaches Association of America's Convention. We already have 8,000 to 10,000 people attending

that event, and if you had something like that, you could really gain some significance. But the real issue is that we don't have that kind of national relevance yet. We're gaining but we're not there yet. Lacrosse is a great model, I think, because they're able to draw between 60,000 and 80,000 for a weekend event. Now, there are 14 million registered youth soccer players in this country, and we'd need only a fraction of that to make this a great event. The College World Series is a great example, too. We've just got to find our Omaha. We're still trying to figure out where our Omaha is going to be. —T.H.

Chestnut Street, Transformed

By Niki Giankaris and Tim Hyland

Drexel has announced plans for a 361,200-square-foot housing and retail development that will completely transform the University's Chestnut Street gateway—and give students a ritzy new place to live, too.

There's no mistaking it: this is a time of change—dramatic change—for Drexel.

Even before President John Fry finalized his Strategic Plan for the University in mid-February (see sidebar), the incredible physical changes to campus that Fry is pushing forward had already begun. The Padadakis Integrated Sciences Building opened to great fanfare in September, ground was broken on the planned new LeBow College of Business building in October, and progress has continued on the renovation of the historic URBN Center, which will open this fall and serve as the beautiful and stylish new home of the Antoinette Westphal College of Media Arts & Design.

In January, meanwhile, Drexel made public its plans for yet another major project, as Fry joined with officials from both the University and American Campus Communities, a national developer of university projects, to kick off construction of Chestnut Square, a $97.6 million, 361,200-square-foot student housing and retail development that will completely transform Drexel's Chestnut Street gateway and greatly increase the University's ability to house its growing student population.

Designed by internationally acclaimed Robert A.M. Stern Architects, the development will include two eight-story buildings that front Chestnut Street while maintaining an open entry corridor to the adjacent Creese Student Center. The broad use of glass at the street level combined with limestone will continue Drexel's progress toward creating a pedestrian-friendly, mixed-use campus district enlivened by retail amenities. Stern Architects were the creative force behind such high-profile projects as the Comcast Center and Philadelphia Navy Yard in Philadelphia, and are also the lead designers on the LeBow building.

Stern's building design for Chestnut Square includes a 19-story residential tower at the corner of Chestnut and 32nd streets. The two-story, street-level space will include retail outlets, neighborhood restaurants, and a new corner entry into the Barnes & Noble—activating student life in an urban setting. Upper floors feature student apartments with both shared and private accommodation options.

The project is expected to be completed by the Fall of 2013. "This innovative partnership combining dynamic urban retail with high-quality student housing will serve as a catalyst in continuing the revitalization of our campus and surrounding community," Fry said in announcing the project. "We look forward to partnering with American Campus Communities to create a more vibrant gateway to University City."

To read more about the Master Plan, visit drexelmasterplan.wordpress.com, or follow "drexelmasterplan" on Facebook.

AN INNOVATIVE, EXCITING VISION FOR THE FUTURE

During February's Board of Trustees meeting, Drexel President John Fry received approval for his Strategic Plan for the University. The plan, which besides setting important goals for the University will also provide the foundation for Drexel's fundraising efforts going forward, will be formally published in May, and will be posted on the President's website at drexel.edu/president.

At the same time, the University will publish its accompanying Master Plan, which outlines all of the construction and redevelopment projects that Drexel will pursue in the years and decades to come. This remarkable document outlines Fry's vision for such important initiatives as the 30th Street gateway, the 32nd Street Esplanade, the North Campus Mall and many others.

It's an exciting document—one that illustrates once again the lofty ambitions Drexel has for itself, for its neighborhood and for its city.

Added Bill Bayless, CEO of American Campus Communities: "We are thrilled to be partnering with such a prestigious institution of higher learning such as Drexel and assisting President Fry in achieving his vision for the University. This transaction stands as an example of a premier university benefiting from private sector investment to deliver world-class housing to its students while preserving its own debt capacity for core capital projects."

About 860 beds of high-quality housing will be available for students at Chestnut Square. The development includes a 14,800-square-foot community center with space for residence life operations and student amenities that include a social lounge with gaming area, a fitness center furnished with modern workout equipment, meeting space, a theater and laundry facilities.

Under terms of the development deal, ACC will develop, own and manage the project through a 70-year ground lease structure and make annual ground rent payments to Drexel. [D]

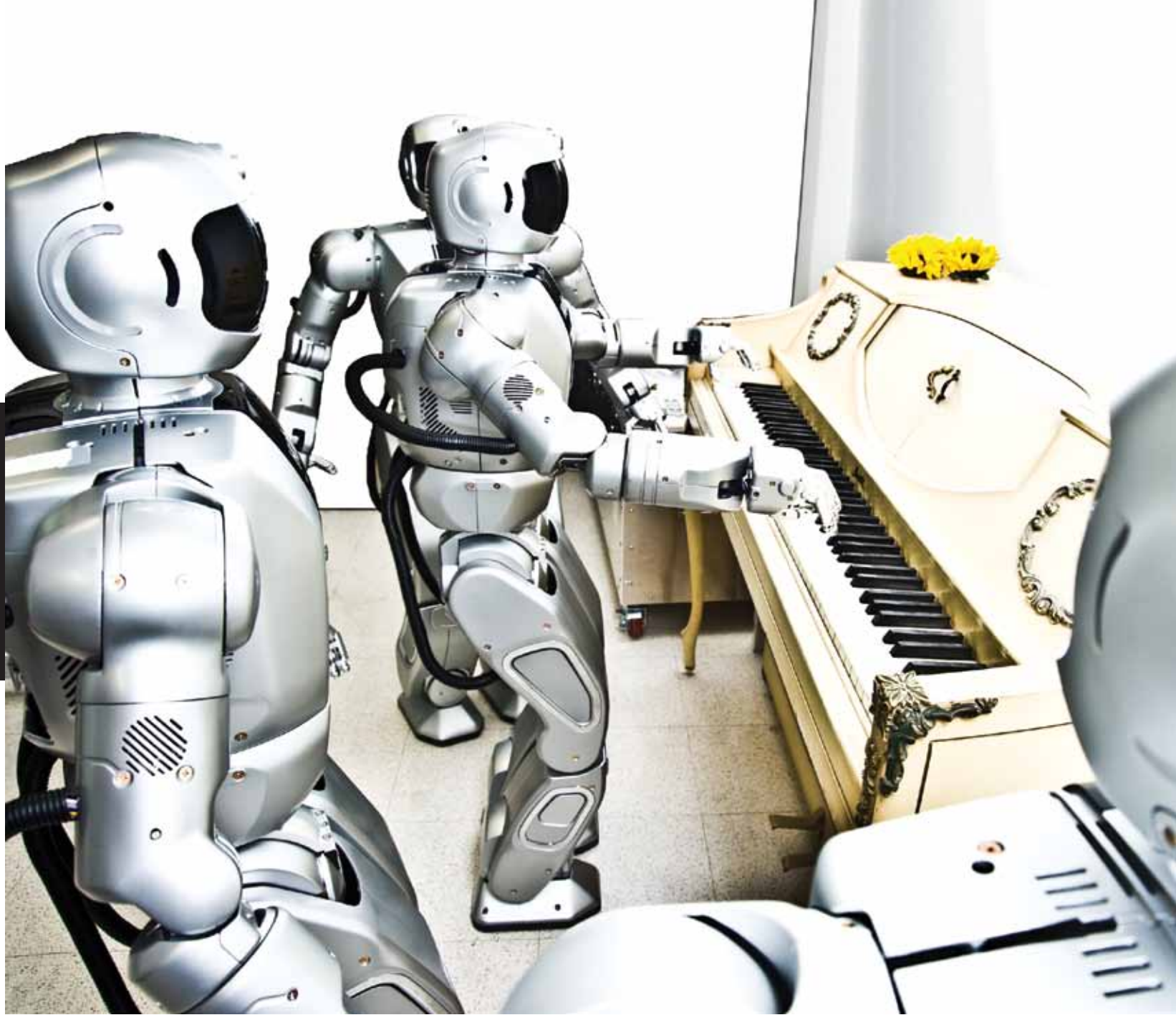

Hubo
KAIST
Rainbow

Leader of the Band

WITH THE HELP OF COLLEAGUES FROM AROUND THE WORLD AND A TROUPE OF MUSICAL ROBOTS, DREXEL'S YOUNGMOO KIM IS PUSHING THE BOUNDARIES OF MODERN ROBOTICS.

By Maria Zankey

Photographs by Melisssa Marie Hernandez



Jaemi Hubo has been at Drexel since 2009.

In three years at the College of Engineering, Jaemi has become an active and integral member of the Drexel Autonomous Systems Laboratory (DASL, pronounced "dazzle"), and through countless hours spent in the Music and Entertainment Technology Laboratory (MET-lab), Jaemi has shown rhythmic promise on the dance floor, too. Which is why Jaemi was chosen to perform on stage at the Main Building Auditorium to kick off this year's Engineers Week festivities in February.

"Robots are tools that could help us understand better what we do, what is unique about being human. It's a tool for us to understand what goes into a great musical performance."

But unlike most others in the College of Engineering, Jaemi isn't a student. Jaemi's not even a researcher. Instead Jaemie is the researched.

Jaemi is a humanoid robot, or "HUBO," a type of lifelike robot developed by Drexel's overseas research partner, the Korea Advanced Institute of Science and Technology (KAIST). Standing at 4-feet, 3-inches and weighing about 100 lbs., Jaemi's design and functionality is a great deal more sophisticated than the average robot. It has a slimmer figure than most, with an aluminum endoskeleton and polycarbonate frame. Its arms can move freely—as can its 10 fingers—and its legs allow it to stride more like an actual human than its robot cousin, Roomba. Oh, and then there's this: Jaemi is one of seven brothers and sisters (well, to be clear, these robots are gender neutral), Jaemi is crazy about music.

Since Drexel obtained Jaemi in 2009, KAIST has flown six more identical robots to Drexel in increments, and when the final two robots arrived at Drexel in late February, it marked the largest gathering of HUBOs in robotics history—a feat that is as meaningful as it is impressive.

"By bringing seven robots here and standardizing the research, now everyone is studying on a level playing field," said Youngmoo Kim, director of the MET-lab, an associate professor of electrical engineering and assistant dean of media technologies in the College of Engineering. "Now, it's a very apples-to-apples comparison."

With the accumulation of so many identical robots opening doors for new comparative research, engineers at Drexel are elevating the field robotics to unprecedented ground—and they're doing so with a little rhythm in their step.

A Hub for HUBOs

Drexel's partnership with KAIST began in 2008, when mechanical engineering and mechanics department head Paul Oh visited the institute's HUBO laboratory, where the robots were originally designed and built.

"You can't buy a humanoid in the U.S. [So Oh thought,] 'Why don't we use this opportunity to work with those who do and who are the best in the world with it?,' which is KAIST and HUBO lab," Kim said. "We wanted to use it not as just a way to use a really great piece of equipment, but also to learn from that experience on both sides."

"At KAIST, their primary focus is in mechanical engineering,

and they do great design, but there's not as much focus in software, artificial intelligence or machine learning," Kim added. "We have a lot more expertise in those areas, so by partnering, we get the best of both worlds."

Since then, Kim said, Drexel students have traveled to the South Korea for co-ops at KAIST, while KAIST students have also traveled here to study at Drexel. Jaemi's arrival to University City in 2009 was made possible in part by a five-year, $2 million grant from the National Science Foundation's Partnership for International and Research Education Program (PIRE).

In August 2010, the NSF awarded a $6 million Major Research Instrumentation (MRI) grant to a group of U.S. institutions led by Drexel to expand upon research with Jaemi and bring the six additional robots in for study.

Robotics researchers from the seven collaborating universities—Massachusetts Institute of Technology, Carnegie Mellon University, Virginia Tech, the University of Southern California, the University of Pennsylvania, Purdue University and Ohio State University—will travel to Drexel to learn how to operate the HUBOs.

"It really is kind of an all-star team we'll be working with," Kim said, adding that the group consists of many "world famous roboticists," maintaining previous academic relationships and also building some new ones.

"We'll be teaching them how to turn them on, how not to let them fall down, how to calibrate the robot," Kim said with a laugh. "In some ways, the way you have to deal with these robots is worse than having a baby. It takes a long time before the robot can do something really simple. We're working to improve that, too, but we'll be teaching our partners some of the things you only get by working with the robots."

Eventually, each of the robots will be shipped to the partner institutions to be studied on an individual basis.

But for now, Kim and his colleagues in the MET-lab have plans for the seven-part humanoid dance troupe.

The Aim? To Be More Human

While the HUBOs are sophisticated in the realm of humanoid robots, they still need a fair amount of coddling.

"Humanoids haven't gotten a lot of attention because there's not necessarily a direct application for them right on the horizon—that's what makes it a long-term research problem," Kim said. "I can tell you a list of 100 things I think humanoids could do—none of which they'll be able to do in a year, or even five years. But unless we start doing that basic research right now, we'll never get there."

Kim said that was the goal of the MRI grant—to create a new research platform by enhancing the robots.

"These robots have a great design, but they're fairly limited. They can't see things, they can't hear, they can't touch," Kim said. "We're going to be putting in new cameras, microphones and tactile sensors, and then build a whole new software architecture so it can take in all that data. Right now, it can't."

The possibilities for a sensitive robot are vast, Kim said, but whether the humanoid is dancing to the beat of a tune or just standing still, they're controlled by computer programs.

"There are computer programs that write music—very, very good music—that could pass for something by Mozart or Bach," Kim said. "Because we have robots that can build things much faster than we can, maybe we'll be able to program them to do things creatively to a greater extent."

He said involvement with the robots has spanned beyond the two labs. Yury Gogotsi with the A.J. Drexel Nanotechnology Institute has helped develop new power systems for the robots, and William Regli, a professor of computer science in the iSchool at Drexel, has helped with the development of capabilities software.

"It really does require a wide variety of skills," said Kim, who received dual undergraduate and graduate degrees in both engineering and music, as well as a Ph.D. from the MIT Media Lab.

"I think my students would [agree] that a lot of what they learned with working with the robot has not come from the classroom—it's being able to be hands on and tinker around with the robots," Kim said.

After first arriving at Drexel, Jaemi spent a lot of time in the DASL lab, where Oh and his colleagues gathered knowledge about the basic functions and quirks of the HUBO design. As MET-lab and DASL researchers began

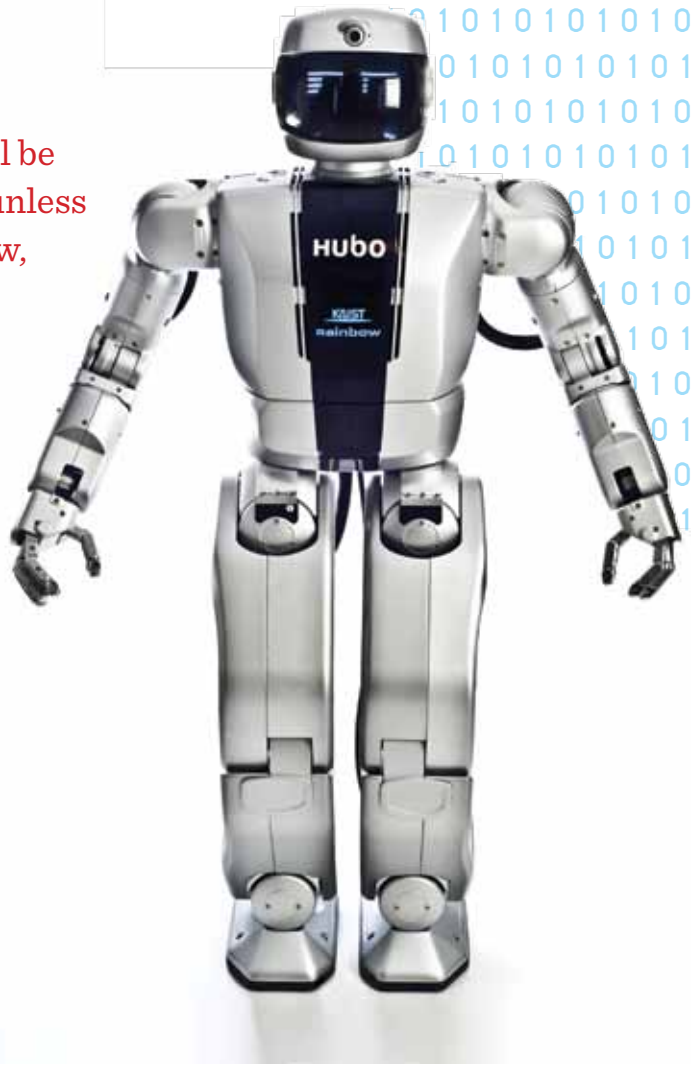
CLIMBING THE CHARTS

The Hubos premiered their first single—a cover of the Fab Four's "Come Together"—via YouTube in early April. At the time *Drexel Magazine* went to press, the video already had a climbing number of 120,000 views within the first week of its release.

But even more remarkable than the viral video is the technology behind it. The robots aren't just timed to play their specially constructed instruments, and a Drexel MET-lab engineer isn't behind the scenes controlling each stroke of the drum. Each robot has actually been programmed to follow a musical score, executing the notes—and lyrics—to accurately harmonize with its fellow bandmates.

But don't just take our word for it. Listen for yourself by visiting YouTube.com/DrexelEngineering.

"I can tell you a list of 100 things I think humanoids could do—none of which they'll be able to do in a year, or even five years. But unless we start doing that basic research right now, we'll never get there."



to discuss potential collaborations, Jaemi's schedule became busier than ever.

"It's similar to the early days of computers, when there were only a few in the world," Kim said. "If you were at a university that had one, you would get some time on the computer at, say, 3 in the morning to try to get your work done before someone else gets on at 4:30. It was kind of like that—everyone wanted a turn with Jaemi."

But with increased collaboration came more interesting projects. A student in the DASL lab was interested in creating a program that would allow Jaemi to watch a conductor and be able to follow the beat—a project that led to developing "music understanding" programs for humanoids.

"It's a dancing program, essentially," Kim said. "It hears the music, figures out where the beats are and then can move in time with the beat. The movements are pretty limited right now, and a lot of that has to do with us being afraid to make them do really crazy motions really fast—we have to be really careful with them. It's about baby steps."

A Future Undefined

While the robotics research at Drexel garnered accolades and interest from engineers all over the world, Kim said reactions from those outside of the engineering field aren't always as positive.

"Everybody asks me if robots are going to replace humans in certain jobs, particularly when it comes to the arts. And oh god, I don't want to see robot musicians or robot dancers," Kim said.

He said he never thinks of the robots as a way to replace human functions, but rather, as a tool to help further explore current fields.

"I want to see humanoids become useful assistants, to be able to do the things that we can't do or don't want to do," Kim said. "Something as simple as taking out the garbage or doing the dishes, but also the really hazardous things, like dealing with nuclear power plant disasters or space exploration."

But Kim thinks that humanoids could eventually play a crucial role in expanding fields that traditionally have never used mechanical assistance.

"Robots are tools that could help us understand better what we do, what is unique about being human," Kim said. "It's a tool for us to understand what goes into a great musical performance."

"You can't say to a piano player, 'Play that again, but use .1 more Newtons of vertical force. No one can do that. I can play it louder, I can play it harder, but I can't vary myself that precisely," Kim said. "But a robot can. Just by trying to teach a robot to play like a human, we can learn a lot more about how we do it ourselves as humans."

While rhythmic humanoids might be a little too reminiscent to the robotic uprisings in "The Terminator" and "I, Robot," Kim said the fear others have of the future of robotics is a little less literal and more philosophical.

"We hold onto these romantic ideals about what's human. We used to think a robot would never be able to play chess or Jeopardy better than a human. We were wrong, and I don't think we need to be afraid of those things," Kim said. "Just because a calculator can do multiplication faster than I can doesn't make me feel like I have less self worth. The fact that we as humans can conceive of machines, build them and use them is one of the amazing things about being human."

"For these HUBOs, that's still a long ways off. For now, we're just happy to help them stand up straight and bounce to a beat." [D]


POSS
OVATIVE, COLLABORATIVE, INSPIRING.

GAMEDAY.

There is no denying the excitement, the joy and the unbridled school spirit that can be generated on a college campus by a winning sports team. No matter the school, no matter the sport, history tells us that few things can bring more energy to a university like success on the football field, or glory on the baseball or softball diamond, or here at Drexel, a winning streak on the basketball court.

And this year, well, we had ourselves quite a winning streak. (19 straight wins, in case you were wondering).

While our friends in the so-called Big Five may not want to admit it, the facts are clear: Drexel basketball has arrived. Under coach Bruiser Flint, the Dragons have methodically gone about the work of building their own hoops tradition in a town that stands at the very center of the sport. That was especially the case this year, and for one day, at least, *Drexel Magazine* was there to see history in the making.

In early February, contributing photographer Steve Boyle arrived at the DAC bright and early to carry out the assignment that we had given him. We wanted him to spend one entire day—from 7:30 a.m., when the Dragons first arrived for their morning shootaround, until nearly midnight, when the DAC lights were turned off for good—documenting what gameday is like for the players, the coaches, the support staff, the students and the fans of Drexel basketball.

The gameday in question was the team's Feb. 14 showdown against William & Mary, and in the pages that follow, you'll see precisely what Steve saw during his long, long day at Drexel—a day on which he took a staggering 2,000 photos, and offered us a unique glimpse into all of the hours and work and nail-biting excitement that goes into a big basketball game here at Drexel, Philly's new hoops power. – T.H.

PHOTOS BY STEVE BOYLE

7:13 A.M.

For Flint and his players, gameday begins a full 12 hours before tip-off. At the team's morning shootaround, Flint and his assistants run the team through a series of drills and simulations to make sure they're ready for the night's opponent. Flint, famously animated during games, remains mostly quiet during these sessions. He watches, he listens. And yes, occasionally, he'll let his guys know when they're doing something wrong.

3:04 P.M.

Mario puts in a long shift on gameday, too, making it a point to visit students all over campus to remind them (without speaking, of course) that, yes, there is a game this evening, and yes, the team could really use their support. Other athletics staffers spend the day dotting the campus with signs promoting the game as well.

Every shootaround session ends the same way: With a team-wide half-court shooting contest. Each member of the team lines up and takes their shot. But not before Flint, a former star player himself at St. Joe's, gets his chance. (On this day, it should be pointed out, nobody managed to drain one).

Because it is literally attached to the DAC and only steps from the Drexel locker room, the Landmark Americana Tap & Grill makes for the perfect venue for the Dragons' pre-game meal. The team sauntered in to the restaurant in the late afternoon and treated themselves to an impressive buffet spread in the restaurant's back-room bar: Chicken, lasanga, potatoes, fresh fruit and fresh veggies.

4:31 P.M.

After the morning shootaround, the DAC remains mostly silent through the daytime hours. The players head off to class (they are students, after all) and the coaches head into meetings. It's not until late afternoon that things start to pick up, with facilities staffers preparing the DAC for gametime, Comcast television crews setting up their cameras and microphones and trainers getting the players taped up and ready to play.

6:01 P.M.

6:53 P.M.

The DAC Pack has rightfully earned the reputation as one of the best student sections in the CAA, and these hoops crazies were especially rowdy this season, as the Dragons charged their way through their schedule en route to the regular season league title.

7:05 P.M.

At 7:05, finally, it's tip-off time. Taking the honors for the Dragons, as always, was Daryl McCoy, the soft-spoken but powerful forward who averaged nearly 7 rebounds per game this season. Oh, and he won the tip, by the way.

Franz Massenat, shown here blowing by the William & Mary defense, was one of the CAA's breakout stars this season. The sophomore point guard with NBA ability averaged 13.6 points per game and was named first-team all-conference.

Though Flint, as always, hollered his way through the game, and though William & Mary put up an unexpectedly tough fight, the Dragons would come away with a win on this night, knocking off the Tribe by the score of 63-61. Massenat led the way with 22 points. Speaking to the media afterward, a relieved (and much calmer) Flint would say of his opponents: "You don't want a nail-biter, but give them credit, they really played hard."

To see more images from our basketball shoot, go to drexelmagazine.org.

1950s

Stanley H. Cohen, Esq., Chemical Engineering '57, was named Philadelphia Best Lawyers Trademark Law Lawyer of the Year for 2012.

1960s

Joseph P. Gallagher, Ph.D., Civil Engineering '64, was named a fellow of the American Society of Mechanical Engineers.

Samuel M. Herb, Electrical Engineering '69, judged the Sam Herb/Jack McGrath Automation Award at the National Engineers Week Philadelphia Future City Competition.

Elizabeth McCool Stanton, Esq., Business '69, was selected by her peers for inclusion in *The Best Lawyers in America 2012.* She was also named among the "Ohio Super Lawyers 2012" by *Super Lawyers.*

Anna T. Meadows, M.D. WMC '69, was designated by Governor Tom Corbett as a 2011 Distinguished Daughter of Pennsylvania.

1970s

Larry Besnoff, Political Science '73, served on the faculty for the Pennsylvania Bar Institute's continuing legal education program entitled, "Facebook, Twitter, & Blogging ... Oh My Space!"

Donald A. Gillis, C&E General Studies '70, was promoted to president of the Heavy Civil Group for The Walsh Group.

Joseph P. Grimes, Jr., Electrical Engineering '79, was named senior vice president of Exelon Nuclear.

Stuart A. Katz, CPA, Accounting '77, was hired as a tax manager at the accounting firm Shechtman Marks Devor PC.

Gary A. Krimstock, Esq., Business Administration'70, was elected president of the Community Associations Institute/Pennsylvania and Delaware Valley Chapter.

James Madara, M.D., HU '75, was named executive vice president and CEO of the American Medical Association. He previously served as the Thompson Distinguished Service professor and dean at the University of Chicago Pritzker School of Medicine, as well as CEO of the University of Chicago Medical Center.

Eugene P. Munday, Metallurgical Engineering '78, Humanities and Communications '78, received a Fulbright Award to lecture on American environment history at Southwest University in Chongqing, China, for the spring 2012 semester.

Edward J. Radetich, Jr., C.P.A., Accounting '77, received the Spirit of Life Award from the City of Hope. He is an Executive Partner of the CPA and consulting firm of Heffler, Radetich & Saitta LLP.

Anita Scheyer Grossman, Home Economics '73, was recognized as a "Top Five Star Wealth Manager" from *NJ Monthly.*

Carl L. Smith, C.P.A., Accounting '76, was appointed chief financial officer at Judson Center, a non-profit human service agency.

Cynthia A. Sudor, Design '74, released her first book titled *Adventures at Green Apple Acres*.

Roseann B. Termini, Esq., Human Behavior and Development '75, authored three new editions of the following food and drug law books: *Food and Drug Law: Federal Regulation of Drugs, Biologics, Medical Devices, Foods, Cosmetics, Dietary Supplements, Veterinary and Tobacco Products,5th ed.; Food, Drug and Cosmetic Act* and *Related Laws CD 5th ed.; Training/Instructor's Manual CD.* She recently served on the panel for the Roe v Wade at 39: Reproductive Rights Symposium at Widener University School of Law.

Kathleen Zatavekas, Dietetics '73, received the award for Commitment and Excellence in Service at the banquet hall at Heinz Field.

1980s

Peter S. Amenta, M.D. Medicine '80, Ph.D. Anatomy '84, dean of UMDNJ-Robert Wood Johnson Medical School, was elected to the Board of Trustees of the Joslin Diabetes Center for a three-year term.

David Alan Bayer, Accounting '83, hosted an international charity event to benefit breast cancer awareness. The event auctioned off sports bras, autographed and decorated by women in the athletics field.

A. Michael Bloh, MBA '89, wrote an article titled "Nanotechnology and Nanomedicine: Implications for Drug Safety, Pharmacovigilance and Risk Management" which appeared in Global Forum.

Joseph Gerard Borgioni, MBA '86, was named one of SmartMoney's Power 30: The World's Most Influential Players. He is the Director of Alabama Securities Commission.

Michael S. Brown, Chemical Engineering '80, was promoted to vice president information technology at ExxonMobil Corporation in Houston, TX.

Elizabeth Camera Hechtman, M.S. Group Process/Group Psychotherapy '88, was elected to a two-year term as vice president of education of the International Coach Federation Philadelphia chapter.

Mark T. Celoni, P.E., C&E Business Teacher Education '88, MS Engineering Management '93, was promoted to Philadelphia office principal at Pennoni Associates.

Kevin J. Davis, P.E., Chemical Engineering '86, was named chief engineer for environmental at the engineering, design, and consulting firm Pennoni Associates.

Michael Doyle, M.S. Electrical Engineering '87, was chosen as one of the 2010 Top Scientists and Engineers of the Year for the U.S. Navy. He

is the lead Electro-Magnetics technologist for the Electromagnetic Aircraft Launch System program at Naval Air Systems Command in Lakehurst, New Jersey.

Michael Fine, M.D. HU '83, received the 2011 John M. Eisenberg Award for Career Achievement in Research at the annual meeting of the Society of General Internal Medicine. Fine directs the VA Center for Health Equity Research and Promotion, based in Pittsburgh, Pennsylvania, and is a professor of medicine at the University of Pittsburgh School of Medicine.

John M. Heath, M.D. Gerontology '83, joined the Summit Medical Group of Berkeley Heights, New Jersey, as its inaugural Medical Director for Geriatric Services, and also serves as medical director at a number of sub acute rehabilitative and long-term care and facilities.

Kim Hollaender, Esq., M.S. Environmental Engineering '81, was a featured speaker at the Reinsurance Association of America seminar, "Reinsurance Claims and Loss Management —Taking it to the Next Level," in New York City.

Michael Joshua Kline, C.P.A., M.S.T., Accounting '86, partner with Citrin Cooperman, was named among the region's top practitioners by readers of the business magazine SmartCEO.

Mitch I. Plotnick, Humanities and Communications '80, published a book entitled *Good Better Best: Simple Ways to Improve Your Nutrition, Health and Life.*

Richard D. Roberts, Civil Engineering '84, was named chief engineer for building and facilities at the engineering, design, and consulting firm Pennoni Associates.

James G. Sherman, Construction Management '86, was named president of the Building Industry Association.

Scott N. Smith, Finance '87, was named senior vice president of transmission strategy and business development for American Electric Power in Columbus, Ohio.

1990s

Jeffrey S. Backal, MBA '93, announced his company with Merrick B. Rosenberg, MBA '92, Team Builders Plus, was recognized as South Jersey's #1 team building company.

Christine Bombaro Ross, M.S. Library and Information Sciences '95, released a book titled Finding History.

Akit K. Brooks-Bland, Hotel and Restaurant Management '95, received a Master of Science in Leadership: Leadership Development Specialization from Walden University.

Patricia Carmel Woody, M.S. Engineering Management '93, was a recipient of The Philadelphia Business Journal's annual Women of Distinction award.

Chirag K. Desai, Mechanical Engineering '96, joined The North Highland Company's Philadelphia office as principal.

Kathryn Finn McCluskey, Physician Assistant '91, MPH '04, was elected trustee of Pierce College. She is an associate in the healthcare practice group of White and Williams LLP.

Daniel J. McCormick, Finance '90, has a debut album available on iTunes called "Broadway Lights" and has also written a new play called "The Return of Devin Darby".

Susan Fort Sordoni, M.D. MCP '97, was designated by Governor Tom Corbett as a 2011 Distinguished Daughter of Pennsylvania. Gina Furia Rubel, Esq., Corporate Communications '91, recently welcomed Generocity.org, Trestle Point, LLC and Williams & Hand, P.C. to the client list at her public relations and marketing firm Furia Rubel Communications, Inc. Her firm was ranked as one of the top 15 public relations firms in the Philadelphia region by the *Philadelphia Business Journal.*

Joseph Glantz, M.S. Computer Science '90, wrote two books about Philadelphia: Philadelphia Originals and Philadelphia Before You Were Born.

David Grasso, Mechanical Engineering '90, was named the North American chief operating officer and partner of Techedge U.S.A., a global technology consultancy.

Edwin J. Greenlee, M.S. Library and Information Science '95, edited a book entitled *Whose God Rules? Is the United States a Secular Nation or a Theolegal Democracy?*

William D. Jemison, Ph.D. Electrical Engineering '93, was appointed chair of the Clarkson University Department of Electrical & Computer Engineering.

John P. Joergensen, M.S. Library and Information Science '97, a librarian at the Rutgers School of Law–Camden, was named to the 2011 Fastcase 50, a listing of the nation's most interesting and provocative leaders in the combined fields of law, scholarship, and technology.

Lewis Kaplan, M.D., Surgery Resident, MCP '94, associate professor of surgery at Yale-New Haven Hospital, is in training as part of a local SWAT Team in a groundbreaking role as tactical emergency medi-

WEDDINGS

James J. Bright, Commerce and Engineering '07, to **Stephanie R. Friedman,** Nutrition and Food Science '06, on September 24, 2011.

Timothy J. Dougherty, Business Administration '07, to **Sarah Marie Linn,** Math '08, on June 4, 2011.

Alex Hohmann, Economics '89, MS Finance '92, to Sean DiGiovanna on October 2, 2011.

Steven Thomas Klawunn, Business Administration '07, to **Elisabeth Lane Kleszczelski,** Architectural Engineering '08, on August 21, 2011.

Peter A. Wolk, Information Systems '05, to **Luana Barbosa,** Business Administration '11 on July 2, 2011.

cal support. He is one of just six physicians nationwide to serve in this role.

Sheldon S. Kauffman, M.S. Science of Instruction '97, was named a senior associate for Gannett Fleming, Inc. He also serves as international development director and vice president for the company.

Kenneth E. Korber, M.H.S.C., Physician Assistant '91, was named national director of education for the American College of Osteopathic Family Physicians.

Jason D. Livingood, Marketing '94, MBA '05, was promoted to vice president at Comcast and joined the Board of Trustees of the Internet Society.

Michael S. Rinehart, Mechanical Engineering '92, joined Fox Rothschild LLP as its chief technology officer.

Merrick B. Rosenberg, MBA '92, of Team Builders Plus in Marlton, New Jersey, was selected as a finalist in the USA Best Books 2011 Awards for his book *Taking Flight!* His company with Jeffrey S. Backal, MBA '93, Team Builders Plus, was recognized as South Jersey's #1 team building company.

Rachel Roth Resnick, M.S. Library and Information Science '96, received the Chapter Achievement Award from the Philadelphia Regional Chapter of the Medical Library Association.

Kim Santivasi Huggins, Human Services Management '90, presented "Understanding the Generations to Build a Better and Stronger Team" at the 2011 Leadership Conference hosted by Pennsylvania Institute of Certified Public Accountants.

Thomas G. Zink, Architectural Engineering '90, Civil Engineering '94, was named a vice president of Gannett Fleming. Based in the firm's Mt. Laurel, New Jersey office, he has 18 years of experience with the company.

BABY DRAGONS

Yanatha Desouvre, Business Administration '01, and his wife Amy had a daughter, Daielle Nathalia, on December 13, 2011.

Anthony Strom Pastor, Finance '88, and his wife Kerri Milcarek-Pastor had a son, Devon Michael, on September 21, 2011.

J. Christopher Scott, Commerce and Engineering '96, and his wife Angela had a son, Henry Grassi, on April 29, 2010.

Oliver Tsuya, MS Library and Information Sciences '11, and his wife **Billi Jo Stephens Tsuya,** MHS Physician Assistant '05, had a baby on November 11, 2011.

2000s

Renen Bassik, Mechanical Engineering '07, was recently promoted to project leader at Mako Surgical Corp., located in Florida.

Bridget M. Bitto, Civil Engineering '08, joined KMJ Consulting, Inc. as a traffic/design specialist.

Tiffany Bianca Current, Dramatic Writing '03, had her first book, How to Move in with Your Boyfriend (and Not Break Up with Him,) published by Hunter House.

Yanatha Desouvre, Business Administration '01, created a "Proud Haitian" app for the i-Phone. He also published his third book of inspirational short stories entitled *A Family Affair.*

Caitlin Gray, Communications '08, joined the Bucks County law firm Curtin & Heefner LLP as an associate attorney.

Angela E. Heist, Business Administration '02, earned the insurance designation CLU. She is a Sales Associate with John Hancock Life Insurance Company.

Farzin Irani, Ph.D. Clinical Psychology '08, joined the Graduate Psychology Department at Immaculata University as an assistant professor.

Sarah Marie Kane, M.D. Medicine '05, is completing her fellowship in Urogynecology at MetroHealth/Case Western Reserve University in Cleveland, Ohio. She will be staying on as faculty at MetroHealth Medical Center as of July 2012.

Matthew D. Malkie, Mechanical Engineering '01, marketing director for Military & Commercial Fasteners Corp. announced the manufacturer's newest branch opening in Goshen, Indiana.

Kevin Jeffrey Schulz, M.D. Medicine '09, is finishing his emergency medicine residency, and accepted a position as the University of Texas - Houston EMS and Disaster Medicine Fellow and Assistant Medical Director of the Houston Fire Department.

Stephen A. Starks, Biological Sciences '01, joined Kroger, Gardis & Regas, LLP as an associate. He was the former Legal Affairs Director for the United States Anti-Doping Agency.

Steven M. Stein, MBA '03, received a continuing education certificate in Organizational Decision Science and Risk/Opportunity Management from Stanford SCPD.

Naketa Webster Thigpen, Psych-Soc-Anthropology '00, and her husband launched a community enhancement project called, Thigpen's Professionals, LLC, a multifaceted employment staffing agency that offers a distinctive Corporate Wellness Program series.

2010s

Brendan R. Baker, Construction Management '10, completed U.S. Navy basic training at Recruit Training Command in Great Lakes, Illinois.

Lenuta Violeta Ciobanu, Business Administration '11, was named associate, fund administration and compliance reporting at Turner Investments, an employee-owned investment-management firm.

FRIENDS WE'LL MISS

1930s

Ruth Bosworth Filip '36
Dorothy Brown Hurt '37
Charles Case '38
Homer Fegley '34
Richard Goyne '36
Alice Hynes Restak '39
Florence MacFarlan Knoll '39
Margaret Pfeil Hower '36
Ira Shafer '35
Leona Siewicz Gill '36
Albert Stott '38
Lester Stradling '39

1940s

Emily Appelgren Piatt '43
Martin Aronow '47
Alfred Assaiante '49
Marie Berenato Romano '47
Marie Bauerle English '41
William Clark '48
Elizabeth Crap Stockton '44
Thomas Cretella '45
Donald Daily '49
Donald De Lanoy '47
Stephen Derkash '40
Vincent Drill '47
Walter Dubrow '49
Gloria Dunn Hendry '45
Henrietta Enfield MacDonald '45
Paul Ergler '41
Esther Good Holder '44
Violet Hackman Pfaltzgraff '42
Clarence Heyde '48
Michael Holowka '49
Gertrude Hongell Haldeman '44
Edward Hyde '40
Gordon Kirjassoff '44
June Kistler Carpenter '45
Richard Kravits '41
Irving Kun '43
William Lacy '42
Barbara Ladd Jenkins '41
Edward Lawson '43
Doris Leskin Fischbein '47
Joseph Lorenz '40
Bruno Manno '45
Rosemarie Miles Monaghan '49
Allen Mills '42
Mildred Mitchell-Bateman '46
Musser Moore '41
David Mynick '47
Doris Niemeyer Smith '43
Virginia Nylund Shaub '44
Dorothy Pike Brackin '40
Charles Protheroe '40
Esther Richardson Ralph '41
John Shallcross '42
Sophie Shtendel Levitt '40
G. Kent Smith '43
Nancy Smith Edwards '48
Laura Spencer '42
John Stevenson '46
Irene Stover Ziegler '46
Charles Swartz '43
Charles Swift '47
Daniel Tomasso '42
Richard Turner '46
Joanne Ware Stewart '45
Olive Whitehead '41
David Wood '43
Thomas Zaydon '44
R. Jack Zeluff '46

1950s

Charles Atherton '52
Joseph Aron '53
Raymond Baker '52
Catherine Baldwin Loser '51
Landis Barish '53
Gerald Batten '56
John Bice '58
John Brewer '52
James Burke '59
Thomas Callahan '59
Thomas Campion '51
Andrew Cashmere '53
Elmer Charlier '50
Donald Cropper '58
Roscoe Curry '53
Daniel Dalzell '57
Richard Davis '58
David DePrefontaine '54
Richard Dietterich '55
Leonard Doloff '52
Jean Forest '55
George Formanek '52
Rose Marie Gioia '52
Bernard Goldentyer '55
Richard Hanson '57
Robert Harvey '59
John Heckert '53
Helen Horowitz '51
Elizabeth Irvine Davies '50
Albert Jackson '50
Doreen Johnson Smith '58
Harry Johnson '50
Albert Lengyel '54
Morris Levinson '55
Claude Light '57
George Lund '52
Edward Malloy '59
Laverne Miller '53
Ralph Moore '54
Robert Murphy '50
Louis Murray '53
Robert Nyce '54
Morton Perkoff '55
William Piercy '55
Charles Rackie '53
Carl Rauscher '53
Arnold Rubin '58
Carmelo Russo '58
Harry Sarajian '54
Daniel Schadt '53
Louise Schnaufer '51
Edwin Schultz '55
Eric Seif '52
Leonard Shapiro '59
Paul Sher '56
Theodore Sookiasian '50
Anne Steele Buck '56
Samuel Stewart '58
Richard Stranix '56
Virgil Templeton '54
Vernon Tetlow '59
Henry Traynor '56
Robert Trimble '59
Annabel Vandeuere Melito '52
Margaret Whelan Peck '54
Thora Winakor '51
Edward Zarnoch '56

1960s

Bruce Bachofer '64
R. Geoffrey Benson
Anna Boettger Burrage '68
Robert Bohn '64
Raymond Counsellor '60
Donald Cunningham '64
Joe Dennis '62
John Derham '60
Anthony DePiano '62
Wallace Devaul '64
Stanley Ellberger '65
John Emery '63
Richard Ervin '66
Richard Gagliardi '66
James Gear '61
Naomi Glushakow Denenberg '61
Doris Goodman '60
Marvin Green '66
Robert Grigg '64
Hildegard Gutzmann Stephans '61
Edward Hoffman '60
William Huber '64
Thomas Irving '61
John Kapp '68
Arthur Krespach '68
Frederick Krohle '64
Joseph Lescavage '62
Martin Lutz '63
Fred Mancuso '63
Querino Manzo '62
Frank Matecki '68
John Matra '62
Howard McCaffrey '64
Robert Nilsen '61
George North '66
Karen Ockers '65
Dmytro Odryna '62
Kathleen O'Shea '64
Kurt Popp '61
Thomas Quade '68
David Rees '65
Margaret Reindollar Taylor '66
John Salera '62
Richard Spahr '66
Carol Straub '68
William Stubblebine '69
W. Jay Taraska '67
John Tate '61
Lawrence Thibault '67
John Thomas '65
Beulah Ward Harmon '65
Carole West Brown '60
Lloyd Woods '65
Francis Zarnoski '66
Margaret Zeiger Horn '68

1970s

Patrick Anderson '70
Gene Armatorio '72
Thomas Barry '72
David Bayer '75
David Bekker '75
Kathleen Bolc '76
Alfred Cheung '75
Vivian Day Vidal '74
Harry Dutcher '75
Paul Gamaldi '77
Carol Gillis '79
Mildred Gross Gordon '70
Robert Greenberg '79
Philip Howley '73
Michael Livingston '75
Stephen Matarazzo '71
Edward Mullen '74
Allen Notis '78
William Novicki '70
Sylvia Perloff Gelblum '71
Leonard Petlev '73
Edwin Phillips '74
William Rhine '72
Walter Scrupskis '70
Frederick Simpson '70
Clifford Stevenson '75
Michael Timmons '77
Peter Whiteley '75

1980s

Wendy Casebeer Caylie '82
Frederick Cone '83
William Copperthwaite '86
Joseph Dobrowalski '87
Catherine Franks '89
Thomas Gavin '81
Joseph Hahn '83
Robert Harley '83
Robert Karpovich '86
Richard Malone '83
Edward Thompson '80
Edward Wright '84

1990s

Elizabeth Chapin '98
Raymond Engblom '95
Marsha Lee '98
Harold Lehman '92
John Morris '93
Elizabeth Snipes Burnette '90

2000s

Linda Klopp '05
Lois Unger '09
Raymond Wielechowski '09

2010s

Joel Eisenstadt '11
Mohamed Hamit '11

Connect with Drexel Alumni on LinkedIn

LinkedIn is the world's largest professional networking tool on the Internet, and the most popular online community for Drexel alumni to come together to network, host discussions, organize their contacts, conduct research, search for job openings and screen job candidates.

The Drexel University Alumni Association Networking Group on LinkedIn has more than 8,700 alumni and student members and grows daily. Members of this group receive the most up-to-date information on upcoming Alumni Career Service programs and events, and hold discussions with one another on various career topics.

"This group is an active hub where Drexel graduates from all over the world connect with one another to build and strengthen their professional networks," said Ashley Baptiste '92, of the Drexel University Alumni Association Board of Governors.

Drexel graduate Mike Idacavage '75, lost his job due to downsizing in June and used LinkedIn to search for and ultimately land a new job. Idacavage is a member of the Drexel University Alumni Association Networking Group, as well as several other professional and special interest LinkedIn groups.

"LinkedIn was the single most useful tool for me in my search," he said. "The most significant use for me was the ability to network across different industries and connect with a lot of people—including those I knew from Drexel."

As a result of his efforts on LinkedIn, Idacavage received five job offers, and four out of the five companies had visited his LinkedIn page. "While LinkedIn will not simply hand you a great job on a silver platter, it is perhaps the best 'Swiss Army knife' of job search tools available," he said. "It comes down to what you make of it."

While LinkedIn is a great tool for getting contact information, job leads and networking referrals, users should remember that LinkedIn is about giving, not just taking. Recommend an article, congratulate someone on a job promotion, or answer a question.

"I found it very useful to post comments and be active in the various LinkedIn groups that I had joined," said Idacavage. "I noticed that after I had done this for a short period of time, I saw an increase in people visiting my LinkedIn page and asking to connect with me."

When used correctly, LinkedIn groups can be a valuable professional-development tool. They are extremely popular, and currently more than 1 million groups exist on LinkedIn.

According to Mark Gress '05, employer relations coordinator and Andy Duffy, senior assistant director for career services in Drexel's Steinbright Career Development Center, having a complete and updated LinkedIn profile is also very important. When creating your profile, there are a few things you should keep in mind.

"One general rule of thumb regarding your LinkedIn profile is that you shouldn't let it go stale," said Gress. "Be sure to keep it updated, active, and use it to connect with people. LinkedIn profiles are becoming the new business cards."

Here are some additional guidelines from Idacavage and Duffy for making the most of your LinkedIn profile:

- Upload your résumé onto your profile.
- Request recommendations from people with whom you've worked in the past. These recommendations will be posted on your profile, and they can be sorted and organized.
- Use a professional photograph of yourself in your profile.
- Be mindful of spelling and grammar.
- Be truthful. Don't think that just because it's online, an employer won't look at it as a credible source. "More than 80% of employers that use social media use LinkedIn to search for potential job candidates," said Duffy.
- Make sure your profile contains key words so it comes up in searches by potential employers.
- If you have a blog, or a company website, link to it in your profile.
- Don't add contacts blindly. "Connecting with just anyone on LinkedIn hinders your ability to effectively network," said Duffy. "Review invitations to connect, and make sure they fit with your profile and with the way you want to be represented on LinkedIn."

"I would also recommend using LinkedIn's Answers feature," said Duffy. "LinkedIn Answers is one of the best places on the Web to share and get business knowledge, and to stand out as an expert."

The Answers feature is a listing of popular questions posted by members of LinkedIn which can be narrowed down by industry or searched by keyword. With this feature, you can post your own questions, or you can strengthen your credibility and value by answering questions that are posted by others.

LinkedIn by the Numbers:

- LinkedIn officially started in 2003.
- Currently, it has more than 150 million members in more than 200 countries and territories, and is available in 16 different languages.
- Approximately two new members join LinkedIn per second.
- There are more than 1 million groups on LinkedIn, 37,000 are for university or college alumni groups.
- More than 2 million companies have company pages on LinkedIn.
- Executives from all of the fortune 500 companies are represented on LinkedIn.

The Drexel University Alumni Association Networking Group

- The Group started in November, 2007.
- The Group has more than 8,700 members.
- 58% of the Group's members are in the Greater Philadelphia Area.
- Top industries represented in the Group are information technology and services, financial services, pharmaceuticals, computer software, marketing and advertising, and accounting.
- 28% of the Group's members are in senior-level positions, while 22% are entry level and 13% are managers.

"On the Drexel Alumni Association Networking Group on LinkedIn, alumni often answer one another's questions, and begin discussions on a certain career topic," said Baptiste. "They already share that alumni connection, so it makes networking with one another that much easier."

"Try using the Advanced Search feature on LinkedIn to narrow down your search for a particular person or company using various criteria," said Duffy. "You can search by job title, industry, location and seniority level, just to name a few. Every time I use LinkedIn, I end up utilizing the Advanced Search tool."

"To sum it up, in my experience, LinkedIn is the best tool for professional networking. There is no other way to make connections as quickly and as easily, and it can be a great alternative for those like me who don't excel at in-person networking."

All Drexel alumni are encouraged to become active members of LinkedIn, and to join the growing community of graduates in The Drexel University Alumni Association Networking Group. The Alumni Association looks forward to "linking-up" with you, and helping you pursue your career goals and aspirations. Visit drexel.edu/alumni and click "Alumni Network."

All I Really Need to Know I Learned at Drexel

As a spin on the popular "All I Really Need to Know I Learned in Kindergarten," the Alumni Association is asking alumni to submit Drexel life lessons—one for each day in 2012. Join in the fun and send us your Drexel life lesson and we'll share it on our Facebook page, Twitter and our website, http://drexel.edu/alumni/yearofthedragon. Sharing a life lesson will automatically get you a promo code toward a commemorative Year of the Dragon prize!

Here are some great examples of Drexel life lessons that have already been shared:

Do your research, be prepared, and don't be afraid to take a chance, especially when you are young!
—Robert Olsen, General Business '75

The best way to learn is hands-on through co-op.
—Kelly Stewart Zsamar, Criminal Justice '08

Most of the world's problems can be solved in one evening at the New Deck Tavern.
—Kirk Williams, MBA '93

Drexel alumni and students joined the Community Alumni Network at Drexel University (CAN DU) and spent a fall morning cleaning, clearing and revitalizing a portion of Morris Park in West Philadelphia.

Drexel alumni, faculty, professional staff and students braved the Philadelphia cold to help distribute 891 turkeys to 36 community organizations in the University's neighborhood as part of the 38th Annual Alumni Holiday Turkey Project.

Seattle-area alumni were treated to an exclusive meet-and-greet on the field following a Seattle Sounders match with former Drexel soccer star, Jeff Parke.

2012: THE DREXEL YEAR OF THE DRAGON

Celebrate the Year of the Dragon with the Alumni Association

The Drexel University Alumni Association's Year of the Dragon is in full swing as we approach the second half of 2012! The celebration continues, and we're gaining momentum with each month that passes. So far, hundreds of alumni have participated in the Year of the Dragon in some way. Some attended events such as Alumni Day at the Daskalakis Athletic Center, the Campus to Career Alumni Panel Discussion, or the Global Night of Networking, while others participated online or via social media by sharing a Drexel life lesson, or answering a student question on the Alumni Association YouTube and Facebook pages.

A secret code that can be redeemed for special commemorative Year of the Dragon items is given out each time you participate—in person or online—in a Year of the Dragon event or program. For every three codes collected, visit the Alumni Association website and cash them in for a prize!

Get a bonus code right now!

Drexel alumni who register for the Online Alumni Directory or who update their directory profiles during the Year of the Dragon will receive a bonus code. At the end of each month we'll tally up who registered for the Directory or updated their already existing profile and send out the promo codes then.

What can you win?

COLLECT 3 CODES: Year of the Dragon Microfiber Screen Cleaner
COLLECT 6 CODES: Year of the Dragon Collapsible Water Bottle
COLLECT 9 CODES: Year of the Dragon Commemorative Pin
COLLECT 12 CODES: Grand Prize Drawing Entry

Jason Miller '07 celebrated the Year of the Dragon by sharing the ambition that makes him a Dragon. Find out more about Year of the Dragon at drexel.edu/alumni/yearofthedragon.

Upcoming Year of the Dragon Celebrations

Check out a summary below of what's coming up in the second half of the Year of the Dragon. We hope you can join us at an upcoming event, or take advantage of our online opportunities for involvement. Join us for the fun as we continue to celebrate our Dragon pride with the Year of the Dragon. It won't come around again for another 12 years!

JUNE – CELEBRATING DRAGONS OF THE FUTURE

The Class of 2012 is the newest group of Drexel alumni! We're going to celebrate their hard work at our Graduation Celebration Networking Event for Drexel seniors and alumni. If you have a family member who is a graduating student, you'll be able to send them a special gift to congratulate and welcome them to the Alumni Association.

JULY – CELEBRATING DRAGON TALENTS

This month we will let our alumni teach us a thing or two. Through events and online videos we will celebrate the Year of the Dragon by sharing the unique interests and talents of our alumni. Graduates will have the opportunity to share their best "how-to" videos with the Alumni Association on our YouTube and Facebook pages. We can't wait to see what you decide to share!

AUGUST – CELEBRATING DRAGONS AT PLAY

Drexel alumni work hard, and play hard! We'll be enjoying the sunshine and rooting for the Phillies in stadiums around the country in August. We hope to see you at one of our Phillies games in your area. Can't make it to the ballpark? Show us how you choose to kick-back and relax by adding your photo to our "Dragons at Play" photo album on Facebook.

Alumni gather in the Recreation Center for Alumni Day at the Daskalakis Athletic Center, the Year of the Dragon signature event for February. As part of the festivities, guests finished the phrase, "I am a Dragon because..." on customizable T-shirts."

SEPTEMBER – CELEBRATING DRAGON DISCOVERY

Discovery and exploration are an important part of the Drexel culture. We'll celebrate this spirit of discovery in September with a scavenger hunt throughout the city of Philadelphia. If you're not local, don't worry, we'll have a special online version of a scavenger hunt just for you.

OCTOBER – CELEBRATING DRAGONS GIVING BACK

Community service is a key initiative for the University and we celebrate those who share our passion for giving back. During this global month of service, we will recognize our alumni who are active members in their communities and with The Community Alumni Network at Drexel University (CAN DU).

NOVEMBER – DRAGONS CELEBRATING DRAGONS

During November we want to say "thank you" to the many alumni volunteers who have given their time and talents to the Alumni Association and the University. We will host our annual volunteer thank you reception on campus in November. In addition, you will have the opportunity to share your gratitude with faculty and staff who made a positive impact in your life at Drexel.

DECEMBER – CELEBRATING THE YEAR OF THE DRAGON

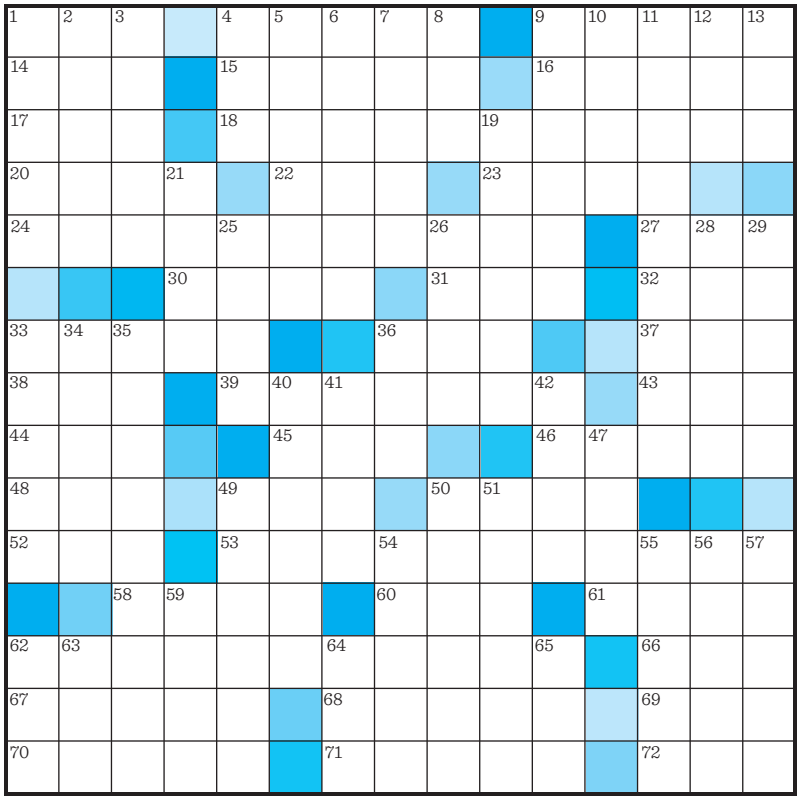
With an exciting year of activities and experiences under our belt, we'll relive our Year of the Dragon celebrations in a video montage. Sit back and enjoy the show!

Visit http://drexel.edu/alumni/yearofthedragon/ for all the Year of the Dragon details!

THE BACK PAGE PUZZLE

In the last issue of *Drexel Magazine,* we offered you the unique challenge of solving a Drexel-themed crossword puzzle designed by *New York Times* contributing crossword author Brendan Emmett Quigley. The response to that puzzle was so strong that we invited Quigley back again for this issue.

This time around, we're taking a look at famous and notable Drexel alumni. Once again, Quigley's puzzle figures to be quite a challenge. So good luck.



ACROSS

1 Rapper who drew the ire of the FCC during the Super Bowl XLVI halftime show
4 "Lordy!"
9 Spanish soldier-hero of the 11th century
14 Face cards?
15 ___ incognita
16 Serum tubes
17 Apple for the teacher?
18 Walter Golaski (Class of '46) developed the first artificial replacement of this body part
20 Denny's competitor
22 Author DeLillo
23 Kitchen pests
24 Alassane Ouattara (Class of '65) is the current president of this country
27 It gets fleeced
30 Letter to a Viking
31 ___-Atlantic
32 Glasses part
33 "So help me!"
36 Argentine-born revolutionary
37 Tribute in verse
38 Spread holder
39 Scanning technology developed by Bernard Silver and Norman Woodland (both Class of '47)
43 "Dancing With the Stars" judge Goodman
44 Approval in Madrid
45 ___ for victory
46 Stand something on its head
48 Map abbr.
49 Mercury or Saturn assister?
50 Foal's parent
52 Neighbor of Okla.
53 Investing term coined by financial analyst Elaine Garzarelli (Class of '69)
58 ___-chic (women's fashion style)
60 Sicken
61 Exhaust
62 TV show created by Chuck Barris (Class of '53)
66 By way of
67 Cav or Mav, e.g.
68 Money in a PayPal account
69 Lamebrain
70 Shapes up, as muscles
71 Opposite of frumpish
72 Left, after taxes

DOWN

1 Resemble closely
2 Boise's home state
3 "My Fair Lady" horse race
4 Pony player's loc.
5 Repressed
6 Get down
7 University town near Bangor
8 Catch player
9 Squared
10 Year-end thing
11 See 35-Down
12 L'eau land?
13 High-speed connection, for short
19 Fluctuated
21 Inca's land
25 Asinine
26 Listserv discussion qualifier
28 Enlarge, as a road
29 Make textual improvements
33 One-named Icelandic singer
34 1945 Big Three conference site
35 With 11-Down, Thanksgiving dish created by Dorcas Reilly (Class of '47)
36 Medicinal amounts: Abbr.
40 Arthurian paradise
41 Org. combating music piracy
42 Italian bread
47 Bottled (up)
49 More than just dislikes
50 Aspen wear
51 "This is not making sense to me"
54 Assassin of Caesar
55 Living room furniture piece
56 Commence
57 Beer maker?
59 Double-curved arch
62 Blasting stick
63 "Hung" channel
64 Col. superior
65 Tot's query

Think you've got all the answers?

If so, send us your completed puzzle to be entered into a drawing to win a great Drexel prize. Puzzles can be mailed to:

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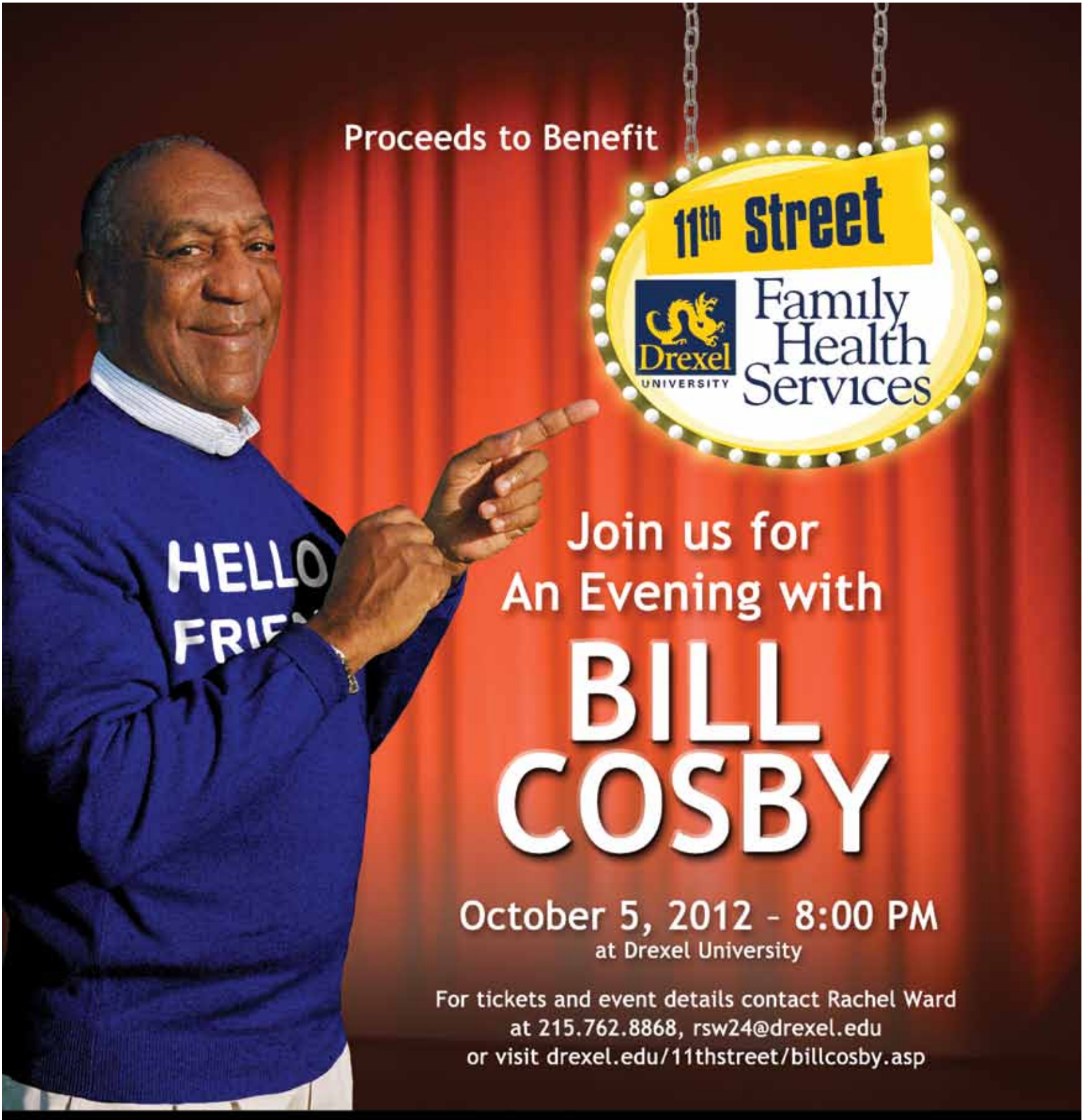

Drexel University's 11th Street Family Health Services (located at 850 North 11th Street, Philadelphia) represents a successful 16-year partnership between the North Philadelphia community and the College of Nursing and Health Professions.

For more information on Mr. Cosby please visit www.billcosby.com