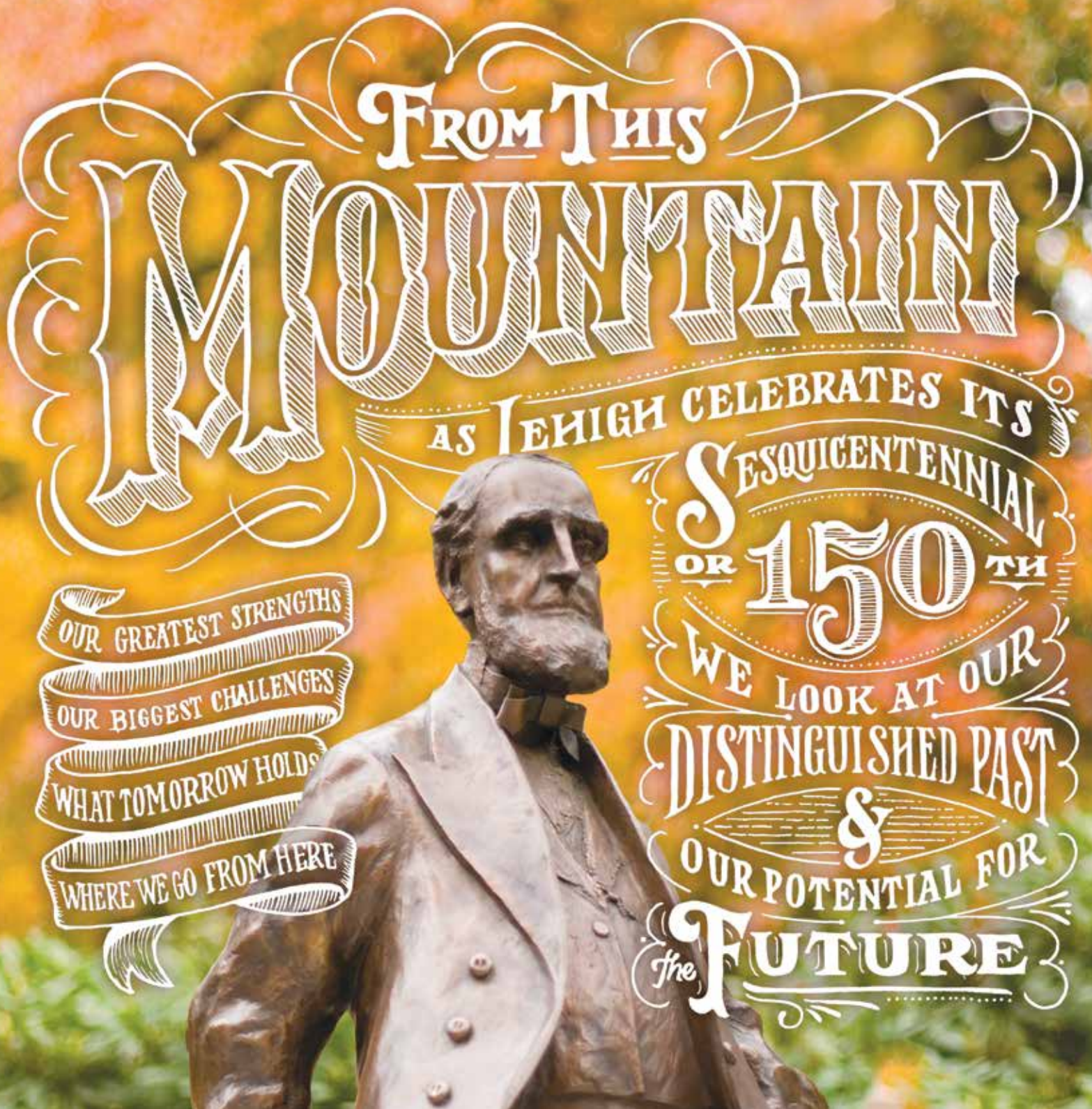


F A L L 2 0 1 5

# LEHIGH

B U L L E T I N





# DINNER EN BLANC

A pop-up gala under the stars in October drew 500 undergraduate and graduate students and helped kick off Sesquicentennial celebrations. Strings of lights decorated the Goodman Campus. From left, Sheilla Rukundo '17, Ivan Rivera '18, Kelli Barber '17, Christie Pai '16

Photo by Christa Neu







## 22 His Vision, Our Vision, Our Future

**LOOKING FORWARD** Founder Asa Packer showed extraordinary vision in 1865, establishing a university in Bethlehem, Pa., that would grow into a vibrant community of scholars, seekers and innovators. But where do we go from here? *By Kelly Hochbein*

## 28 The People, Places and Traditions

**LOOKING BACK** Lehigh's history is rich with people, places, events and traditions that have made the university what it is today. As Lehigh celebrates its Sesquicentennial, we take a look at 150 of the reasons why Lehigh is so special. *By Lehigh staff*



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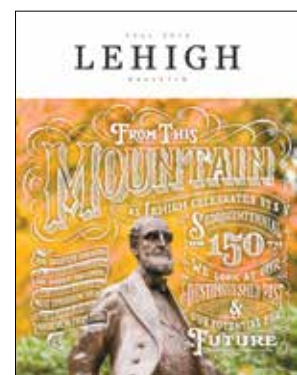
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### ON THE COVER:

In this special Sesquicentennial edition, we imagine the Lehigh of tomorrow—and celebrate 150 years of Lehigh history.

*Illustration by Joel Felix*





CHRISTA NEU

## Where Do We Go From Here?

Even as we look back—and look back proudly—we must keep looking forward. We must always, always keep looking forward.

If there's any one thing I took away from my mid-summer meeting with new Lehigh president John Simon to discuss this issue of the *Lehigh Bulletin*, that would be it. In many ways, in fact, it was that single takeaway that ultimately shaped the magazine that you hold in your hands.

This is, of course, a very special year for Lehigh, as the university community celebrates the historic occasion of our Sesquicentennial. For 150 years now, Lehigh has been educating future leaders, impacting the world around us, and contributing to society in so very many ways. Our past is certainly worth celebrating, and as anyone who attended the four-day party that was Lehigh's Sesquicentennial weekend in early October knows, we certainly have been celebrating (and will continue to do so).

But as Simon has said several times since his arrival this past summer, our 150th anniversary should be more than just a year of celebration. It should also be one of reflection, as it represents an important opportunity to assess where we stand today—and where we must go in the years to come. That's precisely the conversation we hope to kick-start with this issue of the *Bulletin*.

Staff writer Kelly Hochbein spent several months interviewing dozens of members of our campus community—from Simon and his se-

nior leadership team to numerous faculty, staff, students and alumni—as she developed her wide-ranging feature about the future of Lehigh ('His Vision, Our Vision, Our Future,' pg. 22). The story explores the many challenges facing Lehigh (and higher education as a whole, for that matter) today, and as even Simon will tell you, those challenges are real. But as Kelly's story also makes clear, Lehigh is also well-positioned to meet those challenges; in fact, to hear Simon tell it, the university may be on the cusp of greater things than ever before.

It is a timely, important piece—one well worth reading—and we hope that you will do precisely that. We also hope you enjoy the rest of this issue, from our look back at the 150 people, places, traditions and breakthroughs that have helped make what Lehigh is today (pg. 28), to our visit with Mountain Hawks baseball star Mike Garzillo (pg. 18) to our latest update on the ever-evolving Mountaintop initiative (pg. 12) and more.

We thank you, as always, for reading, and welcome you to share your thoughts as well. You can write us via snail mail at the address at the right, or contact me directly at [tih313@lehigh.edu](mailto:tih313@lehigh.edu)

Sincerely,  
Tim Hyland, *Editor*

### MASTHEAD

#### STAFF

##### EDITOR

Tim Hyland  
[tih313@lehigh.edu](mailto:tih313@lehigh.edu)

##### ASSOCIATE EDITORS

Mary Ellen Alu, Kurt Pfitzer,  
Kelly Hochbein

##### CONTRIBUTING WRITERS

Geoff Gehman '89G,  
Mike Unger, Wendy  
Solomon, Jill Spatz

##### CREATIVE DIRECTOR

Kurt Hansen

##### ART DIRECTOR

Beth Murphy

##### DESIGNER

Kate Cassidy

##### PHOTOGRAPHER

Christa Neu

##### BUSINESS SUPPORT

Traci Mindler

##### CONTACT US

Lehigh University Alumni Association  
27 Memorial Drive West  
Bethlehem, PA 18015-3734  
(610) 758-3135  
Fax: (610) 758-3316  
Hotline: (610) 758-alum

##### CLASS NOTES AND REMEMBRANCES

Diana Skowronski  
(610) 758-3675  
[classnews@lehigh.edu](mailto:classnews@lehigh.edu)

##### SUBSCRIBERS

For address changes, send the mailing label, along with your new address, to:  
Alumni Records / Lehigh University  
125 Goodman Drive  
Bethlehem, PA 18015-3055  
610-758-3015  
[smg0@lehigh.edu](mailto:smg0@lehigh.edu)

##### ADVERTISING

Traci Mindler  
Lehigh University  
125 Goodman Drive  
Bethlehem, PA 18015-3754  
(610) 758-3015  
[smg0@lehigh.edu](mailto:smg0@lehigh.edu)

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## CORRESPONDENCE

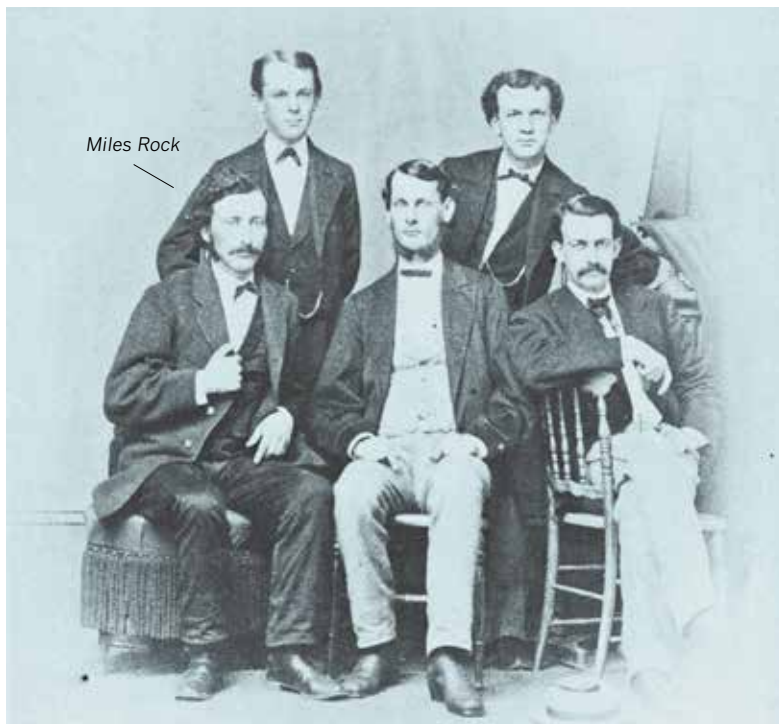
## REMEMBERING MILES ROCK

Thank you for your editorial “Gearing up for the 150th” (Summer 2015).

As I was reading it, I was reflecting on the fact that my great-great-grandfather (Miles Rock) was one of the six in that first class at Lehigh. He was a Civil War veteran and was studying mining engineering. He characterized the zinc ores in Hellertown as his senior thesis and went on to do geologic work and surveying in Central America. One of his prime accomplishments was to map the border of Guatemala in 1895 (to settle a dispute)—a copy of the map hangs in my office and I know of several copies in the Lehigh rare book room.

I wonder how many current Lehigh alumni are descendants of that first class like myself. Wouldn't it be great to organize a gathering of these descendants at the 150th anniversary celebration?

**James E. Baxter, P.G. '80**



## WHAT'S IN A NAME?

If Phil Edmunds' letter did not provide any backup evidence, then Mike Pomerantz (“Karl Marx or the Marx Brothers?,” Summer 2015) did. It is not the government's job to bail out mismanaged, failing businesses, and in the case of G.M., Barack Obama:

- Eliminated the bond holders' investment
- Lost 10 billion of our tax dollars
- Gave part of the company to the “working class,” the UAW
- Let GMAC define itself as a bank in order to qualify for more bailout money

A perfect description of a Marxist.

**Quentin M. White '50**

## PROMOTING DIVERSITY OF THOUGHT

As a college professor at a Connecticut community college I read with great interest the article titled “Putting Lehigh in Focus” (Summer 2015) by Mary Ellen Alu with photos by Chester Toyne. As I read the article, two important questions came to mind:

First, if Lehigh truly values diversity and inclusion of all, why did the Alum-

ni magazine choose to publish photos that made me, a white male, feel excluded? Secondly, why did the article not address what Lehigh is doing about, perhaps the most important form of diversity—diversity of thought? Unfortunately, I have seen far too many instances during my career in higher education where it has been actively discouraged. I am hoping that is not true at Lehigh. Perhaps a future edition of the *Lehigh Bulletin* can include an article on what Lehigh is doing to preserve and promote diversity of thought.

**Wesley L. Winterbottom '72**

## SUPPORT FOR THOSE WHO SERVE

The timing for the article “An Eye for War” (Summer 2015) was very ill-timed. I got my *Bulletin* the week of July 4th—a week we look at the idealism that did bring us freedom unlike any other country in the world. Where was the support for those who serve?

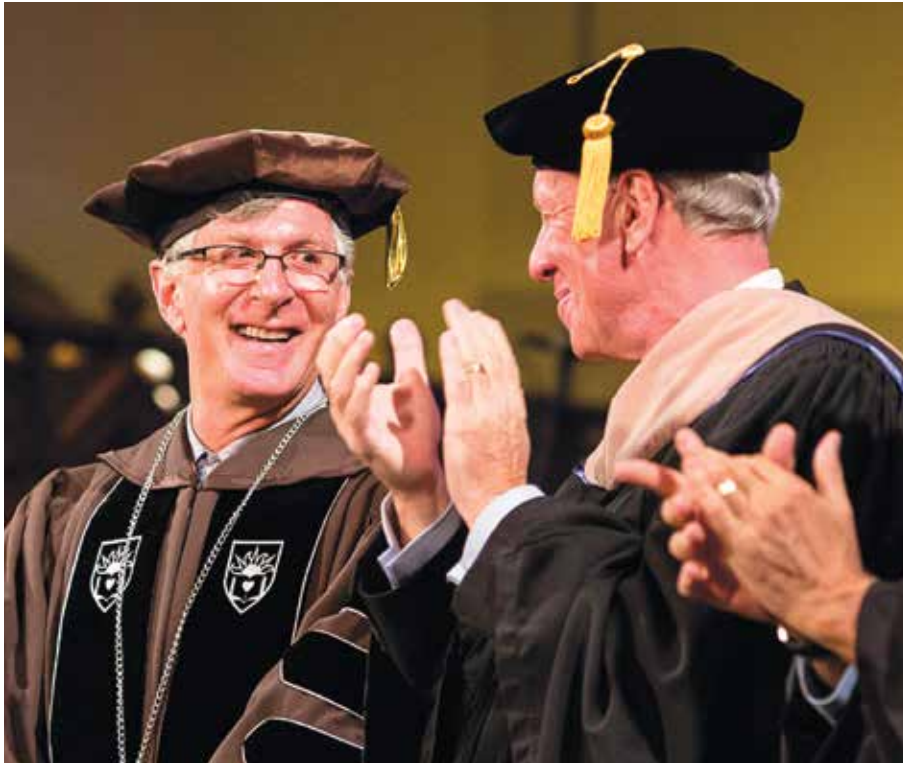
The article represents the armchair luxury of deploring war while never having to face an enemy. Let me assure you those enemies are real and do not hesitate to kill, maim or sacrifice women and children to gain control. I lived in Africa and the Middle East and was shocked by the reality of life without democracy or police protection—but with strong police dictatorships. If you ever saw a child with his arm cut off for stealing, a person imprisoned for his faith, or people going to jail until they are determined not guilty, you might become brave enough to defend them. Or if you ever met those fleeing terror and death as refugees you might support a military willing to stop the machines driving the wars. We as Americans do have an idealism of fairness and justice we are willing to fight and die for. We should maintain that idealism. Yes, Hollywood portrays it both as over-glorified and as a unnecessary evil, but the reality is we do have to fight to stay free and protect freedom in other parts of the world.

My advice is that instead of studying the issue, the author try living it, and go live in a country that will not survive without war. Those trying to kill and take over are not “fair” and follow no rules of engagement. Americans do follow rules, at a cost to our servicemen. Who is to say what tools are fair



to use? Would you be brave enough to pick up a gun to defend your family and others or would you wait for someone else to do it for you? Let's see Lehigh support those who serve.

**Doreen Volk Grieve '79**



CHRISTA NEU

## Shaping Our Future

What a unique and wonderful time it is to be here at Lehigh. In early October, and on the occasion of a very special Founder's Day celebration, I had the great honor of being installed as your 14th president. For myself and for my family, it was a truly memorable day—one that we'll surely treasure for years and years to come. But as proud as I was to formally take office, I was even more excited simply to be part of the wider celebration that this year's Founder's Day was really all about—the landmark occasion of our university's Sesquicentennial.

For 150 years now, this university has been helping shape young lives—and shaping the world around it—through its scholarship, teaching, research and community outreach. Asa Packer founded this university with the aim of creating an institution that would prepare young people to contribute to and lead in the world around them. In the century and a half since Packer's founding gift helped make Lehigh a reality, that's precisely what this university has done. In fact, it's done that, and a great deal more, too.

In this special issue of *Lehigh Bulletin*, we take a moment to look back on our university's extraordinary and distinguished history—one that has seen Lehigh grow and evolve from a tiny school on South Mountain into one of the nation's finest private research institutions. We have, as a university, accomplished so very much, and we are proud to celebrate the people who have helped define what Lehigh is today.

This year of celebration should not pass, however, without us pausing to consider what the Lehigh of the future might become—or even what it must become. These are both exciting and in some ways challenging times for the world of higher education, and as the demands placed on universities—by our society and by our students—change, it is imperative that we change as well.

In my installation speech, I announced to the university community that our Board of Trustees had approved a plan that will see Lehigh spend \$250 million in institutional resources to push our university forward in teaching, learning, research and student life. This is a significant commitment on behalf of the Trustees, and it is incumbent upon each

and every one of us to collectively put forth our best efforts to ensure that this investment pays the greatest dividends possible.

These funds can and, I am confident, will help us create a stronger, more dynamic Lehigh. But I truly believe that the ceiling of success at this university has not and will not ever be defined by dollars alone. Rather, how high we can climb will ultimately be determined by the effort that each of us puts forth, each and every day, to help make this a better place to live, to work, to learn and to grow.

This is a year of celebration—and celebrate we will. But as we do so, we must make sure we learn from, and are inspired by, those who came before us—those who never stopped believing that this university is capable of meeting any challenge, of overcoming any obstacle, and of always evolving into a stronger, more impactful university.

We are the stewards of Asa Packer's vision. And as great as we have been, we must always strive to be better.

Gratefully,  
John D. Simon, *President*



Follow President Simon on Instagram  
@lehighpressimon





# LEHIGH IN OUR LIVES

GERRY ANN AND  
ERIC FLICKER '71 '77G

BACHELOR OF SCIENCE, CIVIL ENGINEERING

For more information on how you can make an impact with a planned gift, please contact Lorraine Wiedorn '84G '13P '17P at (610) 758-4874.

Eric Flicker thinks back to his small-town high school days and remembers being "very proud" that he was admitted to Lehigh to attend school with the "big boys." Crediting the "tremendous education" that he received for much of his success, he recalls two professors who greatly influenced him – John Liebig and Bob Johnson.

"If you talk to any Lehigh civil engineer in my era, everybody knows Liebig," said Flicker, referring to Professor John Liebig, whose reputation for being tough was legendary. "My pride in the school – a lot of it comes from him. He wanted to make sure that we were going to be contributors wherever we wound up."

Flicker's contributions are impressive and include being named Delaware Valley Engineer of the Year and holding top professional affiliation positions such as president of the Pennsylvania Society of Professional Engineers and the National Chairman of the American Council of Engineering Companies. He became president/CEO of engineering firm Spotts, Stevens, and McCoy by age 40, and he was CFO of Pennoni Associates, where he is now a senior consultant. While at Spotts, Stevens, and McCoy, Flicker went back to Lehigh to earn his MBA degree and said that learning how to manage the firm from the business side ultimately led to him becoming CEO.

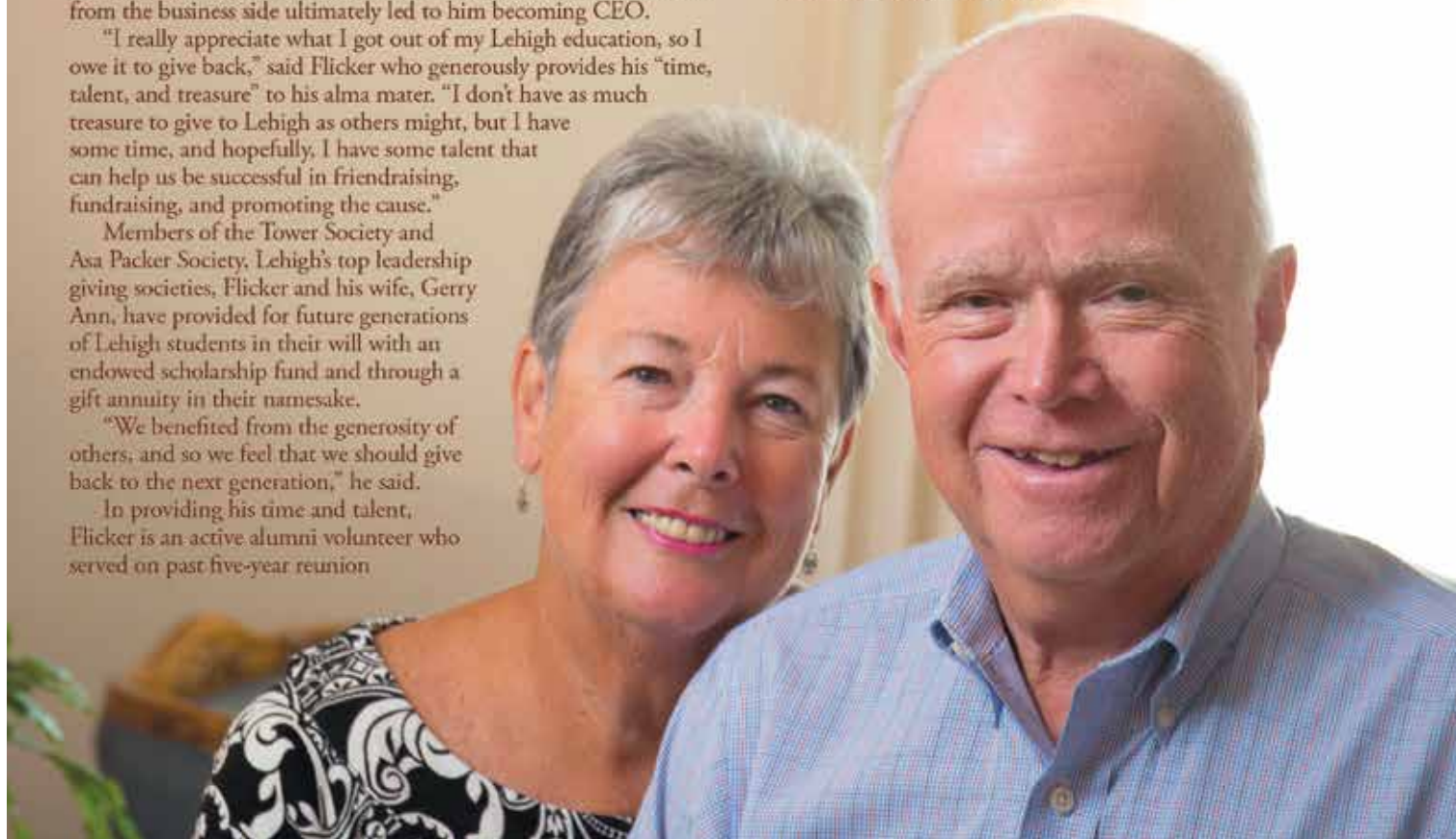
"I really appreciate what I got out of my Lehigh education, so I owe it to give back," said Flicker who generously provides his "time, talent, and treasure" to his alma mater. "I don't have as much treasure to give to Lehigh as others might, but I have some time, and hopefully, I have some talent that can help us be successful in fundraising, fundraising, and promoting the cause."

Members of the Tower Society and Asa Packer Society, Lehigh's top leadership giving societies, Flicker and his wife, Gerry Ann, have provided for future generations of Lehigh students in their will with an endowed scholarship fund and through a gift annuity in their namesake.

"We benefited from the generosity of others, and so we feel that we should give back to the next generation," he said.

In providing his time and talent, Flicker is an active alumni volunteer who served on past five-year reunion

committees and is currently focusing on a Reunite '71 effort with other classmates to increase involvement in the 45th and 50th reunions. Since 2012, he has co-hosted the Hershey's Mill Golf Club Luncheon that brings alumni and friends together in the Delaware Valley region. He said he and Gerry Ann enjoy attending Lehigh events because of the "phenomenal programming" and meeting people who "have the same great feeling for Lehigh that we do."



# ON CAMPUS

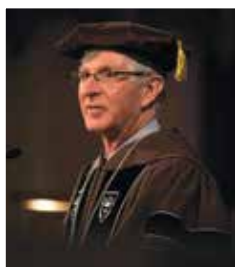
N E W S F R O M L E H I G H

*James McIntosh, right, professor of sociology, hands John D. Simon the university mace, or academic scepter, at his installation as Lehigh's 14th president.*

CHRISTA NEU

## A New President, A New Lehigh

On a historic Founder's Day, a \$250 million initiative is unveiled



*Simon announces a \$250 million investment in Lehigh's future.*

AT A HISTORIC FOUNDER'S DAY CELEBRATION in October, John D. Simon was installed as Lehigh's 14th president, an ambitious \$250 million initiative was announced, and the university kicked off its 150th birthday celebration with a block party, concerts, lectures, a discovery showcase and a host of other events.

Simon's installation by Brad E. Scheler '74 '05P '08P '09PG, chair of the Lehigh Board of Trustees, took place in front of a packed crowd in Packer Memorial Church and, thanks to a live feed, an overflow crowd of 350 students, faculty and friends in Grace Hall.

After officially accepting the mantle of his new office, Simon spoke eloquently of the power of higher education to shape the future. He said Lehigh had experienced a number of "pivot points" in its 150-year history and now stood at another critical juncture. Advancing an ambitious agenda, he announced the Board's commitment to the \$250 million investment in institutional resources in the areas of teaching, learning, research and student life. The investment will sup-

port a comprehensive plan that will allow Lehigh to leverage its strengths and build a university to serve future needs.

"We need to be bold, take risks, push and define frontiers of knowledge, create and embrace new forms of pedagogy for engaging our students in learning and research," Simon said. "We must modernize our infrastructure and research facilities so they do not hold back the creativity and innovation of our faculty and students. We need to reinvigorate our fields of study by integrating experien-



“WE NEED TO BE BOLD, TAKE RISKS, PUSH AND DEFINE FRONTIERS OF KNOWLEDGE, CREATE AND EMBRACE NEW FORMS OF PEDAGOGY FOR ENGAGING OUR STUDENTS IN LEARNING AND RESEARCH.”

—JOHN D. SIMON, PRESIDENT

tial and technology-enabled methods into the student experience.”

The Founder’s Day celebration opened with the Lehigh University Choir performing “Darest Thou Now, O Soul,” a composition commissioned by Lehigh to commemorate its Sesquicentennial and Simon’s installation. The composition, a Mountaintop project, was created and conducted by Steven Sametz, the Ronald J. Ulrich Professor of Music and director of Lehigh University Choral Arts. A sculpture of lights suspended from the church ceiling served as a visual and interactive focal point.

Also among the Sesquicentennial events was the renaming of Campus Square as Farrington Square—a tribute to Gregory Farrington, Lehigh’s 12th president, and his wife, Jean. The Farringtons inspired the square that is considered the gateway to South Side Bethlehem.

Concerts, a homecoming tailgating outside Goodman Stadium and VocalPalooza, a student talent show, rounded out the weekend. Several buildings and facilities were dedicated, including historic Williams Hall

that, thanks to the generosity of donors including Herb Roemmele ’53 and Sharon and James Maida ’85 ’17P ’19P, has been transformed into a global hub and student center.

With Lehigh’s athletics campus continuing to evolve, officials gathered to formally dedicate three renovated facilities—the expanded Cundey Varsity House, the new home of Lehigh’s hugely successful softball program and the completely rebuilt Ulrich Varsity Tennis Courts. All three projects were supported by former Lehigh trustees chairman Ronald J. Ulrich ’67, who served in that role from 1996-2002 and over the years has supported a variety of key strategic initiatives at the university.

A special community breakfast also was held under the cover of the Tamerler Courtyard Outdoor Concert Pavilion, built especially for the Sesquicentennial weekend.

The breakfast offered an opportunity for Lehigh officials to celebrate and recognize the accomplishments and significant anniversaries of its community partners, as well as the university’s combined efforts to foster a vibrant South Bethlehem.—*Lehigh staff*

A sculpture of light becomes an interactive focal point as the Lehigh University Choir performs. Below, McIntosh leads the Founder’s Day procession.



## GOALS OF THE \$250 MILLION INITIATIVE



### Ensure that Lehigh’s financial and merit aid packages

attract the best students to the university, regardless of their financial situation.



### Re-imagine the University Center

and address the university’s aging physical plant, especially its laboratory and technical infrastructure.



Deepen the university’s commitment to the hallmarks of a Lehigh education, one that stresses innovation, integration and entrepreneurship at all levels.



### Globalize Lehigh’s campus

to ensure the university’s graduates are educated about the world, acquiring the knowledge, skills and experiences to prepare them to lead in tackling the complex global issues of their generation.



## A WEEKEND TO REMEMBER

Lehigh kicked off a yearlong celebration of its 150th anniversary with concerts, lectures, dedications, a community breakfast and a host of other events. At right, the Brown and White campus party featured performances by the department of music, a light show and a birthday toast. Below left, Campus Square is renamed Farrington Square in honor of Gregory Farrington, Lehigh's 12th president, and his wife, Jean. The Farringtons inspired the square that is considered the gateway to South Side Bethlehem.



### AT RIGHT

Scenes from VocalPalooza, with Lehigh students taking to an outdoor concert pavilion to showcase their musical talents.







Sesquicentennial celebrations included, clockwise from top, a special Brown and White birthday bash, Marching 97 performances and a show of artistry.



Above, the Academic Discovery Showcase highlighted scientific research, creative writing, visual art, and theory and practice across all disciplines. At Goodman Stadium, left, the Mountain Hawks took on Yale. In a hard-fought game, the Bulldogs won the day, 27-12.

PHOTOS BY RYAN HULVAT  
AND CHRISTA NEU



## MARTINDALE CENTER NEW DIRECTOR NAMED

Economics Prof. Todd Watkins was named executive director of the Martindale Center for the Study of Private Enterprise. He is only the second person to lead the center since its inception in 1980.

Watkins succeeds J. Richard Aronson, who retired.

Watkins, who has a deep interest in international and economic matters, was the founding executive director of the Baker Institute for Entrepreneurship, Creativity and Innovation. He also co-founded the Integrated Product Development program at Lehigh. He has served as principal adviser for dozens of entrepreneurial startup companies as well as international, development-oriented organizations started by students.

Watkins received his bachelor's degree in optical design from the University of Rochester and his master's and Ph.D. in public policy from Harvard University. His research and teaching have focused on the intersection of innovation, entrepreneurship, public policy and economic development.

The Martindale Center advances educational and scholarly programs to increase understanding of the U.S. economy and its relationship to the world economy. Martindale's Student Associates have traveled to more than 20 countries, including Portugal and the Czech Republic.



RYAN HULVAT



**KAREN BECK POOLEY,**

*who teaches urban planning, challenged students to develop projects that could improve perceptions of the South Side.*



CHRISTA NEU

## Welcome to the South Side

LOOK CLOSELY AT THE NEW mural greeting visitors to South Side Bethlehem and there, sketched onto one of its 3.5-foot letters, is an image of Lehigh's alumni building and iconic fountain. That Lehigh is among the selected images representing Bethlehem's past and future is fitting, as the university celebrates its Sesquicentennial and continues to be an integral part of the South Side.

But there's another significant Lehigh connection—the public art project was conceived by Lehigh students in an urban planning workshop led by adjunct Karen Beck Pooley. Pooley had challenged the students to walk the South Side and talk to people in an effort to develop projects that could improve perceptions and encourage people to visit businesses and use the Greenway park.

Their efforts were supported by the South Side Initiative, which brings together faculty, students and staff to improve the quality of life in the city.

The students focused on a 160-foot-long brick wall in front of the Comfort Suites on W. Third Street. The wall was once part of a lumber company that dates back to the 19th century and whose founders were once among the city's most influential families.

"In our class, we learned that 30 feet of blank wall is boring to the pedestrian," said Courtney Thier '15. "Our class brainstormed ideas to solve the 'boring wall.'"

Students turned to graffiti artist Max Meano to make the wall a welcoming point. A few sketches later, the project was approved by the South Bethlehem Historic Conservation Commission and city officials.

In addition to Lehigh, the images in the sign depict other aspects of the South Side, including ArtsQuest and the old Bethlehem Steel blast furnaces.

"People who pass by the mural will feel the presence of the community and what it has to offer," Thier said. "I am hoping the artwork will create a feeling of safety and security for those who pass by it."

The sign is already having an impact, Pooley said, as it has generated media attention. She said other ideas that aim to improve the South Side's walkability will be handed off to other students to pursue. "It's powerful to them to see something get off the ground," Pooley said. —Mary Ellen Alu



EMILY PAINE



# Insights on Leadership

Lee Iacocca answers students' questions as they head abroad.



DOUG BENEDICT

*"Leaders are made, not born."*

*"We are continually faced by great opportunities brilliantly disguised as insoluble problems."*

These are among the many insights on leadership from one of Lehigh's most successful alumni and legendary business leaders—Lee Iacocca '45 '69H.

Iacocca offered additional words of wisdom to the more than 80 Lehigh students who went abroad this past summer to intern at companies through the Iacocca International Internship Program, established as a result of his philanthropy. Many of the students responded to Iacocca's offer to answer questions submitted via email. More than 80 percent of them had never traveled abroad.

Iacocca's own experience as a global business leader led to sound advice for the interns.

Talia Dunyak '16, who worked in Uganda to build sustainable livelihoods for rural citizens, wanted to know if Iacocca thought her international experience with an NGO would translate into a successful future career in mainstream business. "The world is growing smaller all the time," Iacocca told her, "so we need to know our neighbors, how they live, how they think and what they aspire to be."

"There are so many important skills that you will develop through this internship, including problem-solving and cultural competency. You will learn how to understand, communicate and successfully work with people across cultures. These are all important skills that will transfer to your future business career."

Nicholas Reese '17, a civil engineering major, conducted engineering research at the University of Science and Technology in China. Reese sought advice regarding how to acclimate to a foreign lifestyle and make the most of his experience. Iacocca, who has traveled extensively for business over the span of his career, offered: "Read all that you can about the area of China that you are visiting, including its history, customs, food and beliefs, so you will not be surprised. Remember, everyone comes away with something different that is important. It is really the people with whom you will meet that make the experience enriching."

Iacocca's \$5 million gift to endow international internships in 2011 inspired more than 40 alumni and friends of the university to match his gift with an additional \$5 million. As a result, large groups of international interns will experience global learning each year, and in perpetuity.

Iacocca's desire to support international experiences at Lehigh stems from his own successful experience as an undergraduate. He earned a degree in industrial engineering in 1945 and received an honorary degree in 1969. —*Jill Spotz*

ATKIN OLSHIN SCHADE ARCHITECTS



## NEW POLICE STATION

The Lehigh University Police Department will move its headquarters to a state-of-the-art facility rising on the site of the old Windish Hall. The building will put police officers closer to Lehigh's off-campus community, where a third of students live, while keeping them closely connected to the main campus.

The 12,000-square-foot facility, across from Rauch Business Center on Packer Avenue, is expected to be completed in April. Headquarters are currently on the second floor of Johnson Hall.

"The department has outgrown its current location," said Chief Ed Shupp, who oversees 28 officers, four full-time dispatchers, four security guards and one administrative coordinator.

Two substations will remain open—on Morton Street at Campus Square and at Saucon Village.

"We don't want to lose the connections with the community that we built with those substations," Shupp said.

By early November, crews had put in the foundation for the building, designed by Atkin Olshin Schade Architects of Philadelphia.

The building will be fitted with conference and training rooms, evidence and processing areas, interview rooms and an armory. Also, 140 cameras, including "eyes in the sky" in neighborhoods connected to Lehigh, will be tied into the department's emergency response system.

## 82 PLACEMENTS, 27 COUNTRIES

# 22%

EASTERN EUROPE

# 20%

EUROPE

# 16%

SOUTHEAST ASIA

# 15%

ASIA

# 10%

AFRICA

# 7%

SOUTH ASIA

# 5%

LATIN AMERICA

# 2%

NORTH AMERICA

# 2%

OTHER

# 1%

MIDDLE EAST



# From Mountaintop to Mars

Students attempt to design a greenhouse to sustain future travelers.

IT ISN'T EASY TO CULTIVATE a garden on Mars. With temperatures averaging -80 degrees Fahrenheit, harmful ultraviolet radiation, a thin atmosphere, and frequent dust storms and meteorite showers, Mars isn't hospitable to plant life. But for a manned mission to Mars to occur, space travelers will need a sustainable food source.

Kevin Augustyn '17, Aidan Din '16 and Aaron Sandoval '17 worked this past summer to design a greenhouse that can make that possible.

NASA has held contests to solve the problem of growing plant life on Mars but has not yet found a solution.

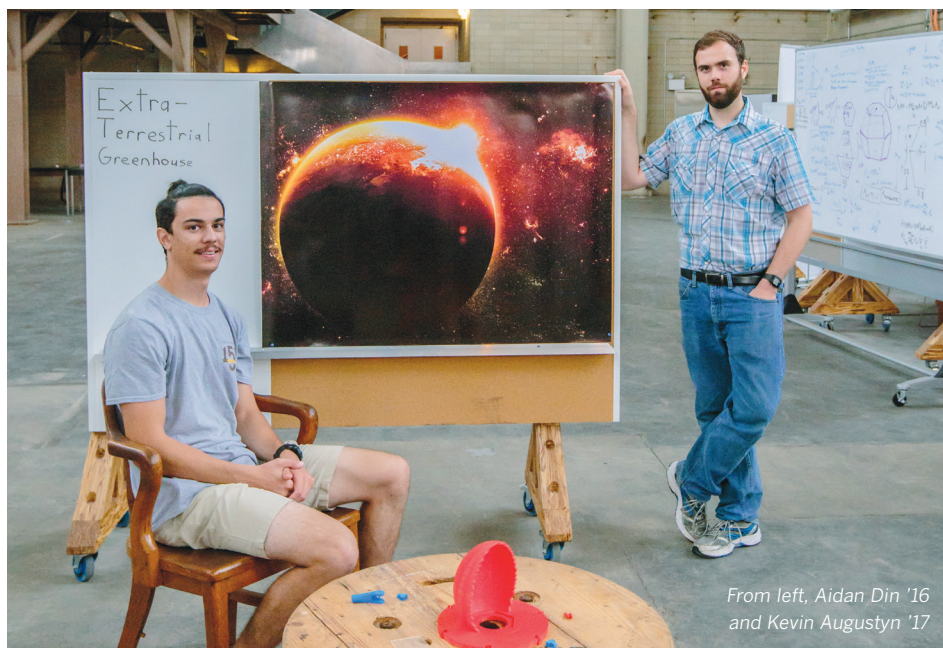
Augustyn approached faculty members Terry Hart and Natasha Vermaak (mechanical engineering and mechanics) and Spencer Quiel (structural, civil and environmental engineering) with a proposal for a Mountaintop project. Hart is a former astronaut.

Din and Sandoval joined Augustyn and set out to design a greenhouse prototype. They studied other design efforts and read up on materials that might withstand Mars's hostile conditions while also allowing light to reach plants. Materials must also be lightweight, as it costs \$10,000 per pound to ship items to the International Space Station and would cost far more to transport them to Mars.

The students explored the possibilities of an inflatable or rigid design and performed mechanical tests on their materials. The team has grown and is continuing its work this fall. Students might develop more detailed parameters for how a mission is carried out or delve into biology to plan for different plant environments.

"[This is] a low-risk opportunity, an incubator opportunity," said Quiel. "Without [Mountaintop] there would be very few mechanisms to be able to do something like this."—*Kelly Hochbein*

NASA HAS HELD CONTESTS  
TO SOLVE THE PROBLEM  
OF GROWING PLANT LIFE ON  
MARS BUT HAS NOT YET  
FOUND A SOLUTION.



From left, Aidan Din '16 and Kevin Augustyn '17



CHRISTA NEU

**WINNING THESIS** As many as 2 million lesbian, gay and bisexual people over 50 live in the United States, experts estimate, and their numbers will likely grow as the nation's aging population increases.

"A lot of research has been done on young and middle-aged LGB persons," says Bethany Perkins Detwiler '15 Ph.D., "but older sexual minority populations have been overlooked."

Detwiler studied older LGB adults for her doctoral thesis in counseling psychology. Last spring, she received the Elizabeth V. Stout Dissertation Award, which is given to one doctoral candidate from each of Lehigh's four colleges.

For her thesis, Detwiler surveyed 189 people who report having some degree of same-sex attraction. She found that older LGB adults, in dealing with discrimination, get more help from social support groups and networks of friends and family members than from accessing their self-esteem.

Detwiler, now a postdoctoral resident in Lehigh's Counseling Center, concluded that prejudice is strongly linked to psychological distress and reduced quality of life, and that external events of prejudice are more significant in this regard than having a concealed LGB identity and internalized homonegativity.





Ph.D. student  
Kelly Burns

## A Cancer Research Team Hits its Target

Chemists find the right peptide for a seek-and-destroy mission.

IN AN EFFORT TO DEVELOP drugs that kill cancer cells more selectively, says Damien Thévenin, researchers are turning their attention to pH.

The extracellular environments of almost all cancers, says Thévenin, assistant professor of chemistry, have a lower pH than those of healthy cells, making them more acidic and giving cancer drugs a general target to aim at.

Thévenin and his students are developing a unique system that uses a peptide, or amino acid chain, to seek and destroy cancer cells. The peptide is called pHLIP, for pH (Low) Insertion Peptide, and pronounced like *flip*.

In lab tests, pHLIP has shown the ability to deliver an anti-cancer drug to cancer sites in mice based solely on their low pH and to release the drug in cancer and breast tumor cells. The project is funded by the National Institutes of Health/National Cancer Institute and by a Lehigh Faculty Innovation Grant.

An effective drug targeting and delivery system, says Thévenin, must be able to locate cancer cells, deliver (translocate) the drug only into these cells, and avoid harming healthy cells. The drug should be relatively cell-impermeable, meaning it will not escape, or diffuse out of, the cancer cell after it has been infused into it.

A conjugate developed by Thévenin's group, which paired pHLIP with Monomethyl Auristatin E (MMAE), an FDA-approved cancer drug, met all these objectives.

In an article published in *Molecular Pharmaceutics*, Thévenin's group reported that the conjugate inhibited more than 90 percent of cancer cell growth, targeting cancer sites based on their low pH and not on a specific biomarker, or cell membrane receptor. The pH at which the pHLIP translocated MMAE into cancer cells also corresponded to the pH of the tumor environments.

The article was written by Ph.D. candidate Kelly E. Burns, Matthew K. Robinson of the Fox Chase Cancer Center in Philadelphia, and Thévenin.

"We are the first group to show in mice that a pHLIP-drug conjugate is still going to the tumor site as expected," said Thévenin. "We have discovered that the cytotoxicity depends on the pH and on the drug concentration."—Kurt Pfitzer



**DAMIEN THÉVENIN**  
Assistant professor of chemistry  
Damien Thévenin and his students developed a drug targeting and delivery system that singles out cancer cells.

### WHEN IS FEMALE LEADERSHIP AN ADVANTAGE?

When the collapse of Lehman Brothers triggered the Great Recession in 2008, some speculated the company's downfall might not have happened had the firm been run by women.

The notion intrigued Corinne Post, associate professor of management who studies women in leadership.

"As a researcher, I'm always worried about blanket truths," Post said. "It's unlikely that women are always better leaders. My question was, 'In what type of contexts would they be more likely to make a positive difference?'"

Work in organizations has become increasingly "relational," Post said.

Collaboration, trust-building and teamwork are important to completing tasks successfully. Given the assumption that women are more relationship-oriented than men, she theorized, perhaps women are better at leading teams with higher relational needs.

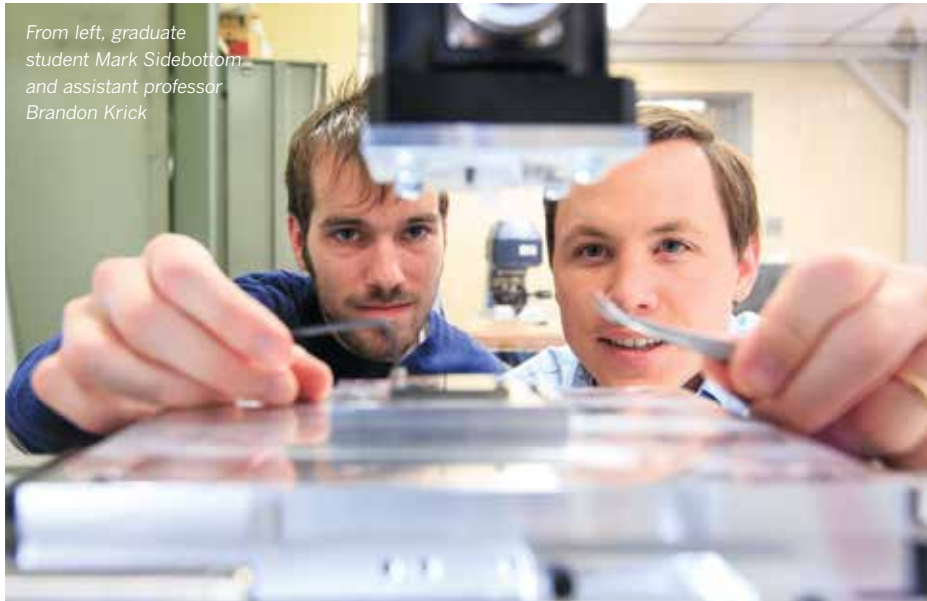
In 2008 and 2010, with a National Science Foundation grant, Post studied 82 teams representing more than 800 people at 29 research and development companies. She found that women excel at unifying large teams whose members have diverse specialties as well as teams whose members are spread over a large geographic area.



GETTY IMAGES



From left, graduate student Mark Sidebottom and assistant professor Brandon Krick



CHRISTA NEU

## A Superior Grasp

Friction experts probe the complexity of a dinosaur's teeth.

TRICERATOPS, THE THREE-HORNED DINOSAUR that lived nearly 70 million years ago, possessed teeth that were far more intricate than those of any reptile or mammal living today, scientists have learned.

Researchers from Lehigh, the University of Florida, the University of Pennsylvania and the American Museum of Natural History have determined that Triceratops' teeth could slice finely through dense material, giving the dinosaur a richer and more varied diet than that of modern reptiles.

The group reported its findings in June in *Science Advances*. The project was funded by the National Science Foundation.

The teeth of today's reptiles are built mostly to seize food and crush it. They do not occlude—or come together—like those of mammals and cannot chew. The teeth of most herbivorous mammals wear with use to create complex file surfaces for mincing plants.

Gregory Erickson, professor of anatomy and vertebrate paleobiology at Florida, acquired teeth from museum specimens of Triceratops in North America, cut them open and discovered that they were made of five layers of tissue. Horse and bison teeth, once considered the most complex to evolve, have four layers, while the teeth of crocodiles and other reptiles have just two.

Erickson then passed the specimens on to Brandon Krick, assistant professor of mechanical engineering and mechanics at Lehigh and an expert in friction. Krick and his group, including graduate student Mark Sidebottom, mimicked the motion of plants across the dinosaur's teeth by scratching the teeth and measuring tissue wear rates.

The group developed a sophisticated 3-D model to show how each tissue wore in a strategic manner, leaving a complex surface with a recessed area in the middle of each tooth that served to reduce friction during biting and to promote efficient feeding.

The new model is inspiring new engineering techniques for industrial and commercial uses, said Krick.

"The model can be used to design material systems with optimized wear properties and surface features for many applications," he said. —*Timothy Hyland*

FIGURE 2



Triceratops' five layers of teeth sliced finely through dense material, affording a varied diet.

## OVERDUE RECOGNITION

As the author of six novels and many stories, Israel Zarchi made a major impact on the literary life of Palestine in the 1930s and 1940s, but he has been largely forgotten since his death in 1947.

Nitzan Lebovic, assistant professor of history, hopes to give Zarchi his due when Lebovic's second book, *Zionism and Melancholy: The Short Life of Israel Zarchi*, is published later this year.

Zarchi was born in Poland in 1909 and moved in 1929 to what is now Israel and was then the British protectorate of Palestine. He advocated a blend of cultural and political Zionism, favoring the return of Jews to their biblical homeland of Israel on a peaceful basis with equality for Zionists and Palestinians. He criticized the treatment of Arabs by Jews and the British.

With funding from the Humanities Center, Lebovic discovered Zarchi's lost literary archives—letters, diaries and unpublished manuscripts—three years ago in Israel.

"I think Zarchi had a sense of the paradigmatic change—political and economic—that was about to occur. He foresaw the change as clearly or more so than the politicians.

"At the same time, he made a major contribution to the creation of modern literature in Hebrew."

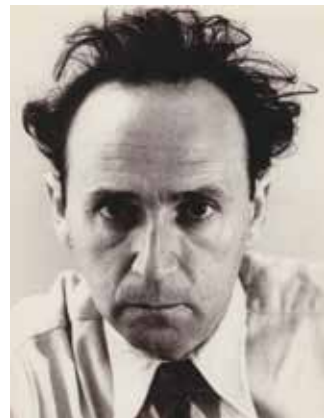


PHOTO COURTESY OF NITZAN LEBOVIC

# Alums Win National Contest With Device That Tracks HIV Medications

FIVE ALUMNI HAVE WON a national competition for designing a portable device that enables patients with Human Immunodeficiency Virus (HIV) to determine if their medication is working.

Kathryn Kundrod, Jay Fraser, Kaylynn Genemaras, Paul Schroeder and Andrew D'Onofrio, all Class of 2015, took first place in the Design by Biomedical Undergraduate Teams (DEBUT) Challenge for Cyclic Solutions: Viral Diagnostic Technology. The prize carries a \$20,000 award.

The contest is sponsored by the National Institute of Biomedical Imaging and Bioengineering, which is part of the National Institutes of Health. Kundrod and Fraser also have been selected as finalists in the 2015 Collegiate In-

strumentation and pre-test costs are expected to be lower than similar technologies now available.

The students designed the device for an Integrated Product Development class in which teams of engineering, business and design majors develop products and marketing plans. They were advised by Profs. Chao Zhou (electrical and computer engineering) and Susan Perry (chemical and biomolecular engineering).

Kundrod and Fraser, both bioengineering majors, continued working on the device with Prof. Xuanhong Cheng (materials science and engineering). They entered their project in the 2015 David and Lorraine Freed Undergraduate Research Symposium in the P.C. Rossin College of Engineering and Applied Science, winning the People's Choice Award and second place overall.

Last summer, Kundrod worked on the technology at LaunchBayC, a program sponsored by Lehigh's Baker Institute for Entrepreneurship, Creativity and Innovation.

Most of the estimated 35 million people worldwide with HIV, the students said, live in low- and middle-income countries. WHO recommends patients taking antiretroviral therapy undergo an annual viral load test to measure the concentration of HIV virus in the blood and determine if medication is decreasing it.

"Conventionally," the students wrote, "viral loads are measured using central laboratory-based tests, which require infrastructure, cold-chain transport and trained personnel."

"To address the global pandemic of HIV, [there is an urgent need for] tests that are designed for use at the point of care, that can be run with a portable setup, that have a turn-around time of less than an hour, and that require minimal training."

The Viral Diagnostic Technology utilizes microfluidics (the ma-

nipulation of extremely small amounts of fluid) to capture and quantify HIV virions (the complete and extracellular infective form of a virus particle).

Cheng has developed a porous membrane that isolates 80 percent of the HIV virions from solution in a microfluidic device. The DEBUT students worked with Krissada Surawathanawises, a Ph.D. candidate in Cheng's group.

The students were also guided by Prof. Steven McIntosh (chemical and biomolecular engineering) and Prof. Yevgeny Berdichevsky (electrical and computer engineering).—Kurt Pfitzer



PHOTO COURTESY OF KATHRYN KUNDROD

## AT THE SYMPOSIUM

Kathryn Kundrod '15 (center) and Jay Fraser '15 (right) discuss their HIV medication-monitoring technology with visitors.

ventors Competition to be held Nov. 15-18.

The Viral Diagnostic Technology device allows patients to monitor their HIV medication and determine if it is decreasing the amount of the HIV virus in the bloodstream. It is intended particularly for patients who live in remote areas without easy access to medical facilities.

The device provides results in under an hour, meeting the World Health Organization's (WHO) minimum detection requirement. Its



PHOTO COURTESY OF ATLAS



## RESILIENT STRUCTURES

Lehigh has received \$5 million to participate in a national initiative aimed at improving the ability of the civil infrastructure to withstand the effects of natural disasters.

The five-year award from the National Science Foundation (NSF) will support research using the unique experimental facilities in Lehigh's ATLSS (Advanced Technology for Large Structural Systems) Research Center.

The award was made through NSF's new \$40 million Natural Hazards Engineering Research Infrastructure (NHERI) program. A network of shared-use research facilities at seven U.S. universities will evaluate the performance of engineering designs and materials during earthquakes, hurricanes, tsunamis and other disasters.

ATLSS researchers conduct real-time, large-scale and multidirectional experiments that mimic the demands on structures from natural disasters, said James Ricles, principal Lehigh investigator on the NHERI project.

These experiments include hybrid simulation tests, which combine large-scale physical test models with numerical simulation models, and geographically distributed hybrid simulation tests, in which test components are located at different sites.

ATLSS researchers also conduct real-time hybrid earthquake simulations (RTHS) and geographically distributed RTHS tests.

FIGURE 2



Lehigh's areas of focus in the DOE project include algorithm development and security and privacy protection.

# Cybersecurity Researchers Enlist to Protect Power Grid

U.S. Energy Department grants \$12.2 million to Lehigh, four other schools.

THE U.S. DEPARTMENT OF ENERGY (DOE) has awarded \$12.2 to Lehigh and four other universities to develop new technologies to protect the nation's power grid from cyber attacks. The grant will be supplemented with \$3.3 million in matching funds from the schools.

The initiative, led by the University of Arkansas, also includes experts from the University of Arkansas-Little Rock, Carnegie Mellon University, Florida International University and the Arkansas Electric Cooperative Corp.

Researchers will develop and test new technologies to help modernize the U.S. power grid—the network of generating stations and transmission lines that produce and distribute electricity to homes, businesses and other users across the nation.

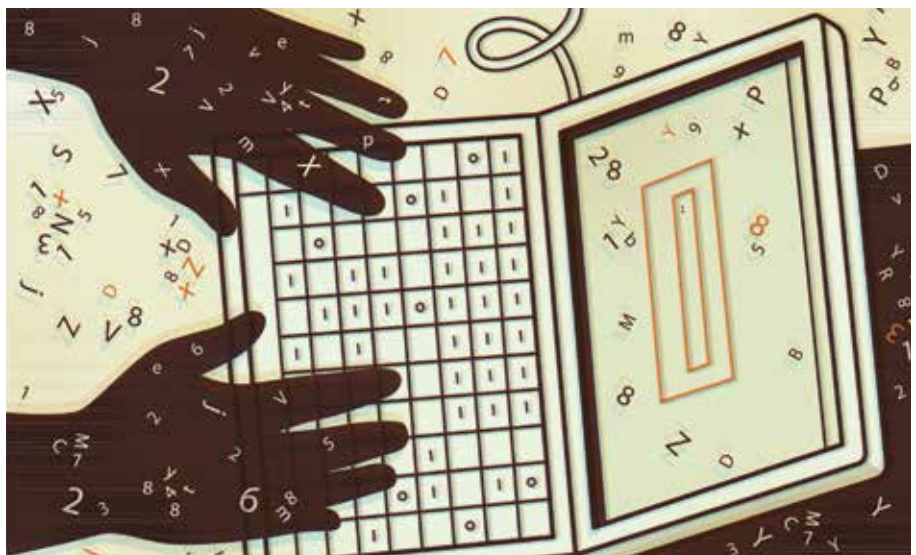
Objectives include protecting core power grid controls and communications infrastructure, building security and privacy protection into components and services, and providing security management capabilities and security testing and validation.

Faculty members in Lehigh's Integrated Networks for Electricity (INE) research cluster represent the largest number of investigators involved in the project. They include Rick S. Blum, Liang Cheng, Mooi Choo Chuah, Boris Defourny, Shalinee Kishore, Alberto Lamadrid, Wenxin Liu, Larry Snyder and Parv Venkatasubramaniam.

"Cybersecurity for energy systems is universally recognized to be one of the most important challenges of the future," said Blum, principal investigator of the Lehigh team.

The INE cluster consists of engineers, mathematicians and economists who seek to develop advanced electricity systems while minimizing their impact on the environment.

The cluster is focused on developing "Smart Grids"—which it defines as "the overlaying of a sophisticated information infrastructure atop the power infrastructure"—and on controlling and securing the three interrelated smart-grid flows of electricity, information and money.—Lori Friedman



HARRY CAMPBELL



## Paige Elliott '16

The star defender talks soccer, team and leadership.



**MAJOR** Chemical engineering

**HOMETOWN** Soddy Daisy, Tennessee

**HONORS** Two-time team Scholar-Athlete of the Year, Patriot League Academic Honor Roll member.

**WHAT I LOVE ABOUT SOCCER** I started playing when I was 4 or 5 in the rec leagues. I loved running, and there's a lot of running in soccer, so that was a good way to get energy out. It sounds silly, but soccer's just different because you use your feet, and that was always something that was fun because it's not like any other sport. Now I love the team aspect of it.

**WHAT I DON'T LOVE ABOUT IT** The most frustrating part is when your team is possessing more than the other team and doing well, but you get that one fluke play and they get their one chance on goal and they score when you've been dominating the whole game.

**BIGGEST ACHIEVEMENT** Hopefully my biggest achievement will be winning the [Patriot League Championship] this year.

### BETTER FEELING: SCORING A GOAL OR MAKING A GREAT DEFENSE PLAY TO PREVENT ONE

Scoring is something that, as a defender, is less likely to happen, so that's pretty cool. But it's more dependent on the situation of the game. If we're up 1-0, it's more important to make the defense stop so they don't tie the game, but if it's 0-0 and you score to win the game, that's awesome.

### MY FAVORITE PREGAME MEAL

I would never play a soccer game if I hadn't eaten a banana right before. I've gotta have one that day at least. I'm a huge Goldfish fan, so sometimes if I don't feel like I've had enough food before a big game I'll snack. I always keep a bag of Goldfish in my bag. Ten minutes before we warm up I have a couple handfuls of it. Most people on my team know me for my Goldfish. The original flavor, by the way, not cheddar.

### I WATCHED THE WOMEN'S WORLD CUP FINAL

At my house. My family is a huge soccer family. My parents never really played but my dad wished he could have. My brother is not very coordinated but he loves it. We just got together as a family and watched it at our house.

### IF I DIDN'T PLAY SOCCER, I'D BE PLAYING

Volleyball. I think it's a cool team sport, and I'm pretty tall, so I would have been good at it, maybe? I like the team dynamic.

### MY FAVORITE ATHLETE IN ANOTHER SPORT IS

Peyton Manning. He's such a good quarterback, and he cofounded the gym I work at back home. He comes back to Chattanooga for a week or two in the summer. We're not tight or anything, but we've worked out at the same time. I try not to bother him, but it's kind of cool to see him working out the same way I am.

### MY LEADERSHIP STYLE IS

Leading through my actions. I like to get things done and do the right thing and help out when I can. I'll help the freshmen pump up the balls, and if we need to have cones out or pick up cones I'm the first one to start getting ready. I have a really good work ethic, so hopefully people pick up on that energy and do the same. I'm vocal on the field but I'm not one of those people who gives huge pep talks.

### MY HEROES ARE

My parents are huge heroes for me. They both work super hard. My dad's a chemical engineer and did a lot of sports when he was growing up, so I'm kind of like the girl version of him. He's a chill guy, but at the same time if something needs to be done or if he needs to speak up about something, he'll do it. But he does it in such a calm manner.





STEVE BOYLE

**BO JACKSON, DEION SANDERS AND BRIAN JORDAN ARE AMONG THE ATHLETES WHO FAMOUSLY PLAYED MORE THAN ONE PROFESSIONAL SPORT. MIKE GARZILLO WILL NEVER JOIN THEIR RANKS. WHEN IT COMES TO SPORTS, HE'S STRICTLY MONOGAMOUS.**

"From a really young age I knew that baseball was all that I wanted to play," says Lehigh's star second baseman. "I loved watching it on TV, and when I was old enough to play, I took the first opportunity I got. I never even wanted to play T-ball because it wasn't real baseball, so I waited until the kids were pitching to start playing."

Pitchers everywhere wish he would have waited a lot longer. From little league into high school and throughout his Patriot League career, he's never stopped hitting. As a junior last year he batted .359 while setting a new school single-season home run record with 13. He finished with a league-best 54 RBI, and his 75 hits were the second most in a single season at Lehigh.

Lots of people, including scouts from the New York Yankees, took note. After a season in which he was a unanimous first team All-Patriot League selection and was named a second team All-American by Baseball America, the Bronx Bombers selected him in the 38th round of the Major League Baseball draft.

"Derek Jeter is Mike's favorite player, but there's something about Mike that's very similar to Jeter in the consistency that he brings in his performance every day," Lehigh Coach Sean Leary says. "We know that we can count on him every day."

Garzillo's performance in the Patriot League Championship Series was Jeter-esque. He went 4-for-5 with a grand slam and solo home run in the Mountain Hawks' game-one win and scored the game-winning run in game three to help Lehigh to its second-ever league crown.

His monster season brought chatter that he might be drafted, but after two days his name was still on the board. By the third day he couldn't take the tension, so he broke from

the shackles of his TV and headed to—where else?—a ballpark.

"I couldn't sit there any longer, so I went to the Lehigh Valley Catz game to see some of my [Lehigh] teammates play. I was sitting in the stands watching the game and the draft tracker on my phone. It was in the 38th round and the Yankees pick was coming up and I saw my name pop up. I thought that was pretty cool because I was sitting next to my dad, so I gave my dad a hug."

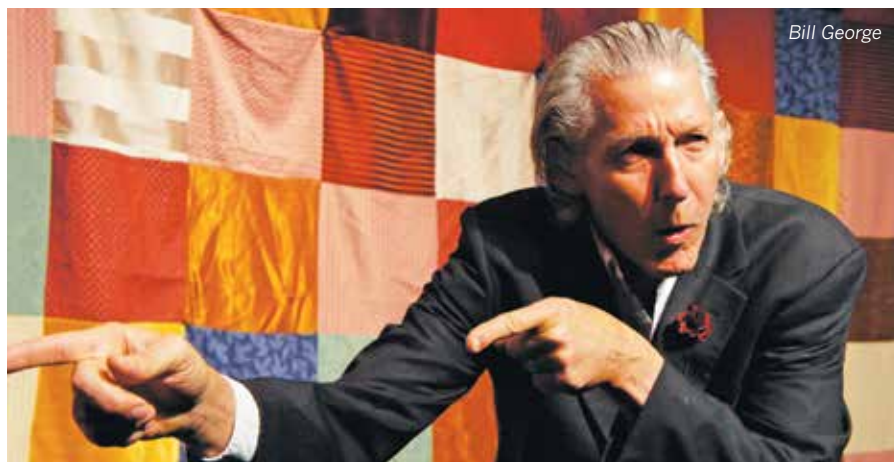
It was a dream come true for a hopeless baseball romantic, but Garzillo quickly learned the reality of professional baseball is no fairy tale. A contract agreement with the Yankees never materialized. "I really wanted to sign, I was ready to start my professional career, but I also had to make a decision that was best for me and my family," he says.

A business management major, Garzillo last season earned Academic All-League honors for the second straight year. He's on track to graduate next year, but first, there's the matter of his senior season. "The goal is to win another championship," he says. "We made it to [NCAA] regionals last year and we lost two games. I think it would be awesome if we could leave a legacy that we were the first [Lehigh] team to win a regional game."

To get there, Garzillo's not resting on his 2015 laurels. As always, he's working on his fielding and taking his cuts in the batting cage. (On his Lehighsports.com profile, he lists his hobbies as "baseball.")

Next year, Garzillo will go back into the draft pool, and he can be chosen by the Yankees or any of the 29 other Major League teams. While he'd still love to play for New York, he'd happily suit up for anyone. As long as he's playing baseball, Mike Garzillo will be happy.





Bill George

## Performance photography

An alumnus riffs on a photo exhibit that explores  
three centuries of local history.

BILL GEORGE '73 SURVEYS A LAPTOP PHOTOGRAPH of the Star of Bethlehem, the South Mountain sign that sends him mixed signals. The comforting beacon, he says, once guided him home after a long, misguided night ride. Up close, however, the star "is just a bunch of light bulbs on a rickety frame. In a way, that may be what we are: a bunch of light bulbs, trying to be special."

The Star starred in "56 Photos & An Old Man Dancing," George's solo meditation on three centuries of photos of South Bethlehem. In his show Sept. 22 at the Zoellner Arts Center, George riffed on images of identically dressed Lehigh Reunionites, Bethlehem Steel's massive and ruined No. 2 Machine Shop, Lehigh's old Taylor Stadium and more.

"Old Man Dancing" continued George's quest to map his identity through the South Side's identities. At Lehigh, he tested his personality within a crucible of machine shops, Gothic churches, steeples, blast furnaces, side streets named for obscure U.S. presidents and a United Nations of ethnic tribes.

His appreciation for the area increased as he and his wife, Bridget, raised two children in a Fifth Street row home while running Touchstone Theatre, which the couple founded in 1981.

"Old Man Dancing" was shepherded by two of George's Lehigh soul brothers: Augustine Ripa, professor of theatre, and Ricardo Viera, curator of the university art galleries. Viera asked George to create a performance inspired by 56 photos of South Bethlehem history that Viera picked from the Lehigh teaching collection to celebrate the university's Sesquicentennial. The exhibit, "Revisiting South Bethlehem," runs through May 27, 2016 in the DuBois Gallery of Maginnes Hall.

George researched "Old Man Dancing" by showing photos to a wide range of citizens to get a wider range of opinions. Rick Cantelmi, patriarch of a family hardware store on Fourth Street, recalled the defunct Bethlehem Farmers Market as a cultural beehive. He also evaluated the merits of a saw in a hardware-store window that was photographed during the Depression.

"Photographs," says George, "can show us the relationships between things and the greater whole. Photos are instants, grains of sand. What I'm asking is, 'What can you learn about the desert from a grain of sand?'" —*Geoff Gehman '89 M.A.*

"PHOTOGRAPHS CAN SHOW US THE  
RELATIONSHIPS BETWEEN THINGS  
AND THE GREATER WHOLE."

—BILL GEORGE '73

### LAUGHTER AND LIFE SKILLS

A central concept in improvisational comedy, a highly collaborative form of theater, is "yes, and..." When one performer makes a statement, the other responds with "yes, and..." agreeing with the stated idea and building on it. So, for example, if a performer says she's holding a bowling ball, the other might respond, "Yes, and I love its mustache."

Thus begins the snowball of humor that is improv—unscripted collaborative theater created in real time.

The Hobo Army, Lehigh's improv comedy troupe, practices "yes, and..." on a weekly basis, producing laughs and the more enduring benefit of some essential life skills.

The Army became an official club in 2014, though it has existed on and off since 2006. The club meets for open rehearsals on Thursday evenings in the Zoellner Arts Center. All members of the Lehigh community are welcome.

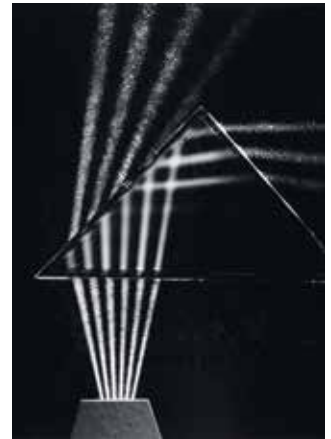
"You don't even need to get up and perform. You can watch and laugh... We know improv can be uncomfortable the first few times you do it, and we like having a welcoming environment for that to happen in organically," says Amber Schrum '16.

Students see the positive effect of improv in their relationships, self-confidence, job interviews and academic performance.

"In life, it's just easier to say, 'Yes, and...' [It's more] positive," says Talia Dunyak '16.



CHRISTA NEU

**EXHIBITION: 'Object as Subject'**

IN CELEBRATION OF Lehigh's Sesquicentennial, *Object As Subject* gives nod to the university's history of regarding art as an integral part of the classroom. The works in the exhibition reflect Lehigh's world-class collection of more than 12,000 art objects, representing a broad range of cultures and materials.

The exhibition is on view through May 27, 2016 at the LUAG Main Gallery in the Zollner Arts Center.

The LUAG Teaching Collection has become a laboratory for visual literacy used by students, faculty and the community, thanks to the generosity of alumni and friends.

In the exhibition, European masters such as Bonnard, Redon, and Picasso join American "Outsiders" such as Finster and Eilshemius. Pioneers of photography are seen side-by-side with Japanese prints.

To see images from the exhibit, go to [luag.org](http://luag.org).



ARTISTS FROM TOP LEFT, CLOCKWISE:  
JACOB LAWRENCE, BUILDERS NO. 3, 1974  
BERENICE ABBOTT, MULTIPLE BEAMS OF LIGHT, 1958  
ALEX KATZ, PORTRAIT OF A POET: KENNETH KOCH, 1970  
ÉDOUARD VUILLARD, THE THEATRE, c. 1905







# HIS VISION OUR VISION OUR FUTURE

150 years after its founding, the Lehigh community contemplates what tomorrow may hold.

BY KELLY HOCHBEIN

**STANDING ON SOUTH MOUNTAIN IN 1865, COULD ASA PACKER HAVE PICTURED THE LEHIGH UNIVERSITY OF TODAY?** Could he have predicted that his Lehigh, with its inaugural enrollment of just 39 young men, would grow over time into a vibrant community of more than 7,000 scholars, seekers and innovators?

Could he have pictured the campus's original 57 acres expanding to encompass nearly 2,358 acres on and around that same mountain—and reaching into the world beyond?



Could he have known what Lehigh—the institution and its people—would eventually accomplish, what impact it would have on the world, and how many lives it would touch?

It's certainly possible. After all, Packer was a man much more interested in what could be than in what already had been. In his memorial sermon to Packer on June 15, 1879, then-Lehigh president John M. Leavitt described the university's founder as precisely that kind of individual—one always focused on the potential of tomorrow. Already a successful businessman by the early 1860s, the young Packer could have easily settled down into a comfortable life.

Fortunately, Leavitt said, he was not yet satisfied.

"He had a work in this world," Leavitt said. "His past was but an education for his future. To him belonged the gift of foresight, the power to look beyond the ordinary vision—the ability to see speedily and sharply, to mature slowly and wisely, to grasp large plans, to organize great enterprises and to execute energetically what he had elaborated deliberately."

These gifts, so central to the character of our founder, continue to serve Lehigh today, and as we begin a yearlong celebration of our Sesquicentennial, we also use this moment to try and envision what our Lehigh of tomorrow might be in much the same way Packer must have envisioned his Lehigh: through a consideration of where we stand today, a candid acknowledgement of the obstacles we face, an awareness of our enormous potential and an aspiration to accomplish even more.



## THE GIFT OF FORESIGHT

Higher education is inevitably influenced and shaped by the outside world—by the resources it provides and the results it expects. As a result, nimbleness and adaptability have always been, and will continue to be, essential to success.

But according to Lehigh President John D. Simon, success in higher education going forward cannot be achieved if universities only respond to the pressures and dynamics of the moment. Rather, he says, it's crucial that universities formulate a vision for the future—and then confidently lay out a plan to methodically work toward that vision, even if it seems unconventional or at odds with the best practices of the past.

It sounds simple, but taking those steps requires leaders to resist the urge to assume that the way things have been are the way they always will be—or that the data that has been used to define success in the past will remain relevant in the future.

"Metrics" is a word I hear tossed around a lot—*"What are the metrics?"* says Simon. "But my problem with that is, while you have to be data-driven today, metrics are actually trends of the past."

As he explains, there was a time not too long ago when the record industry was booming—and booming specifically because of the thriving market in sales of compact discs. Following those profits, the industry spent much of the 1990s pursuing a strategy that assumed

consumers would always need to buy CDs to hear their favorite music.

Then Apple rolled out iTunes to the world, and the entire model collapsed. The industry was focused on the wrong things, and has yet to recover. There is a lesson there for leaders in higher education, he says.

"I think you have to look at the situation you're in and decide how it is exactly you want the university to move forward—and how you want to define or measure success," he says. "That may be quite different than what you've pursued or measured to date. I think analytics and tools are important, but being wedded to a certain set of tools or indicators can blind you to what you should be paying attention to."

That includes, he says, rankings—which can push universities to move forward on initiatives that aren't necessarily in the best interest of their students.

**"I actually think of universities as being in the business of human capital development, so our success should be based on the quality of graduates we provide to the world."**

—JOHN D. SIMON, PRESIDENT

"The thing that bothers me about rankings is that these are largely input-determined, and not outcome-determined," he says. "I actually think of universities as being in the business of human capital development, so our success should be based on the quality of graduates we provide to the world. When I think about the number of people who come to me and tell

me about how their Lehigh experience changed their lives for the better—that's the business that I think we're in."

Lehigh Provost Pat Farrell agrees with Simon's view that higher education is rapidly changing, and will look radically different by the time the next generation of students arrives on campus. To be ready for these changes, universities must constantly ask themselves what students of the future will expect from their college experience. Because again, those expectations aren't likely to match up with those of the students of yesterday.

"What the world expects, who comes to us, how well-prepared they are... in 15, 20 years, it will be quite a bit different," says Farrell. "Some of these things we can predict, some we can't. So when we ask what higher education is going to be like, we're talking about serving the student who comes next week as well as the one who comes in 20 years."

It's not only the expectations of these future students that will change. Across the nation, their demographic makeup is changing, too. The Western Interstate Commission for Higher Education reported in 2013 that the population of public high school graduates is increasingly less dominated by white non-Hispanics. The report predicted that the number of high school graduates of Hispanic descent will be 41 percent higher in 2019-2020. In 2014, the National Center for Education Statistics reported that the percentage of white students attending public grade schools is now less than 50 percent and will continue to decline as enrollments of Hispanic and Asian/Pacific Islander students increase.

"Colleges need to do even more to welcome and nurture first-generation college students, especially those from the country's urban centers," says Susan Snyder, a longtime higher education reporter for the *Philadelphia Inquirer*. "Our country's progress will depend on the success of our colleges and universities at meeting these students' needs and helping them to flourish."

Of course, educating these students comes at a cost—and today, those costs are higher than ever before. For many students, and many families, the rising cost of higher education is putting a college education out of reach. As consumers and government officials scrutinize the issues, colleges and universities, both public and private, are going to have to find creative ways to balance competitiveness and affordability, Snyder says.





the things that for a long time we've expected will always be in place—well, maybe not.”

## BEYOND THE ORDINARY

But how does Lehigh as an institution plan for students of the future— individuals who will face problems we don't yet know and take on roles we can't even begin to imagine?

One possible answer, says Alan Snyder, is to look to the past.

“I would go back 150 years and ask, ‘What was Lehigh crafted to do well?’” says Snyder, vice president and associate provost for research and graduate studies. “Lehigh was crafted to prepare people for action in the world, thoughtfully conceived and effectively carried out. We've always done that through a combination of rigorous preparation and an embrace of the practical and a cultivating of a breadth of awareness. So in those ways, the future looks the same as the past. I think what's changed is the nature of the preparation that it takes to do that.”

Lehigh's approach to that preparation has, like the university itself, evolved over the years. Packer's initial intent was to launch a university that would foster “the intellectual and moral improvement of young men” in the Lehigh Valley. Today, Lehigh is working to shape men and women to be ready for today's challenges and equipped to handle whatever tomorrow puts in front of them. The scope of what Lehigh does has expanded, because the demands placed on its graduates have grown as well.

Rigorous preparation used to be enough, says Snyder. “[But today] you ask employers what they need and they say, ‘We need people to help us rethink how we do things. And when things move that fast, we need explorers and discoverers and inventors and re-thinkers and challengers of settled understand-

ing.’ And so to me, that makes our status as a research university now part of the foundation for how we work as an educational institution.”

High-quality research has long been part of Lehigh's mission. Today, however, “it's part of the mindset and way of being in the world that you cultivate in students,” Snyder says.

“There's no question that tuition rates have gone up faster than most other traditional measures of inflation or anything else,” Farrell says. “It's probably fair to say that increases at that rate are really not sustainable. I don't think that higher education in general, certainly not us, has figured out a secret that allows us to maintain all the things we'd like to maintain and yet also at least hold costs steady, if not decrease them.”

A growing concern, Farrell says, is that ever-higher costs will “fragment” the world of higher education into a sector of haves and have-nots—with only 20 or maybe 30 well-funded universities sitting among the haves. Those institutions, supported by massive endowments, would operate in their own sphere, and charge whatever they wish, leaving the bulk of the nation's colleges and universities to figure out how to compete with fewer resources.

This situation, says Farrell, would be less than ideal, but not out of the realm of possibility.

“I don't really think that Darwinian approach for universities actually makes them better,” he says. “I think it just makes them richer, and that's not the same thing as better.”

Lehigh, says Farrell, is well-positioned to try to be a major player—one of the “haves”—but would be wise to begin thinking about how it might operate differently. “We've got to figure out,” he says, “if we're not [in that group], how else do we do this?”

Universities that are able to deliver a unique product that stands out in the wider world of higher education will enjoy greater success than those that don't, says Farrell. Snyder agrees. “Universities will have to work harder at defining and marketing what makes them unique,” she says. “What distinguishes them from the rest of the higher education world?”

Adds Farrell: “Where higher education is going is a much more dynamic place—dynamic in terms of what an individual does, dynamic in that what you see now will look different in five years and different yet again in 10, dynamic in that some of

**“Lehigh was crafted to prepare people for action in the world, thoughtfully conceived and effectively carried out.”**

—ALAN SNYDER, VICE PRESIDENT AND ASSOCIATE PROVOST, RESEARCH AND GRADUATE STUDIES



“What we need,” says Farrell, “are people who have creativity and the discipline to marshal that creativity into genuine innovation.”

Adds Mayuresh Kothare, Lehigh’s R.L. McCann Professor of Chemical Engineering: “We need to create a broad-based competitive research community of faculty scholars who are solving grand challenge societal problems and integrating their findings into unique educational experiences for our students.”

That focus—integrating the student experience into the faculty research experience—is essential to what the university prepares students to do and what the students themselves will be able to do in 10 to 15 years.

Lehigh’s Mountaintop experience, for example, provides an opportunity for students to put creativity into action. The approach,

**“What we need are people who have creativity and the discipline to marshal that creativity into genuine innovation.”**

—PAT FARRELL, PROVOST

says Farrell, is not new, but having a physical space dedicated exclusively to that end is unique. The initiative, launched in the summer of 2013, has grown each year since—and has the potential to serve as a true differentiator for Lehigh going forward. It is also a crucial step forward in allowing Lehigh to showcase itself as a place where innovative ideas in teaching are welcomed.

That, says Simon, will be increasingly important in the years to come as the university strives to recruit talented young faculty who may be looking to work at institutions that are truly open to new methodologies.

“If you look at the demographics of faculty in the United States, we are on the cusp of a huge wave of retirement taking place across all universities,” says Simon. “This is both an immense challenge and a huge opportunity. You will have a whole new generation [of faculty] who will want to do things differently, but may not be sure that they are empowered to do so. We have the opportunity to do that, but the question is whether or not we can seize and if we can figure out how to properly approach it. I think Mountaintop is a one of the ways we can do that—it’s a safe place to explore new ideas.”



Alan Snyder sees that mindset moving from the top of South Mountain throughout the rest of campus.

“I think the mode of operating that’s evolved out of Mountaintop is something that is important and something that will carry on and will be infused into what we do,” says Snyder. “The elaboration of something like that is complete when you can’t pinpoint it to a location anymore—it’s a practice, it’s a way of working with people, and the more people find it fulfilling and effective, the more it will just happen.”

Going forward, Snyder says, he would expect that the lines between the classroom and the wider campus environment will “continue to get fuzzier.” And again, that’s tied directly back to the idea that Lehigh is increasingly aware that the learning and growing experience is not limited to the classroom or laboratory.

Lehigh’s bLUeprint program, now in its third year, helps students plan and personalize their larger Lehigh experience. John Smeaton, vice provost for student affairs, believes bLUeprint will

be a signature program for the university well into the future.

“It’s helping students take charge of their experience, decide thoughtfully how they want to spend their four years as undergraduates, and give them some opportunities to learn very important life skills about respect for others, about knowing yourself, about inclusive leadership, about opening your eyes to other possibilities,” says Smeaton.

## SEEING SPEEDILY AND SHARPLY, MATURING SLOWLY AND WISELY

Quite a bit has changed since Smeaton arrived on campus in 1984. Lehigh has settled into coeducation. Graduate student support has expanded. The university has developed more learning opportunities for students outside the classroom, particularly in the realm of community service, and conversations about alcohol abuse and sexual assault and other societal ills have moved more to the forefront.

“We’ve seen change,” says Smeaton, “but the essence of Lehigh hasn’t really changed.”

That essence remains the same as when he first arrived—namely, a commitment to helping young people grow up intellectually and personally. These days, he says, part of that commitment requires the university to facilitate uncomfortable—and sometimes unwelcome—conversations.

“When I came to Lehigh, 12 years after going coed, we were still wrestling with what it meant to be a co-ed institution. There was a real discrepancy that way. So it was male-dominated, it was [focused] on athletics and fraternities,” says Smeaton. “And what we tried to do in the first decade was to say, ‘Wait. We’re a community.’”

Intentional efforts followed, as did change. That same intention has defined the university’s work ever since. It continues today, as the enduring challenge of building a community is intensified by the changing composition of the individuals who

make it. “The diversity of our undergraduate students, from where we were just seven years ago to where we are now, in terms of that number—that’s significant,” says Henry Odi, vice provost for academic diversity.

“It’s not about quotas,” says Smeaton. “It’s about making sure we are engaging, inviting, enrolling students from across the broad spectrum of our society, and that students who come here from nontraditional backgrounds are not simply surviving, that they’re thriving. They’re able and invited and encouraged and are supported in having the full Lehigh experience, inside and outside the classroom.”

This, like everything else, requires effort. In 2011, Lehigh welcomed the participation of a wide range of stakeholders, engaged in meaningful conversations, and adopted the Principles of Our Equitable Community, a foundational document that outlines what Odi calls “a new culture, the new normal for Lehigh.”

“It’s the intentional, proactive strategies that are helping to bring about change,” says Odi. “Every year, we have over 1,200 new undergraduate students, over 300 graduate students, over 75 new faculty members, over 130 new staff members, so that means that this is ongoing.”

But he’s quick to add: “There’s no such thing as ‘We’ve arrived.’ Because with each new generation of students comes new dynamics, new challenges and new opportunities. Lehigh must be prepared for all of it.”

“The students of today are very different from the students who were here when I arrived 14 years ago, and students a decade from now will be very different from today,” says Heather Johnson, associate professor of sociology. “How can we move forward within a rapidly changing world, stay true to the core of what has made Lehigh so lovable for so many people, and progressively evolve to ensure that Lehigh stays authentically lovable for students and alum far into the future? That, I think, is our greatest challenge, but it also presents amazing opportunities and prospects if we can get it right.”

As the university evolves, its physical space must also reflect its evolution. Picturesque and steeped in history, Lehigh’s campus facilities will play a significant role in the university’s future, and therefore will require some attention.

In recognition of precisely that, President Simon used the occasion of his installation ceremony in early October to announce that the university under his leadership would spend \$250 million in institutional resources to advance the university in teaching, learning, research and student life. A large part of that investment will focus on physical improvements, including long-sought renovations of the University Center.

“We need to put some energy and, frankly, some money into thinking hard about how to make best use of facilities—labs, classroom spaces and so on,” says Farrell. “We’re going from hiring faculty who were largely teachers and in many cases not particularly active researchers to hiring people who are very much both. That can call for different space configurations—different lab or research configurations—and that, in some cases, is not what we have.”

Historically, says Farrell, the university has completed fairly modest internal renovations to keep up with the changing times. It’s time, he says, for more. Much more.

“We’ve got some significant work to do. So I think it’s a dollar commitment, it’s a time and energy commitment, and it doesn’t make the outsides look any prettier but it makes the insides work for the 21st century,” says Farrell.

Planned renovations of the University Center, meanwhile, target more than an attractive, more open internal space—they promise to reinforce a strong sense of community on campus.

“The UC is that place where our students will feel they belong—everybody belongs there,” says Smeaton. “It doesn’t make a difference what major you are,

**“The students of today are very different from the students who were here when I arrived 14 years ago, and students a decade from now will be very different from today.”**

—HEATHER JOHNSON, ASSOCIATE PROFESSOR OF SOCIOLOGY

what gender you are, what team you belong to, what fraternity or sorority you’re in or not in. You’re Lehigh.”

## EXECUTING ENERGETICALLY WHAT WE HAVE ELABORATED DELIBERATELY


Smeaton recalls fondly the university’s symbolic, large-scale gesture during the transition of Lehigh football from Taylor Stadium to Goodman Stadium in 1989.

“We decided that tradition is such a big, important part of Lehigh,” says Smeaton, that members of the Lehigh community lined up every 10 yards from Taylor Stadium to the team’s new home on the Goodman Campus, up and over South Mountain, passing a football and passing a tradition, a physical representation of the link between past and future.

The first president of the Lehigh board of trustees, William Bacon Stevens, once described the early graduates of Packer’s Lehigh as the kind of young people “needed in this bustling, wrestling, grasping age.” They were, Stevens said, individuals of “drilled minds, and taught eyes, and skilled hands, and steady wills, and earnest purpose, and plodding progress ... who will not tire or falter until they have reaped new fields or opened long-buried treasures, or unlocked the still guarded secrets of nature’s laboratory.”

Like a football passed over a mountain, this legacy of industriousness, discovery and unwavering resolve has been passed from generation to generation of Lehigh students. Though the world, its problems and the ways in which we tackle them may change, the vibrant spirit of Lehigh remains the same.

Like its founder, Lehigh University has a work in the world.

Our past is but an education for our future. 

### MORE VOICES, MORE PERSPECTIVES:

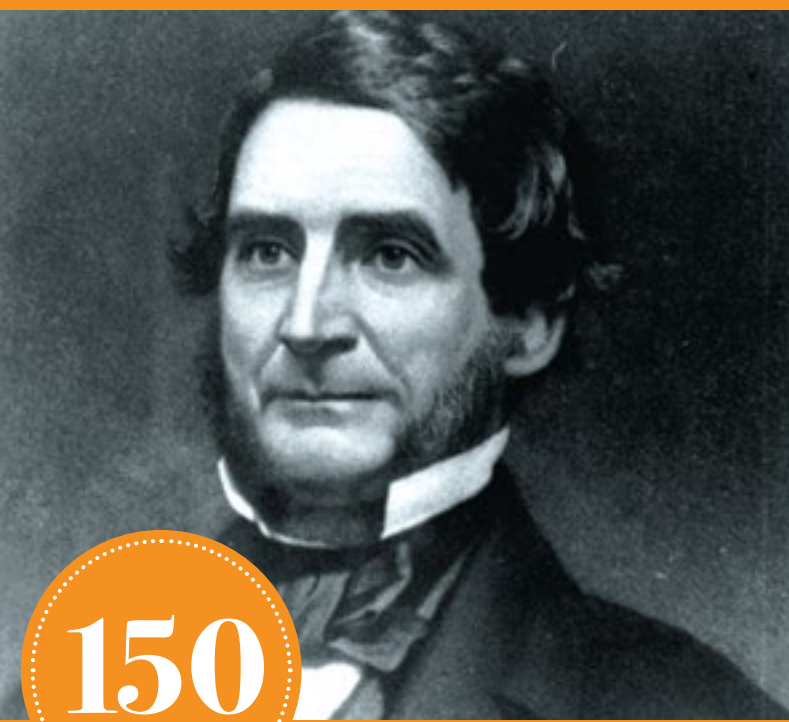
*See what other members of the campus community—students, faculty, staff and alumni—had to say about the future of Lehigh at [lehigh.edu/bulletin/150](http://lehigh.edu/bulletin/150).*



# LEHIGH AT 150

## THE PEOPLE, THE PLACES, THE TRADITIONS

As we celebrate Lehigh's 150th anniversary, we look back here on 150 of the people, places and traditions—listed in no particular order—that have helped make Lehigh what it is today. Our list is hardly comprehensive—so many more people and places and memories could have been included—but it offers a historic (and fun) snapshot of Lehigh's proud history. For fuller descriptions, go to [lehigh.edu/countdown150](http://lehigh.edu/countdown150)



150

## ASA PACKER

LEHIGH FOUNDER ASA PACKER was a true risk-taker. Packer came from humble beginnings. He worked as a carpenter and a farmer, but he eventually made his money by building and operating canal boats along the Lehigh Canal. Packer took a financial risk in the early 1850s when he financed construction of a new Lehigh Valley Railroad. As the canals with-

ered, the Lehigh Valley Railroad prospered and Packer's wealth continued to grow.

Packer also was active in politics and public life: he became a state lawmaker, then Carbon County judge, then a

member of the U.S. House of Representatives.

In 1865, Packer donated 57 acres on South Mountain and \$500,000—the largest gift to any educational facility at the time—to establish Lehigh University.

Packer died May 17, 1879. That same year, in October, the university celebrated its first Founder's Day. The tradition continues to this day at Lehigh.

149

### PACKER MEMORIAL CHURCH

was built between 1885 and 1887. It was a gift from Mary Packer Cummings in memory of her parents, Lehigh founder Asa Packer and his wife, Mary.

148

### MARCHING 97

was founded in 1906, the year that 15 men gathered in Christmas-Saucun Hall under the direction of band leader E.E. Ross. The band has since established itself as one of the finest in the country.



146

### LINDERMAN LIBRARY SKYLIGHT

is one of the most enduring images on campus and was installed in 1878 as part of the original library.

145

### LEHIGH CHORAL ARTS

is directed by award-winning composer-conductor Steven Sametz and associate director Sun Min Lee. It includes four ensembles.

144

### COS DENSON '56

arrived on campus in Fall 1951 and would make history as the first African-American student to graduate from Lehigh.

143

### WRESTLING

Lehigh boasts a proud tradition across many sports, but its wrestling team has enjoyed particular success, establishing it as one of the top programs in the country. The team first competed in 1910. Lehigh's wrestlers have won 28 individual NCAA national championships.



147

### LEE IACOCCA '45

started his career at the Ford Motor Co., made his mark as the "father of the Mustang," and rose through the ranks to become company president. Later, he joined the rival Chrysler Corp. where, as chairman, he cemented his place in automotive history by turning around the ailing company.

142

### LEHIGH SQUIRRELS

Love them or fear them, the squirrels seem to be everywhere on the Asa Packer campus.

141

### WOMEN AS UNDERGRADUATES

The Board of Trustees agreed to admit 100 women for the first time in the 1971-1972 academic year. In reality, 169 women enrolled that year, most in the fields of science and mathematics.

## 140

### THE STEPS OF SOUTH MOUNTAIN

There are 2,600 steps—count 'em!—on the Asa Packer campus.

## 139

### W. DEMING LEWIS

was Lehigh's 10th president. He led the university from 1964 to 1982. He was a scholar, inventor, space engineer and the longest-serving president in Lehigh history.

## 138

### HENRY COPPEE

Lehigh's first president was also a civil engineer, a war hero, and an English professor. He spent two years at Yale before working as a civil engineer and eventually graduating from West Point. He served as a lieutenant and was promoted to captain for gallantry in the Mexican-American War. He served as Lehigh's president from 1866 to 1875.

## 136

### JESSE W. RENO

Reno, Class of 1883, received the first patent for his plans to build the electric-powered moving stairway. He eventually sold his patents to the Otis Elevator Company and together they produced the first commercial elevator.

## 135

### SPACE SHUTTLE COLUMBIA ANALYSIS

NASA selected Lehigh as the first academic institution in the United States to be granted access to the debris from the Space Shuttle Columbia disaster. The Columbia exploded over the southern United States on Feb. 1, 2003, killing all seven astronauts aboard.



## 134

### HOWARD "BOSEY" REITER

dedicated 31 years of his life to Lehigh as a football coach and as the university's first athletic director. He is perhaps more famous, though, for originating the overhand spiral pass.

## 133

### THE FIRST FOUR

The arrival of professors Rosemarie Arbur, Elizabeth Fifer, Rosemary Mundhenk and Barbara Traister to Lehigh's department of English in 1972 and 1973 was a landmark in campus diversity and inclusion. The women's stories and lives are chronicled in "The First Four," a documentary written and produced in 2013 by four Lehigh students.



## 132

### THE DINK

Can you spot a freshman in the crowd? Until the early 1970s, you certainly could, thanks to the dink, a brown, peaked hat. Embroidered with the wearer's name and class year, dinks adorned the heads of every first-year student six days per week from the start of the fall term until the Lafayette football game. In the Oct. 2, 1928, issue of *The Brown and White*, students sounded off about the distinctive accessory.

## 137

### THE STEPS FACILITY

The Science, Technology, Environment, Policy and Society (STEPS) facility, completed in 2010, provides a collaborative and interdisciplinary environment for natural and social scientists and engineers.



## 131

### PERCY HUGHES

was a philosopher, teacher and instrumental figure in the development of Lehigh's education program. He began his 35-year tenure at the university in 1907 at the invitation of President Henry S. Drinker.

## 130

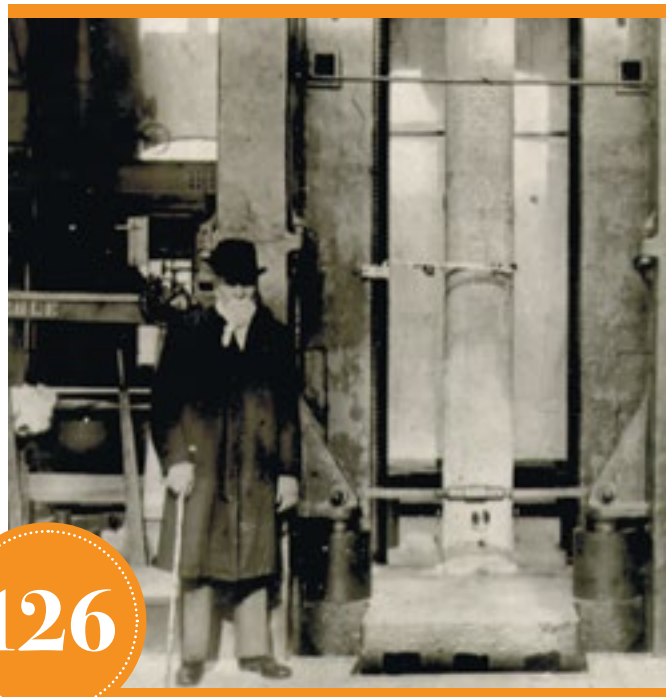
### THE EPITOME

is not just a yearbook. It's the oldest existing publication at Lehigh, born when the Class of 1875 decided to represent the social aspect of Lehigh in print.

## 129

### THE HARMONY PAVILION

has a puzzle-like corner bracket, tiles and an intricate vaulted roof. It stands as a symbol of Lehigh's cultural link to China as well as the university's efforts to build relationships with the City of Bethlehem. It's located on the Southside Greenway.



## 126

### HISTORIC FRITZ LAB

John Fritz, an original Lehigh trustee, loved Lehigh so much that at the age of 87 he funded, designed and supervised construction of the research lab that bears his name. In 1991, it was declared a national landmark by the American Society of Civil Engineers. A Pennsylvania historical marker also notes Fritz's contributions. The original lab opened in 1910.

## 128

### THE HILLEL

**SOCIETY** provides a Jewish home for students



on campus—a place where they can socialize, study, share meals and observe Shabbat. Located at the Jewish Student Center at 214 Summit St., Hillel has sponsored a host of religious and cultural activities, with the aim of encouraging and strengthening Jewish values.

## 127

### SCORING WITH THE NBA

C. J. McCollum '13 made Lehigh history on June 27, 2013, when he was selected by the Portland Trail Blazers in the NBA draft. He was the 10th overall pick. He had finished his Lehigh career as the Patriot League's all-time leading scorer.





125

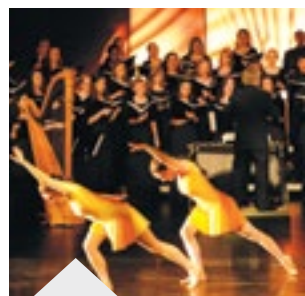
### MARJORIE NEMES

As one of the few female research scientists in the 1960s and 1970s, the late Marjorie Nemes '51G '55G made significant advances in learning what might prevent viruses and the common cold. Her work with the Merck Institute for Therapeutic Research team was reported in *Newsweek* and *Time* magazines in 1983.

124

### TERRY HART '68

was named by NASA in 1978 as a member of "Group 8"—the first selection of Space Shuttle astronaut candidates in nine years. As a mission specialist aboard the STS 41-C Challenger in April 1984, Hart operated a robotic arm that retrieved the Solar Maximum Satellite for repairs and filmed footage for an IMAX movie titled *The Dream is Alive* (1985).



123

### ZOELLNER ARTS CENTER

What do Tony Bennett, the New York Philharmonic and Bobby McFerrin have in common? They've all performed at the Zoellner Arts Center. The late Robert Zoellner '54 and his wife, Victoria, donated \$6 million to build the 105,000-square-foot arts center, which opened in 1997. By bringing the department of music, the department of theatre, the art galleries and the Guest Artist Series under one roof, the facility transformed the arts at Lehigh. It houses three theatres: Baker Hall, a 1,000-seat proscenium theatre; the Diamond Theatre, a 300-seat thrust theatre; and the 125-seat Fowler Black Box Theatre.

122

### WLVR-FM

is Lehigh's award-winning freeform radio station. It officially went on the air May 8, 1973. Today the station offers a wide range of programming and is recognized as one of the top outlets in the Lehigh Valley.

121

### TRACY BYRNES '92

was a senior accountant at Ernst & Young LLP before transitioning to financial journalism in 1997. She worked as a senior writer for *TheStreet.com*, wrote weekly columns for the *New York Post* and the *Wall Street Journal Online*, and freelanced for *Smart Money*, *Forbes* and *Marketwatch.com*. She joined the Fox Business Network in 2007 and appears weekdays on *Varney & Co.*, one of the network's highest-rated programs.

120

### LANDING SHIP TANK

The innovation of brothers Francis (Class of 1887) and Albert Dravo (1889) helped Allied forces storm beaches in Normandy and the Pacific in World War II. The ship was capable of carrying and landing 160 soldiers and more than 28 tanks and trucks.

119

### EAGLES TRAINING CAMP

From 1996-2012, the Philadelphia Eagles held their annual preseason training camp on Lehigh's Goodman Campus. The football players stayed in dormitories, ate meals together, lifted weights in the A. Haigh Cundey Varsity House and practiced on Lehigh's three grass fields.

118

### ANNA HERZ

was the first woman in Lehigh's history to become a full professor and department chair. She taught Slavic and Eastern European languages for decades and welcomed opportunities to share her passion about foreign cultures with others.

116

### ASA PACKER'S WALKING STICK

Lehigh's founder often walked with a cane, reportedly one that was crafted from the vertebrae of a deer. Today, in a symbolic gesture, replicas are given to those who publicly represent Lehigh as models of leadership and accomplishment.



117

### ALUMNI MEMORIAL BUILDING

The stately Alumni Memorial Building rises on the Asa Packer campus as a tribute to the 46 Lehigh alumni who died in World War I and the 1,921 alumni who served in that war. Plaques also commemorate alumni who died in subsequent wars. The Gothic-style, ivy-covered building, with its tall, stained-glass windows, was a project of the Lehigh Alumni Association. Designed by alums Theodore G. Visscher and James Lindsey Burley, it opened in 1924.

115

### JOHN MCDOWELL LEAVITT

was Lehigh's second president, serving from 1875 to 1880. He was in office when Asa Packer died.



113

### OLYMPIAN BOBBY WEAVER '83

The former

Lehigh wrestling star claimed the 105.5-pound gold medal in freestyle wrestling at the 1984 Olympic Games in Los Angeles. A native of Easton, he also had qualified for the 1980 Olympic team but the team did not compete in Moscow because of a U.S. government boycott.

114

### LEHIGH CANE RUSH

In Lehigh's early days, freshmen were forbidden by sophomores to carry canes on campus. When freshmen defied the custom, sophomores would seize their canes and cut them into pieces to distribute as trophies. This led to raucous, organized scrimmages from 1886 to 1891, when the event was abolished.

## 112

### THE BUZZ

Honeybees are hard at work at Lehigh's apiary, tucked under a canopy of trees on the Mountaintop campus. The Lehigh University Beekeeping Club, which established the apiary, aims to raise awareness of the plight of the honeybee and promote environmental sustainability.

## 111

### J. RICHARD ARONSON

is believed to have taught more students than any other Lehigh professor—an estimated 20,000. Past students included Interim President Kevin Clayton and several university trustees. The economics professor, who retired in 2015, also led The Martindale Center.



## 108

### LEHIGH'S COLORS

Since 1876, brown and white have

been Lehigh's official colors. The inspiration? Women's hosiery—or, so the story goes. Brown-and-white striped stockings were a prevailing fashion for women in 1876, according to a 1929 article in *The Brown and White*. With male students "in a quandary" over what to select as the school colors, one artistic student who admired the color combination in the hosiery made the suggestion, which the student body adopted.

## 110

### A DISTANCE LEARNING PIONEER

In 1992, Lehigh became the first university in the country to create an independent digital satellite network to broadcast a class nationwide, with 27 students taking courses toward a master's degree in chemistry.

## 109

### MARIA JACQUEMETTON '83

is an emmy-winning writer and producer. She majored in English at Lehigh, where she says she gained the confidence to express her inner voice.



## 107

### ROBERT A. LAMBERTON

was Lehigh's third president (1880-1893). Both a gym (now Coppee Hall) and Chandler Chemistry Laboratory (now Chandler-Ullmann Hall) were built during his tenure, the mechanical engineering department was established, and Mustard & Cheese put on its first dramatic presentation. Lamberton Hall is named in his honor. He died in office.

## 106

### THE BROWN AND WHITE

The first issue of Lehigh's student newspaper was published on Jan. 16, 1894.

## 105

### JOHN W. FISHER

When the civil engineering legend formally retired from Lehigh in 2002, experts from around the world assembled here to celebrate his unprecedented contributions to bridge engineering and structural connection in his more than 40-year career.



## 102

### LEHIGH'S UPSET OVER DUKE

On March 16, 2012, Lehigh dreams came true when its 15th-seeded men's basketball team scored a 75-70 upset over second-seeded Duke University. It was Lehigh's first NCAA tournament win. Lehigh never trailed by more than five points and led for much of it. C. J. McCollum '13, who now plays for the Portland Trail Blazers, led the way with 30 points. At the time, Lehigh was only the sixth No. 15 seed to ever beat a No. 2 seed, and the second team to do so that day. The Lehigh win was even nominated for the ESPY "Best Upset."

## 104

### THOMAS MESSINGER DROWN

was Lehigh's fourth president (1895-1904). His time at Lehigh was characterized by financial difficulty but he was able to lead the university to growth in enrollment, academics and physical size. Drown Hall is named in his honor.

## 103

### IDEAS PROGRAM

The Integrated Degree in Engineering, Arts and Sciences program allows students to combine two programs of study, culminating in a bachelor of science with concentrations in both the College of Arts and Sciences and the P.C. Rossin College of Engineering and Applied Science.

## 100

### HENRY STURGIS DRINKER

was Lehigh's fifth president (1905-1920). He was the first alumnus to become the university's president.



## 101

### JAMES WARD PACKARD

is best known for the Packard Motor Car Company, whose Ohio Model A was the finest American-produced luxury vehicle of its time. His \$1.2 million gift to Lehigh led to construction of Packard Lab, home of the P.C. Rossin College of Engineering and Applied Science. An "Ohio Model A" is on display there. Packard was in the Class of 1884.



## 99

### SCULPTURE ON THREE CAMPUSES

The Woman on a Park Bench is among the thought-provoking outdoor sculptures that can be found on the university's three campuses. Gifts of alumni and friends, they are part of the Lehigh University Art Galleries' Teaching Collection, offering, as curatorial associate Mark Wonsidler points out, "the relatively rare experience of encountering significant works of art on a daily basis, as one is coming and going from classes, lunch and other campus events."



## 98

### A WINDOW TO WALL STREET

On the second floor of the Rauch Business Center, in the College of Business and Economics, the Financial Services Laboratory connects Lehigh to Wall Street. Here, students who are preparing to enter a competitive job market have access to the most highly used data feeds and software applications—the kinds of data they'll likely have to analyze in financial careers and related pursuits.

## 97

### LYNN S. BEEDLE

had a passion for tall buildings. The civil engineering legend inspired generations of students in his six decades at Lehigh and brought together engineers, social scientists and architects from around the world to create more livable cities. Beedle, who earned a master's in 1949 and a doctorate in 1952 from Lehigh, was a champion of skyscrapers as aesthetically pleasing residential centers and as viable alternatives to urban sprawl.



## 96

### THE FOUNTAINS OF LEHIGH

A striking marble fountain bearing the university seal greets those stepping onto the John A. Cable '45 Arrival Court in front of the Alumni Memorial Building. The fountain, in the center of a circular driveway, is one of several fountains that can be found on campus that provide beauty and, perhaps when needed, places for contemplation.



## 94

### MCCLINTIC-MARSHALL

Friends Howard McClintic and Charles Marshall, who both graduated from Lehigh in 1888 with degrees in civil engineering, are the names behind the freshman dormitory built in 1957. And as co-founders of the McClintic-Marshall Construction Company, their accomplishments are memorialized in works of more monumental proportions—the Golden Gate Bridge, the George Washington Bridge, the locks of the Panama Canal and the Empire State Building.

## 95

### CENTENNIAL SCHOOL

Governed by Lehigh's College of Education, the highly regarded Centennial School for children with educational disabilities is about six miles from the Asa Packer campus. The school has been nationally recognized for using positive behavioral intervention techniques to deal with children who have behavioral problems.

## 93

### THE LOST FOREST

Did you know Lehigh established an arboretum in 1909 on the northern slope of South Mountain? Did you know it was lost and forgotten until it was rediscovered in 2009 by Robert Booth, associate professor of earth and environmental science? The arboretum—and a forest plantation—were intended to help Lehigh in conservation efforts and in establishing a forestry program.

## 92

### CHARLES RUSS RICHARDS

led Lehigh through the Great Depression. He was Lehigh's sixth president. During his tenure, from 1922 to 1935, the first graduate degrees were awarded to women. Richards House, a first-year residence hall, honors his memory.



## 91

### A LIVING MEMORIAL

A dozen rain trees alongside

the Alumni Memorial building stand as a living memorial to the eight alumni and four parents of alumni killed in the Sept. 11, 2001 terrorist attacks. A bronze plaque beneath each tree bears their names: Alumni Philip Guza '67, Allison Horstmann-Jones '92, Garry Lozier '78, Gregory Malone '81, Robert McLaughlin Jr. '93, Edward Pykon '90, Scott Saber '86, Thomas Sinton III '82; and the four parents of alumni, Alan Merdinger (father of Jill '02), Sareve Dukat (mother of Athena Dawn Shapiro '97), Philip Caccagno (father of Kristine '88 and Karen '91), and Jeffrey LeVeen (father of Jeff '97).

## 90

### THE HILL

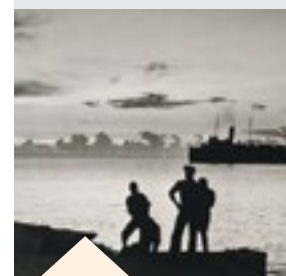
Greek life at Lehigh began in 1872, just seven years after the university's founding, with the establishment of Chi Phi fraternity. Since then, more than 50 chapters have called Sayre Park, more commonly known as "the Hill," home.



## 89

### MUSTARD & CHEESE DRAMA SOCIETY

is the second-oldest drama society in the United States. The society started in 1884 as a series of weekly meetings in the back room of Renning's Bar in Bethlehem. The small group of Lehigh students named its club after its refreshments of choice: beer served with mustard and cheese.



## 88

### LOU STOUMEN

was a poet, photographer and filmmaker. He told the *Brown and White* that his work centered not on stories with happy endings but ways to make people aware of their own humanity. He won Academy Awards for two documentaries: *The True Story of the Civil War* and *Black Fox: The Rise and Fall of Adolf Hitler*.

87

**LEHIGH'S ROTC PROGRAM**

is one of the oldest in the country. The "Steel" Battalion, which operates out of Jordan Hall on Mountaintop campus, consistently rates among the best Reserve Officers Training Corps programs in the country. It was begun in 1919.



85

**GOODMAN CAMPUS**

Lehigh's bucolic Goodman Campus, with its vast playing fields, is named for trustee emeritus Murray H. Goodman '48.



86

**LINDERMAN LIBRARY**

IT'S NO SURPRISE that Linderman Library ranks high on College Rank's list of 50 Most Amazing Libraries. One of the most beautiful structures on campus, it boasts a Victorian rotunda with a striking stained-glass skylight and Great Reading Room. Named for Lucy Packer Linderman, the oldest child of Lehigh founder Asa Packer, it houses a rare book collection that includes Darwin's *On the Origin of Species* and first editions of English and American literature from the 17th to 19th centuries.

**LEHIGH LORE HOLDS THAT THE GHOST OF LUCY PACKER LINDERMAN MOVES ABOUT THE BOOK STACKS.**

After Lucy died of pneumonia in 1873, Packer donated \$500,000—of which \$400,000 was set aside for collections and maintenance—to have the library constructed in her memory.

84

**DR. WILLIAM S. PIERCE '58**

led development of the first artificial heart pump, a milestone in the 1970s in medical technology and integrated research.

83

**ALICE P. GAST**

was Lehigh's 13th president (2006-2014). Her tenure saw the establishment of the Iacocca International Internships, the addition of the 750-acre Stabler campus, the construction of the STEPS building and the launch of the innovative Mountaintop initiative.

82

**4 O'CLOCKS**

Lehigh classes have two rounds of exams, and each are called 4 o'clocks, named for the time they are administered to students.



81

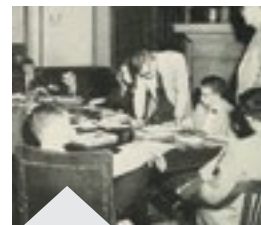
**UNIVERSITY SEAL AND MOTTO**

"Homo Minister et Interpret Naturae," which translates loosely to "Man, the servant and interpreter of nature," was adopted from the works of Francis Bacon. The motto was incorporated into the university seal, which features a heart, sun and book.

80

**WILLIAM SPENCER MURRAY SR.**

has a unique legacy: a 50,000-acre lake in South Carolina. He was in the Class of 1895.



79

**STUDENT SENATE**

The first student government body was founded at Lehigh in 1904. Known as Arcadia, it aimed to uphold the honor code and promote student activities.

78

**MOUNTAINTOP CAMPUS**

was originally home to Bethlehem Steel's Homer Research Lab. It now houses the College of Education, the departments of biological sciences and chemical and biomolecular engineering, the Health Research Hub, Energy Research Center and ATLLS (Advanced Technology for Large Structural Systems) Center. Lehigh launched the Mountaintop initiative in 2013, thanks to a \$20 million gift from Scott Belair '69.

77

**CATHY ENGELBERT '86**

is the new CEO of Deloitte LLP and the first woman to head a major U.S. professional services firm.

76

**COMMUNITY PROGRAMS**

Lehigh has teamed up with the City of Bethlehem to create a series of programs that aim to reinvigorate the South Bethlehem community, spur economic development and improve safety.



## 75

### PETER C. ROSSIN '48

graduated from Lehigh with a B.S. in metallurgical engineering. He turned down an opportunity with Bethlehem Steel, saying he was more interested in "new techniques, new metals and new markets." In 1967 he founded Dynamet Inc., which made titanium alloy products for the aerospace, chemical, medical and petroleum industries. In 1998, he and his wife, Ada, established a \$25 million endowment, the largest gift ever made to Lehigh, to name the engineering college.



## 74

### PULITZER WINNERS

Eighty years apart, two alumni took

home the prestigious Pulitzer Prize. Editor and author Mark Antony de Wolfe Howe, who graduated from Lehigh in 1886, won a Pulitzer in 1925 in Biography for *Barrett Wendell and his Letters*. In 2005, Joe Morgenstern '53, a film critic for *The Wall Street Journal*, won a Pulitzer for Criticism.

## 73

### CLARENCE THE WONDER DOG

Lehigh's unofficial mascot in the 1920s had an uncanny ability to "predict" the scores of Lehigh football games.



## 72

### TARA STACOM '80

Upon earning a bachelor's in finance, Tara Stacom joined Time Inc.'s HBO division and embarked on a sales career in New York City. A year later, when the division was shut down, she went to work for commercial real-estate giant Cushman & Wakefield Inc. Stacom is renowned for her ability to match properties and clients. As executive vice chairman of Cushman & Wakefield, she has completed some of the industry's largest and most complex leasing, sales and corporate finance transactions.



## 71

### PAUL J. FRANZ JR.

He was known as Mr. Lehigh and America's Dean of Development. Paul J. Franz Jr. '44 served Lehigh for six decades, starting as assistant to the president for development, rising to become vice president for development and university relations, and continuing as a consultant throughout his retirement. During the years when Franz guided Lehigh's development office, the university raised more than \$300 million, two-thirds of that in the 1980s. *The Chronicle of Higher Education* said Franz embodied Lehigh.

## 69

### RICHARD VERMA '90

was nominated by President Obama in 2014 to be U.S. ambassador to India. Unanimously confirmed by the Senate, he became the first Indian-American to serve as ambassador to a major country.

## 68

### ROGER S. PENSKE '59

was named the Sports Car Club of America Driver of the Year by *Sports Illustrated* in 1961. A racing legend, he started a race team in the mid-1960s that became one of the most successful in IndyCar Series and NASCAR racing.

## 67

### THE LEHIGH-UN PARTNERSHIP

In 2004, Lehigh was officially recognized as a nongovernmental organization by the United Nations Department of Public Information, becoming just the sixth university in the world to acquire that status. Thanks to the ongoing relationship, Lehigh students and faculty can attend UN programs and host international dignitaries and events on campus.



## 66

### MARIA CHRIN '87

is founder and managing partner of

Circle Wealth Management LLC, an independent financial advisory firm. She has been ranked as one of the Top 100 Women Financial Advisers by the *Financial Times*. She is a Lehigh trustee.

## 65

### RAUCH BUSINESS CENTER

is home to the College of Business and Economics. It is named for the building's chief benefactor, the late Philip Rauch '33, retired board chairman of the Parker-Hannifin Corp. in Ohio. The Center became a reality after Lehigh moved its football stadium to the Goodman Campus.

## 64

### CLEMENT CLARENCE WILLIAMS

was a renowned civil engineer and Lehigh's seventh president (1935-1944). Under his leadership, undergraduate enrollment rose to an all-time high, surpassing 2,000 students in 1938.



## 63

### THE GLOBAL VILLAGE

A brainchild of Lee Iacocca '45, Lehigh's Global Village for Future Leaders of Business and Industry brings aspiring leaders from around the world to Lehigh each summer. Since its founding in 1997, nearly 1,800 "interns" from 133 countries have been part of the cross-cultural experience, celebrating the value of international diversity as they work together to strengthen their leadership and entrepreneurial skills. Courses are taught by Lehigh faculty and industry experts.

62

**ALI BIN IBRAHIM AL-NAIMI '62**  
was 12 when he joined a training program offered by the Saudi Arabian Oil Co. (Aramco), the world's largest energy company. He rose through the ranks, serving as CEO from 1988 through 2015. He is currently the Minister of Petroleum and Mineral Resources for Saudi Arabia.

61

**THE WOMEN'S CENTER**  
Prompted by the efforts of a computer science graduate in 1989, Lehigh's Women's Center grew out of a report recommending the establishment of support services for women at Lehigh. It was officially opened in 1991 and staffed by one individual who was also responsible for child care. The first full-time director was hired in 1999.

60

**LEHIGH'S ALMA MATER**  
John J. Gibson, Class of 1895, penned Lehigh's alma mater in 1895-1896. Set to the tune of "Amici," arranged by Thornton W. Allen, it is an expression of Lehigh pride to this day.



59

**FARRINGTON SQUARE**

was formerly Campus Square and opened in August 2002 to provide students with more on-campus housing and integrate Lehigh more effectively into the community. The plaza of buildings opens out to South Bethlehem and includes an apartment complex, parking garage, university bookstore and businesses. The square was renamed in October 2015 in honor of Gregory C. Farrington, Lehigh's 12th president, and his wife, Jean, who inspired the center that is considered the gateway to the South Side.

58

**RT. REV. WILLIAM BACON STEVENS**  
was the fourth bishop of the Episcopal Church of Pennsylvania and the first president of Lehigh's Board of Trustees. Stevens advised Asa Packer on the founding of Lehigh University.



57

**DONALD B. STABLER '30 '32 '74H**

was a longtime Lehigh trustee. He started his own successful contracting company, Stabler Companies Inc. He and his wife created the Donald B. and Dorothy L. Stabler Endowed Scholarship Fund in 1966 to ensure a Lehigh education would always be accessible to students. Their generosity created the Stabler Athletic and Convocation Center, the Dorothy L. Stabler Tower (in Iacocca Hall) and established the Stabler Excellence in Teaching Award. After their deaths, Lehigh received \$34.2 million, its largest gift to date. The Donald B. and Dorothy L. Stabler Foundation named the Stabler Wing in the STEPS building and gifted 755 acres in Upper Saucon Township.

56

**MARTIN DEWEY WHITAKER**  
was Lehigh's eighth president (1946-1960). He died in office. Under his leadership, Lehigh's assets nearly tripled, its endowment more than doubled and Dravo House and McClintic-Marshall House were built. The Centennial development program raised more than \$22 million for faculty salaries and construction that later included Whitaker Laboratory.

55

**FIRST-YEAR RALLY**  
One of Lehigh's beloved traditions is The Rally. At the start of each fall semester, the incoming class gathers officially for the first time at The Rally and is presented with a class flag, complete with graduation year and colors.



53

**SCOTT BELAIR '69 AND RICHARD HAYNE '69**  
founded Urban

Outfitters, a specialty retail store that operates more than 550 stores in the United States and abroad and has a significant online business. Belair's \$20 million donation to Lehigh enabled the university to kick off its Mountaintop project.

51

**COMMUNITY SERVICE OFFICE**  
coordinates volunteers efforts of students, faculty and staff.



54

**CHANDLER-ULLMANN HALL**  
was built in 1884 from Pennsylvania sandstone. It was

considered by some to be the first modern chemical laboratory because of its large labs and chimneys that helped circulate fresh air and remove fumes from experiments. In 1994, the lab section was designated a National Historical Chemical Landmark.

52

**LEHIGH UNIVERSITY POLICE DEPARTMENT**

began as a one-man night watchman in the 1960s, grew into a security force by 1967, and was officially named a department in 1975.

49

**ARTHUR C. TAUCK JR '53 '79P**  
is a visionary in world tourism. His funding of the Tauck Scholars Program provides students with international summer internships.



50

**WRESTLING IN GRACE HALL**

Dedicated during Lehigh's 75th anniversary, Grace Hall was opened in 1942. Today, the facility, known as "The Snake Pit," is home to Lehigh's nationally ranked wrestling program and the women's volleyball program. It houses the 1,788-seat Turner-Leeman Arena and the Caruso Wrestling Complex.



## 48

### DATA X

In May 2015, Lehigh announced the launch of an exciting university initiative: Data X. Building upon Lehigh's traditional strengths in engineering, business and the liberal arts, Data X will expand the university's faculty in computer science and three key thrust areas, and will prepare students working across all disciplines to understand, create and collaborate through the latest technologies and methodologies available to researchers today.

## 47

### ROY AND ALICE ECKARDT

Roy Eckardt, a scholar of Christian-Jewish relations, founded the department of religion studies and served as its chair during much of his tenure at Lehigh from 1951 to 1982. Author of 18 books and many articles on moral philosophy and the theology of politics, he often collaborated with his wife, Alice, a professor emerita of religion studies.

## 46

### GREGORY FARRINGTON

was Lehigh's 12th president (1998-2006). During his tenure, Lehigh launched a \$75 million academic venture fund to encourage the creation of innovative academic programs. Admissions increased, as well as alumni giving. He oversaw construction of Campus Square, which was recently rededicated as Farrington Square.



## 44

### UNIVERSITY MACE

The (Centennial) Class of 1966 broke with tradition by presenting Lehigh with an academic scepter, or ceremonial mace, as its class gift instead of a plaque. The 38-inch oak mace is a symbol of order and academic dignity.



## 45

### THE SUN INN IN BETHLEHEM/ BOARD OF TRUSTEES

The historic Sun Inn in Bethlehem had sheltered the likes of John Adams, Martha Washington and the Marquis de Lafayette. On the afternoon of July 27, 1865, the inn was the site of a momentous gathering for Lehigh: the first Board of Trustees meeting.

## 43

### HENRY ALEXANDER NEVILLE

was the only Lehigh faculty member ever named president of Lehigh. He served as the university's ninth president (1961-64). His tenure oversaw the completion of the first phase of the Saucon Valley athletic complex (now Goodman Campus), the opening of Sayre Field and the establishment of the Center for Information and Computing Science. He died in 1983.



## 42

### GEORGE M. CRAWFORD '17

was a member of the Kosciuszko Squadron, a group of 10 American pilots who fought for Poland during its 1919-21 war with Russia. The group took its name from Tadeusz Kosciuszko, the Polish general who served with the Americans during the Revolutionary War. Crawford and the other Americans received the Cross of the Brave and the Polish Service Medal from the Polish government after the war.



## 41

### SAYRE OBSERVATORY

Lehigh's observatory was built in 1868 thanks to a \$5,000 gift from Robert H. Sayre, an original Lehigh trustee. Charles L. Doolittle, professor of mathematics and astronomy from 1875 to 1895, conducted research in the observatory that garnered international recognition for Lehigh. In the late 1920s, a new trolley line on nearby Brodhead Avenue resulted in vibrations that made accurate observations with the telescope impossible.

## 40

### CHARLES D. DENT '39

possessed an incurably restless spirit. During his career as a pilot, he collected countless European art treasures while campaigning for international air safety. He spent his final two decades resurrecting Leonardo Da Vinci's "Il Cavallo," a 24-foot-high equestrian statue.

## 39

### KENNETH R. FRENCH '75

is known for his work on asset pricing with Eugene Fama, the 2013 Nobel laureate in economics. They challenged the Capital Asset Pricing Model, which holds that a stock's expected return is determined only by its sensitivity to general market movements.

## 38

### LEHIGH TREES

Lehigh's hilly campus has long been noted for its stately trees, which can be traced back to the efforts of the university's fifth president, Henry Sturgis Drinker, an 1871 graduate. Drinker, who was trained as an engineer, had a deep interest in forestry. He was moved by the growing blight of the majestic chestnut trees that dotted Lehigh's campus when he was president in 1905, and he authorized funds for the reforestation of Packer Campus and Sayre Park.



## 37

### NELSON LEONARD '37

worked with teams of chemists on the synthesis and production of Chloroquine in time for the antimalarial drug to be used in the Pacific theater of World War II.

## 36

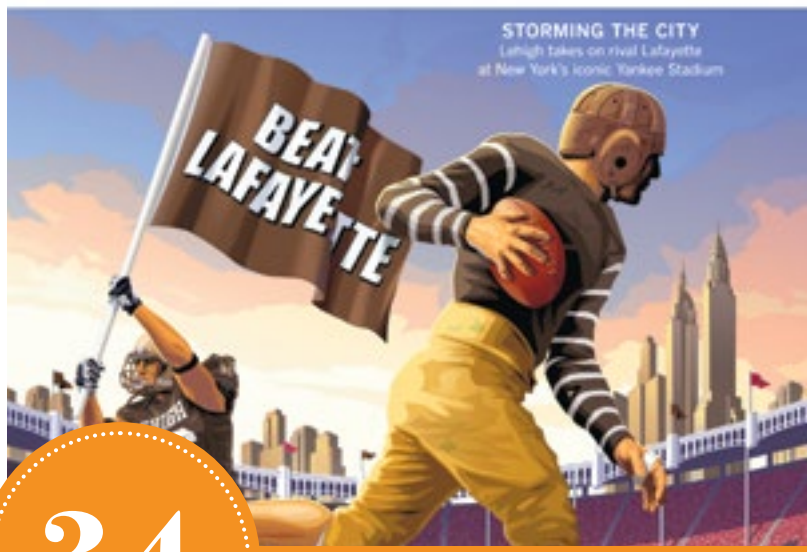
### WLVT-PBS39/NORTHAMPTON COMMUNITY COLLEGE

In the 1960s, administration professor John Cartwright, provost Glenn J. Christensen and education dean John Stoops established the legal foundations for an educational TV station. Trustees leased land for the station atop South Mountain for \$1 per year. Broadcasting began in 1965. Another project led to the formation of Northampton Community College.

FALL 2014

# LEHIGH

BULLETIN



34

## ALUMNI BULLETIN

IN 1913, THE LEHIGH ALUMNI BULLETIN WAS PUBLISHED for the first time. It was a humble start—a 12-page pamphlet about campus happenings that was designed to promote a closer relationship between alumni and the student body. Lehigh's fifth president, Henry Sturgis Drinker, used the *Bulletin* as a vehicle to address alumni. At the time, alumni groups at colleges across the country were publishing some kind of alumni magazine. Lehigh's Alumni Association was growing with each graduating class. Membership stood at 1,220 in 1900, but more than doubled within 20 years. Registrar Raymond Walters '07 was the first editor.



35

### PETER LIKINS

Lehigh's 10th president (1982-1997) continued the "transformation" of Lehigh that began under his predecessor. Under Likins' leadership, Lehigh opened the E.W. Fairchild-Martindale Library and Computing Center, purchased the Mountaintop Campus, replaced Taylor Stadium with Goodman Stadium, and built the Rauch Business Center and Zoellner Arts Center. He helped establish the Philip and Muriel Berman Center for Jewish Studies and led the way in founding the Patriot League. He oversaw great growth in Lehigh's financial aid program and the establishment of the Iacocca Institute.

33

### ROCCO J. TRESOLINI

was a distinguished and well-respected legal scholar and much-loved Lehigh professor of political science. He taught courses on constitutional law, authored books on the Constitution and American government and served as chair of the then-department of government shortly before his sudden death in 1967.

32

### JOURNALISTIC ENDEAVORS

*Washington Post* executive editor Martin Baron '78 '78G '14H is among alumni with celebrated careers in journalism who influence the national conversation. Bloomberg TV anchor Stephanie Ruhl '97 and CNN talk show host Michael Smerconish '84 also lead notable careers.

31

### IPD, IBE AND CSB

The Integrated Product Design, Integrated Business and Engineering and Computer Science and Business programs offer students unique multidisciplinary experiences.

30

### THE LAWRENCE HENRY GIPSON INSTITUTE

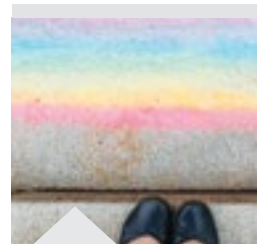
brings together 18th century scholars from history, English and modern languages. It was named after Gipson, a history professor from 1924-71. He left his entire estate to Lehigh.



29

### TAU BETA PI

is the oldest engineering honor society in the United States. It was founded at Lehigh in 1885 by Edward H. Williams Jr., then head of the university's mining engineering department.



28

### THE PRIDE CENTER

was created in 2006, the result of a recommendation by the University Committee on Diversity, a presidential task force. Originally named LGBT Services, its goal is to promote and sustain the academic and personal growth of students by creating a welcoming and affirming environment free from homophobia, heterosexism and gender bias, and to create a safe and supportive academic environment for LGBTQ (Lesbian, Gay, Bisexual, Transgender, Queer/Questioning) students.



27

### JOSEPH R. PERELLA '64 '06H

is a financier, philanthropist and Lehigh trustee. He is a founding partner and chairman of Perella Weinberg Partners, a global advisory and asset management firm. With his wife, Amy, he has endowed the Perella Department of Finance and four department chairs in the College of Business and Economics. The largest auditorium in the Rauch Business Center is named in their honor.

26

### WILLIAM C. HITTINGER '44

served as Lehigh's interim president from 1997-1998. His 40-year career in the electronics industry included positions at Bellcomm Inc., where he oversaw systems engineering for NASA's manned spaceflight program, and at RCA, where he was responsible for corporate technology, patents, licensing and international business and marketing development.



## 25

### CHRISTMAS HALL

The oldest building on Lehigh's campus—and one that predates the founding of the university—is Christmas Hall. It was built as a Moravian church. As Lehigh grew, Saucon Hall was built 50 feet to the east. An entryway was later built that joined the two buildings, resulting in the name Christmas-Saucon Hall.

## 24

### CHILEAN MINERS RESCUED

When 33 Chileans became trapped some 2,100 feet below the earth's surface in a 2010 coal mine collapse, engineer Bill Maloney '80, who had spent his career drilling ventilation shafts in coal mines, felt called to help. He helped develop the plan that led to the miners' rescue 69 days later.

## 23

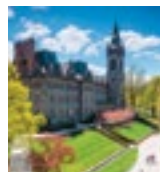
### MIKE CARUSO '67

arrived on South Mountain as a wrestling star, having never lost a match in high school, and he only kept winning for Lehigh. He won three consecutive NCAA championships, claimed four Eastern Intercollegiate Wrestling Association titles and compiled an overall record of 57-1. He won his final 50 matches for Lehigh—a record that stands today. For his achievements, he was honored as a charter member of the Lehigh Sports Hall of Fame. After graduation, Caruso enjoyed a hugely successful business career. The Caruso Wrestling Complex at Grace Hall is named in his honor.

## 22

### RICHARD HARDING DAVIS

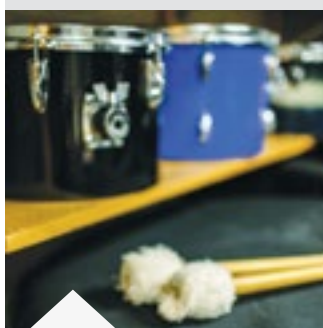
attended Lehigh from 1882 to 1884 and was one of the most prominent and influential newsmen, novelists and playwrights of his time. He also played on Lehigh's first varsity football team and helped found the Mustard & Cheese drama club.



## 20

### THE UNIVERSITY CENTER

On the heart of the Asa Packer campus, occupying a picturesque slope of South Mountain, the University Center is an imposing presence. Originally named Packer Hall after Lehigh's founder, it was the first structure specifically built for Lehigh.



## 21

### EDUARDO BEATO FOWLER

Take a close look at the covers for Lehigh's drums and percussion instruments. Many bear the name Beato, and the orchestra bags carry a memorial: "Eduardo Beato Fowler...Class of 1908." After earning an engineering degree from Lehigh, Beato took part in building two important Cuban harbors—Havana Harbor and Santiago de Cuba Harbor—and helped design and build the bridges on the Carretera Central highway. Later, as Havana's chief engineer, he was in charge of all government engineering.



## 17

### JOSEPH W. RICHARDS

was a noted metallurgist. He played a major role in transforming aluminum from an exotic luxury to an everyday necessity. A member of the Class of 1886, his senior thesis described the chemistry necessary to make aluminum's use practical. After getting his master's here in 1891, he became the first Lehigh student to earn a Ph.D. (1893). Richards spent almost his entire career at Lehigh, teaching metallurgy, mineralogy and blow-piping, and chairing the metallurgy department. He advocated for aluminum as the metal of the future when it was still expensive and difficult to mine.

## 19

### JOHN J. KARAKASH

chaired Lehigh's electrical engineering department and served 14 years as engineering dean. He recited French verse at poetry nights and often said, "At Lehigh, we educate students *through* engineering, not *in* engineering." He took an intense interest in students, staying late to help them with homework, occasionally sleeping overnight in his office.

## 18

### MULTICULTURAL AFFAIRS

Founded in 1992, the Office of Multicultural Affairs promotes Lehigh's commitment to diversity and inclusion through resources and advocacy for students from historically marginalized populations.

## 16

### THE RIVALRY

As of the end of the 2015 football season, Lehigh and Lafayette have played out their famous football grudge match a remarkable 151 times.



## 15

### FAZIL ERDOGAN '55 PH.D.

was an expert in fracture mechanics. In 1998, Lehigh held a symposium honoring Erdogan, professor emeritus of mechanical engineering and mechanics and former dean of engineering. Forty researchers from around the world, many of them Erdogan's former students, presented papers.

## 14

### ROBERT CUTLER

They called him "Boss." A generation of Lehigh student-singers revered Robert Cutler, who directed Lehigh's choirs from 1954 to 1979.

## 13

### FIRST SORORITIES

In 1975, Alpha Phi, followed by Alpha Gamma Delta and Gamma Phi Beta, became the first sororities to be recognized at Lehigh. Today, there are 12, with the latest, the historically African-American sorority Sigma Gamma Rho, chartering on campus this year.



## 12

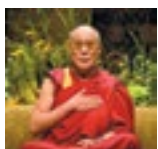
### MONROE J. "JACK" RATHBONE '21

In 1975, when the editors of *Fortune* chose 19 men for permanent membership in the magazine's Hall of Fame of Business Leadership, they included George Washington, Henry Ford, Thomas Edison—and Monroe J. Rathbone. In 23 years with Standard Oil Co., he rose to president and helped develop the world's first fluid catalytic cracking unit, dramatically increasing the efficiency of oil refining. He later served as president of Esso Standard Oil and as president of Jersey Standard.

11

### 1977 FOOTBALL NATIONAL CHAMPIONS

Coached by the great John Whitehead, the '77 Engineers posted a 9-2 regular-season mark, then knocked Massachusetts and the University of California-Davis en route to the Pioneer Bowl. There, in Wichita Falls, Texas, in December 1977, Lehigh blitzed Jacksonville State by the score of 33-0—and lifted the national championship trophy for the first time.



10

### A VISIT FROM THE DALAI LAMA

For six days in July 2008, His Holiness the 14th Dalai Lama delivered historic lectures at Lehigh on entitlement and well-being, drawing crowds to Stabler Arena that spanned generations and continents. In a lead-up to his visit, Tibetan Buddhist monks painstakingly created a sand mandala in the Linderman Library rotunda, then immediately dismantled it to illustrate the impermanence of life.

9

### KEVIN CLAYTON '84 '13P

served as Lehigh's interim president for the 2014-15 academic year. He and his family have longstanding ties to—and a profound love for—the university, and have provided continuous leadership and financial support.

8

### MADE IN SPACE

The first commercial product manufactured in space—microscopic plastic beads—used a chemical engineering process designed by Lehigh researchers with NASA funding. The tiny beads were made in 1983 in near-weightless conditions aboard the maiden flight of the Space Shuttle Challenger.



7

### WOMEN'S SOFTBALL

With 20 Patriot League regular season championships, 13 league tournament titles and eight NCAA regional tournament appearances earned in the past 25 years, Lehigh's softball program has established itself as one of the most successful in the nation.



6

### MILES ROCK

Among the men in Lehigh's inaugural graduating class of 1869 was

Miles Rock, a Civil War veteran who received a degree in civil engineering. A year after graduation, when the Alumni Association was formed, Rock became its first president. He gained prominence as head of the Guatemala Commission from 1883 to 1898, when he worked to determine the boundary between Guatemala and Mexico.

5

### GLOBAL OPPORTUNITIES

Lehigh is dedicated to providing all students with international opportunities where they can experience other cultures firsthand and get the skills necessary to be more competitive in an increasingly global job market.



3

### JOSEPH I. GOLDSTEIN

was professor of materials science and engineering and vice president for graduate studies and research. In 1969, he and Charles Sclar, professor of geological sciences, were selected by NASA to study particles taken from the moon's surface during the first two lunar missions. In 1970, he founded Lehigh's annual Microscopy School, which has trained 6,000 researchers from around the world. Goldstein also helped establish half a dozen research centers. In 2000, American astronomer Schelte Bus named an asteroid for Goldstein—4989 Joegoldstein.

4

### ALBERT HARTUNG

earned three degrees from Lehigh's English department and then spent four decades there as a professor. His teaching, colleagues said, was marked with compassion, rigor and genial good humor. His Middle English scholarship placed Lehigh on the world map.

2

### Clutch

is Lehigh's Mountain Hawk mascot and the face of Lehigh athletics today. Clutch is a relatively new arrival to South Mountain. While there is no species of bird known as "mountain hawk," it is not uncommon to spot hawks sailing over Lehigh's home on South Mountain. And our fine feathered fan, Clutch, can always be spotted cheering his fellow Mountain Hawks to victory.

1



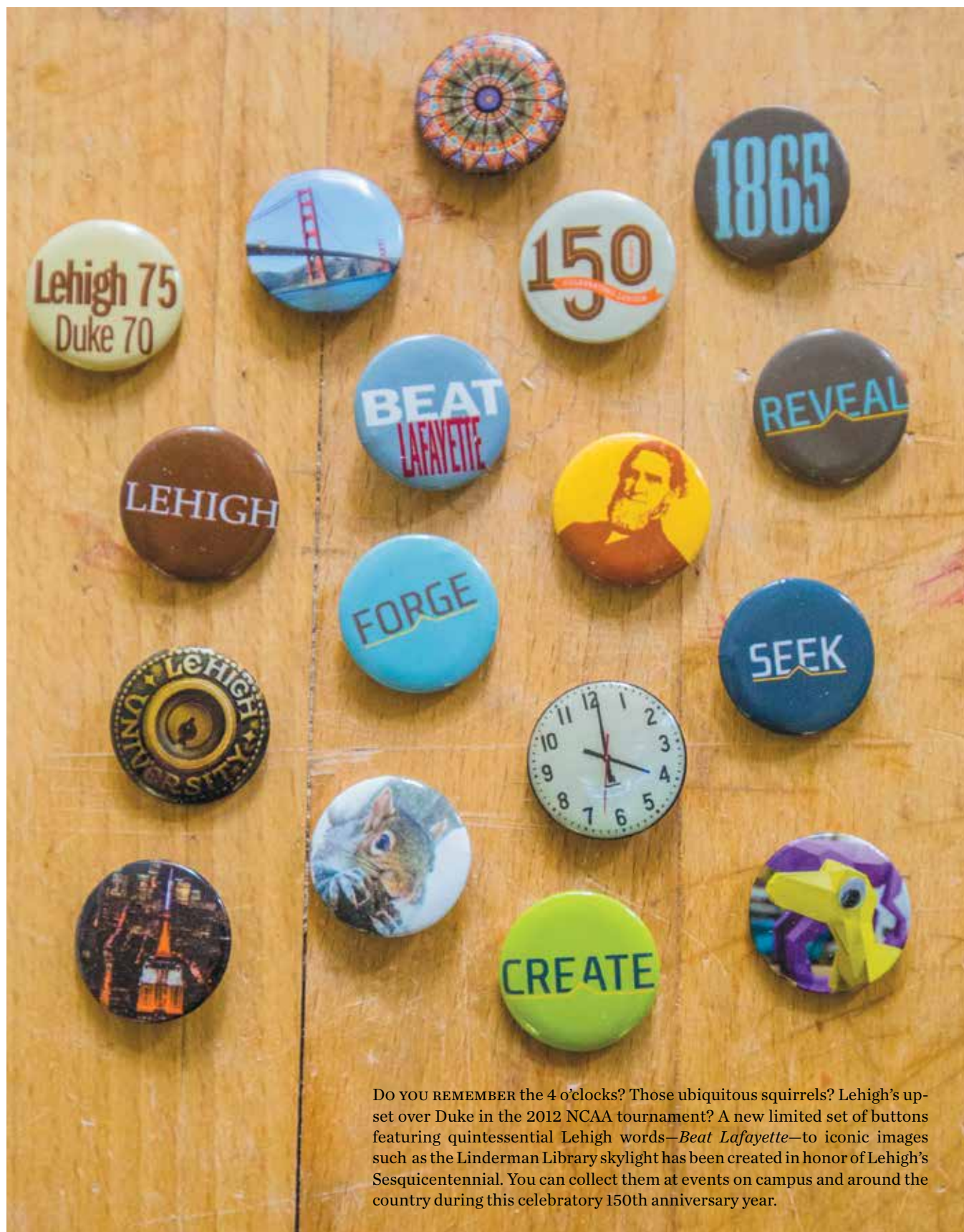
## PRESIDENT JOHN D. SIMON

AN INTERNATIONALLY RENOWNED chemist and highly respected leader in higher education, John D. Simon was formally installed as Lehigh's 14th president on Oct. 2, 2015.

The ceremony fittingly took place on Founder's Day, a celebratory day in Lehigh history for reflecting on founder Asa Packer's vision. Founder's Day 2015 also marked the kickoff of Lehigh's Sesquicentennial. Before assuming the Lehigh presidency on July 1, 2015, Simon served as executive vice president and provost at the University of Virginia, where he oversaw the academic administration of UVA's 11 colleges, library system, art museums, public service activities and foreign study programs. Previously, he was Duke University's vice provost for academic affairs.

His research interests have focused on understanding the structure and function of human pigmentation. Most recently, he collaborated with scientists to study the only known intact pigments recovered from the Jurassic period. He has authored or coauthored four books and nearly 250 academic papers.





DO YOU REMEMBER the 4 o'clocks? Those ubiquitous squirrels? Lehigh's upset over Duke in the 2012 NCAA tournament? A new limited set of buttons featuring quintessential Lehigh words—*Beat Lafayette*—to iconic images such as the Linderman Library skylight has been created in honor of Lehigh's Sesquicentennial. You can collect them at events on campus and around the country during this celebratory 150th anniversary year.



Inside a tent in front of the Rauch Field House, revelers check out the Linderman Library-themed 150th anniversary cake prepared by Lehigh Dining Services.  
**Photo by Ryan Hulvat**







Lehigh University Alumni Association  
27 Memorial Drive West  
Bethlehem, PA 18015-3734  
[lehigh.edu/alumni](http://lehigh.edu/alumni)

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Permit 498  
Burlington, VT  
05401

*Officer Jason Holschwander  
with Asa, a 4-year old Persian  
thoroughbred cross that Lehigh  
donated to the Bethlehem Police  
Department's mounted unit.*

***Photo by Christa Neu***



150  
CELEBRATING LEHIGH

[lehigh.edu/150](http://lehigh.edu/150)