

Lehigh Business

ISSUE NO. 1, FALL 2015

The **POWER** of **DATA**

An unprecedented amount of data is changing the way people around the world do business—and how Lehigh prepares its students.

See page 2.



LEHIGH
UNIVERSITY

COLLEGE OF
BUSINESS AND
ECONOMICS



*The College of Business and Economics
in Bethlehem, Pa., enrolls 1,271 students
from 41 states and 20 countries.
Top majors are finance, accounting
and marketing.*

Lehigh Business

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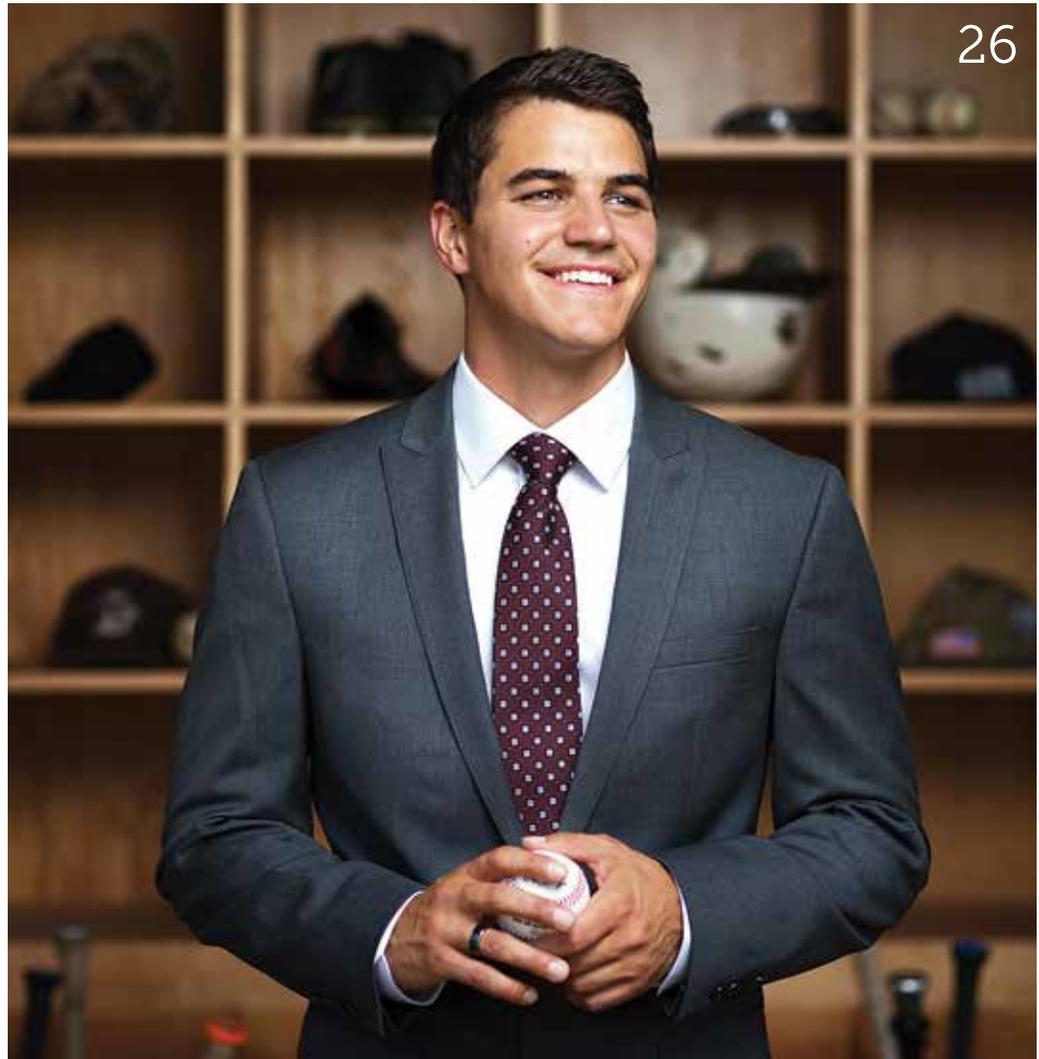


02 ON THE COVER

Lehigh's Data X, a university-wide initiative, will equip students with the skills to collect and analyze data from varied perspectives in different fields of study. *Illustration by Mark Smith*

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Biz Quiz

Test your business knowledge with our Biz Quiz. You can win bragging rights—and Lehigh swag. See page 32.



The POWER of DATA

BY KELLY HOCHBEIN • ILLUSTRATIONS BY MARK SMITH

You purchase toothpaste and milk at a store and the cashier hands you an arm's length of printed coupons, many of which will be quite useful on your next shopping trip. How does the store know that you like specialty coffee, Greek yogurt and a particular brand of paper towels? How did they figure out that you have a large dog or that you suffer from seasonal allergies? It all comes down to data.

Data drives just about everything these days: how people work, travel, shop, eat, exercise. Today, individuals can make decisions big and small armed with a wealth of information to which they've never had access before. Stuck in traffic? A mobile app can identify a better, faster route in real time. Planning a vacation on a budget? A website can provide the best time to book a flight. Need some exercise? An app can track workouts, examine progress over time and even compare performances to others.

Everyone uses data. And for many of the decisions people make, data-driven or otherwise, there's a business using data to influence those decisions.

"There's no business that can ignore the use of data," says Georgette Chapman Phillips, the Kevin L. and Lisa A. Clayton Dean of the College of Business and Economics. "I don't care if you're a retailer, if you are in financial services or accounting, whatever you're doing. You have a bank of data, and if you're not using that data in your business, you're squandering so many opportunities."

Companies have long utilized business insights and customer analytics to solve complex problems and personalize the consumer experience. The type of coupons customers receive with their receipts isn't accidental; nor are the appropriately timed newsletters in inboxes

or the items online retailers suggest buyers might like. The simple scan of a loyalty card provides information that allows a business to plan for demand, stock shelves accordingly and even provide those personalized coupons that encourage return visits. The more a business can learn about its customers, the better it can serve them—and the more it can sell.

Today, marketers have access to an unprecedented amount of data and the innovative technologies that allow them to manage and analyze it.

"All this data is changing the way people around the globe do business—and more importantly, it's changing the way Lehigh prepares students for life after graduation," says David A. Griffith, professor and chair of the Department of Marketing.



"All this data is changing the way people around the globe do business, and more importantly, it's changing the way Lehigh prepares its students for life after graduation," says David A. Griffith, professor and chair of the Department of Marketing.

Enter Lehigh's new Data X initiative.

Not a major, minor or center, Data X is a university-wide initiative that will equip students with the necessary skills to not only collect and analyze data, but also to approach it from the varied perspectives of different fields of study. Data X will develop in students the computational thinking skills that will enable them to better navigate the challenges—technical, intellectual and ethical—of an increasingly digital and social media-focused world. The initiative, announced earlier this year, is much bigger than the data that lies at its foundation.

"Students don't all need to be crack programmers," says Daniel Lopresti, director of the Data X initiative and professor and chair of the Department of Computer Science and Engineering. "It probably behooves a lot of them to learn programming skills, but there are other kinds of skills that allow students to work with and manipulate data in powerful ways. [We also will develop] an awareness of data science and what the op-

portunities are, what the tools are, and then how to feed the system and interpret the results.”

Through a large hiring initiative, Data X will expand its faculty working in computer science and related fields to make available to students of all majors broadly accessible courses that will achieve these goals.

The imperfect data of an imperfect world

In the early days of data analysis, businesses would collect structured data such as units and monthly sales and enter them into Microsoft Excel. Examining that data took time—an analyst would run functions, consider possibilities and try to recognize patterns.

“If you had perfect data in your spreadsheet,” says Lopresti, “you could make some conclusions.”

Today, “big” unstructured data is a major factor.

“We’re collecting megabytes, gigabytes, terabytes of data in very short periods of time about everything from industrial processes to business experiences to your personal experience, your entertainment experience,” says Lopresti. “We’ve gone from basically a very data-poor environment to a very data-rich environment.”

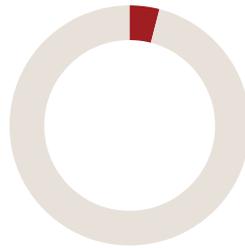
Much of this data is too large and complex for traditional applications to process. IBM breaks this “big data” into four elements: volume, velocity, variety and veracity. Volume refers to the sheer quantity of data available; velocity to the speed at which data is collected, organized, analyzed and decisions are made. The variety of the data collected has exploded in recent years. According to an IBM infographic, for example, 400 million tweets are sent daily by approximately 200 million Twitter users. This is in addition to the more than 4 billion hours of video viewed on YouTube each month and the 30 billion pieces of content shared on Facebook. The final “v,” veracity, has to do with how much the data on which decisions are based can be trusted. How reliable is the information?

Big data is noisy and incomplete, says Lopresti. “So you need computational techniques that can deal with the volume, the velocity, the variety and the noise and the real-world aspects of [big data].”

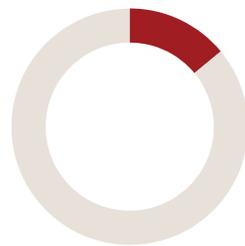
People—intelligent, thoughtful, well-trained people—are helping the world get better and better at developing these techniques.

Today’s computational infrastructure is constantly evolving. People have built, and continue to build, the increasingly innovative

GROWTH IN COMPUTER SCIENCE CLASS ENROLLMENT



Fall 2010
Four percent of the student body, or 214 students, were enrolled in computer science classes at Lehigh.



Fall 2015
That had jumped to 14 percent, or 716 students, in computer science classes within five years.

According to some estimates, there will be 1.4 million new jobs in computing by the year 2020. But there will only be 400,000 graduates qualified to fill them.

computational infrastructure required to collect, disseminate, hold and manage massive amounts of data. This infrastructure comes in the form of high-performance computing techniques, mobile computing techniques, cloud computing, machine learning, pattern recognition and data mining—all methods of extracting useful information from complex sources. Techniques for dealing with the volume, velocity and variety of data are improving over time, thanks in part to the vast quantities of data available today.

As a result, an online retailer can now see not only what customers bought, but also everything they browsed and how much time they spent viewing a particular item. Social media platforms such as Facebook and Twitter provide a massive amount of data about users’ likes and dislikes and, on a larger scale, about societal trends. More data, however, doesn’t necessarily mean more answers.

“I think sometimes we can lose sight of the question because we get enamored with the data. Thoughtful questions and careful consideration are key,” says Griffith.

“You can do web-based analysis [of unstructured data],” says Lopresti. “You can put in numbers, press a button and you’ll get an answer out of it. That’s dangerous because, unless you really understand the nuances of the way these things work, it’s not as simple, unfortunately, as using your toaster—you put the toast in, press a button, and either the toast comes out warm or it doesn’t. It’s not like that.”

All the data in the world won’t do much if you’re not smart in how you use it, says Lopresti.

A deep connection and a strong foundation

Lehigh’s department of marketing, one of the Data X initiative’s three initial thrust areas (which also include digital media and bioengineering), is already invested in computer and data science. Many members of the marketing faculty conduct related research and provide students with meaningful hands-on experiences, including, for example, opportunities to work with real datasets to solve problems for actual businesses. Data X will take these efforts even further by providing opportunities for students to consider those same problems from different perspectives.

“While we have been doing things across the business school pretty well, I think [Data X] moves us outside of the business school and will move us to interacting a whole lot more

Can vs. Should

There is power in data, and with great power comes great responsibility. In addition to technical know-how, students must be able to responsibly navigate the many pitfalls that accompany the abundance of data available today: cybercrime, privacy violations and reputation-damaging social media posts.

“Every single business in the world is desperately worried about these things,” says Daniel Lopresti, director of the Data X initiative and professor and chair of the Department of Computer Science and Engineering.

Recent news of the hacking of government computers that exposed the personal information of more than 20 million people and the seemingly endless

data safe? How can cyber safety be improved? Related Data X courses will offer venues through which Lehigh students and faculty can have these essential conversations.

However easily data is obtained, students must understand how its use affects people and how to approach data ethically, says David A. Griffith, professor and chair of the Department of Marketing. Data can provide valuable insight for businesses, and people provide much information freely, but too much use can make customers feel vulnerable. How much of private information should be public?

“It’s kind of like the hard sciences in the sense that sometimes we ask if we can do some-

“It’s kind of like the hard sciences in the sense that sometimes we ask if we can do something rather than if we should do something.”

—DAVID A. GRIFFITH

reports of businesses falling victim to online attacks bring to the forefront the need for constant innovation in cybersecurity. How can a business—or the government, for that matter—keep its

thing rather than if we should do something,” says Griffith.

Data provides a better understanding of what’s going on in the world and of people’s thoughts and feelings, which can



help marketers craft messages that convey respect for a diverse range of values and opinions. But, says Griffith, the loudest, most prominent voice shouldn’t be the only one heard when reading noisy data. Just because something seems obvious doesn’t mean it’s the right choice.

“We have to be thinking about it from the ethical standpoint of what’s right to do, what principles drive us,” says Griffith. “If we can move in that direction, our students will be much better off in working in extremely diverse workplaces.”

Entering those diverse workspaces—more of which are demanding the types of skills Data X aims to develop—a student equipped with an ethical,

interdisciplinary mindset will be able to see things others might not see, says Griffith. All this data can provide new insights, and if students view the data with an interdisciplinary approach, those insights might be far deeper. Perhaps, he says, they’ll solve problems well beyond how to enhance customer value to generate increased sales.

“The more we can understand about our data and what data we’re providing and who could be using that data, I think we could be better off as a society,” says Griffith. “If our Data X initiative eventually results in more deeply thinking, better educated, more thoughtful, more socially conscious future citizens, I think we’ve done a good job.”

with computer science, journalism, psychology, sociology, mathematics, et cetera,” says Griffith.

Interdisciplinary study has long been one of Lehigh’s strengths. The program in Computer Science and Business, a popular joint initiative between the College of Business and Economics and the P.C. Rossin College of Engineering and Applied Science, already allows students to enroll in both colleges and complete a unique dual degree, bridging the gap between business and computer science. Through its hiring efforts, Data X will increase the variety and expand the availability of computer and data science courses—already in high demand—to all students, regardless of their major.

Through Data X, the marketing department is currently

conducting a dual search for new faculty members—one marketing expert studying computer science and one computer scientist looking at marketing. Rather than compartmentalizing areas of study, efforts like these will provide an unprecedented connectivity across campus, leveraging and complementing its existing strengths.

“The Data X initiative places a spotlight on the importance of interdisciplinary understanding and highlights the fact that we’re all using data and we’re all using different aspects of analysis, tools, techniques, computational sets—you name it—to draw on these things. I think that what it’s going to do is get us to all think more broadly,” says Griffith.

For more information on Data X, go to lehigh.edu/datax.



We think our new annual magazine will be a wonderful way to keep you up-to-date on the groundbreaking research and new initiatives of the College of Business and Economics at Lehigh University as well as the accomplishments and inventiveness of our students and alumni.

This year, we launched a new Master of Science in Management program for non-business degree students, welcomed dynamic new hires and strengthened our Executive Education

programming. Our cover story, *The Power of Data*, outlines the College's exciting role in Lehigh's new Data X initiative, which will better equip our students with the skills they'll need to navigate the challenges of an increasingly digital and data-driven world.

As Lehigh commemorates its 150th anniversary this academic year, we join the university in its celebration of

the people, places and traditions that have made Lehigh what it is today, and we look excitedly to the future. In this issue, we highlight the important research of several of our faculty members, including: when female leadership might be an advantage for companies, how color impacts consumer perception, how foreign investors make real estate decisions, and the effect of coal-fired power plant pollution on a child's birth weight.

We also bring you stories of our students, including their global and community outreach, and our alumni, including Cathy Engelbert '86, the first woman to head a major U.S. professional services firm, and Glenn DuPaul '14, the first director of basketball analytics for the NBA's Brooklyn Nets.

We hope you enjoy this first issue of *Lehigh Business*. You also can get daily updates on the College at cbe.lehigh.edu. As the College grows, we look forward to all that we can accomplish.

Georgette C. Phillips

Georgette Chapman Phillips
 Dean of the College of Business and Economics
 @LehighBizDean

LEHIGH UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS AT A GLANCE

#31

Best undergraduate Business Schools by Bloomberg Businessweek

1,271

Students enrolled

20 & 41

countries states

plus U.S. Virgin Islands and D.C. are represented in the student population

15:1

Student to faculty ratio

TOP MAJORS:

Finance
 Accounting
 Marketing

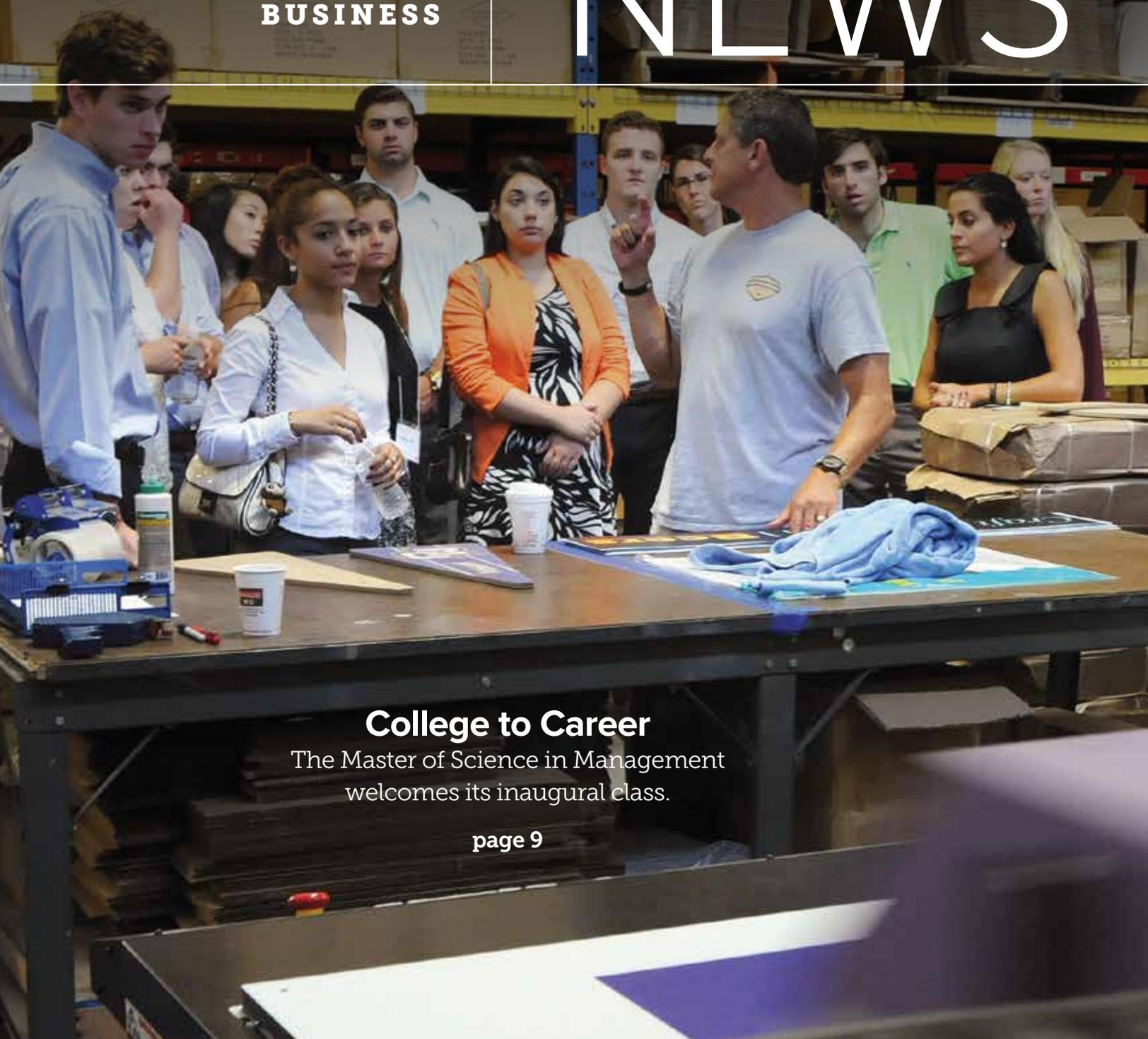
INTERDISCIPLINARY DEGREES

Integrated Business and Engineering (IBE)

Computer Science and Business (CSB)



Placement rate



College to Career

The Master of Science in Management
welcomes its inaugural class.

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INSIDE

DIVERSITY IN THE WORKPLACE

Impact symposium focuses
on how businesses can
thrive in today's marketplace.
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A conversation
with Dean Georgette
Chapman Phillips.

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BUSINESS NEWS

Hires, program changes
and an In Memorium to
a beloved professor.

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Managing a Diverse Workplace

College of Business and Economics hosts symposium to foster dialogue on workplace diversity.

BY MARY ELLEN ALU

Business leaders from companies that included Starbucks, Verizon and Raytheon Company joined educators at Lehigh for a daylong impact symposium that aimed to foster conversations about workplace diversity and to put leaders on a path to better management of tomorrow's workforce.

"Diversity is a word that has an evolving definition," said Dean Georgette Chapman Phillips of the College of Business and Economics, which organized the September 2015 symposium. "Everybody, of course, has a different view, but the one thing that we can agree on is that today's workforce, tomorrow's workforce is not going to look anything like yesterday's workforce. The workforce of tomorrow is going to be a rich blend of different cultures, different pathways of life. And we, as managers in the business world, have got to begin to put our arms around what it is going to look like to manage this diverse workforce."

The symposium, titled "Enhancing Enterprise Value in an Increasingly Diverse Society," included a presentation by Dr. Stephen K. Klasko '74, president and CEO of Thomas Jefferson University and Jefferson Health in Philadelphia, Pa., who spoke on reinventing healthcare in America and Jefferson Health's vision. Also, Amy M. Tingler, regional director of operations in the Northeast Pa. region for the Starbucks Corp., addressed Starbucks' "Race Together" initiative; and Magda Yrizarry, senior vice president and chief talent and diversity officer for Verizon Communications, addressed why diversity matters.

"We hope that this day of information-sharing and gathering will allow us to figure out how to enhance enterprise value," said Phillips, "because at the end of the day that's what we're all trying to do in the context of the new workforce."



Dr. Stephen K. Klasko '74

Panel discussions centered on fostering dialogue and understanding among diverse constituents, as well as workplace challenges and opportunities.

In her talk on why diversity matters, Yrizarry said it might be easier and quicker to come to conclusions by oneself, but research shows that innovations tend to be richer with diverse teams. She used the analogy of making dinner for her family. If she asked everyone's opinion on what to prepare, she said, the process would likely be more complicated, but perhaps everyone would be more satisfied.

Panelist Hayward L. Bell, chief diversity officer for Raytheon, recalled a time when his company's best engineers, without success, were trying to figure out why a complex piece of equipment had failed. One of the company's leaders had turned to a new junior hire and asked, what do you think? She offered a perspective that ended up solving the problem.

"That's what inclusion looks like," said Bell. In all likelihood, he said, the junior hire was not going to speak up, but the leader had the foresight to invite her into the conversation.

The value in that, he said, is that "you never know what you're going to get."



Panelists Robert E. Gabrys, Timothy Grever, Sandy Harris, Bernard J. Milano and Dennis Whitney.

LIVE TWEETS FROM #LEHIGHBIZTALKSDIVERSITY

-  @GriffithDavidA We have to approach individuals as individuals," panelist & CBE prof.
-  @LehighBusiness How to measure progress? Discover the impact you're trying to add.
-  @LehighBusiness "We need to go from Blockbuster to Netflix..."—a new business model
-  @LehighBizDean Increased access to decrease healthcare disparity starts with culturally competent care
-  @PrecPetty Inclusion is good. Diversity is better. Inclusive diversity is best. —Dr. Robert Gabrys, of @NASA



College-to-career

The new M², the Master of Science in Management program, welcomes its inaugural class.

BY MARY ELLEN ALU

Thomas Farrell '15 finished Lehigh with a journalism degree, but he wants to refine his analytical and quantitative skills to better position himself for a career in the financial industry. French major Garilania Reyes '15 wants to be able to leverage her knowledge of biology and languages to get a job in healthcare management. Charlie Baldwin '15, who has a degree in environmental studies, wants to become fluent in the language of business as he pursues his career interests in sustainable development.

They are among the 22 students in the inaugural class of the new Master of Science in Management (M²) program. The

full-time, 10-month program—the first to be launched in the region—is designed to give recently graduated, non-business degree students the core business skills they'll need to succeed in today's competitive job market.

"This is an exciting day for us," Andrew Ward, associate dean for graduate programs and the Charlot and Dennis E. Singleton '66 chair, said on the students' first day. "We've reached the starting line."

The inaugural class includes recent college graduates who received degrees in a cross section of disciplines, including bioengineering, psychology, physics, computer engineering, behavioral neurosci-

ence, English, international relations and chemical engineering. Despite their diverse backgrounds, the students share a desire to develop a fundamental business skillset that will give them an edge in their search for high-level job opportunities. Many also hope the program will help them refine their career goals.

The offerings, said Shannon Cassidy '15, who has a degree in global studies and political science, is "a recipe for success."

To help students learn about career opportunities, program director Mary Theresa Taglang tapped experts in the students' chosen career fields to join in two-week orientation sessions, including executives from Colgate-Palmolive, Sunny Delight Beverages Co., New Energy Risk and Tyco.

"We're trying to act like sponges and take it all in," said Farrell. In just the opening few days, he said, students had learned how to enhance their personal brands and make the most of networking opportunities, including through LinkedIn.

Baldwin, who traveled to Nicaragua and India as part of his studies, minored in sustainable development at Lehigh. He has an interest in renewable energy, but could also see himself working at the crossroads of the entertainment, education and environmental fields. Given the three pillars of sustainability—social, environment and economic—he said the program will help strengthen his knowledge of the economic arm of a sustainable system.

"Because I can see myself possibly going into so many different directions [with a career], this was very attractive to me," he said.

M² students will earn 30 credits through lockstep courses in accounting, finance, statistics, management, economics and marketing. They also will have the option of a study trip to Peru over winter break.



GARILANIA REYES '15

Wants to leverage her knowledge of biology and languages to get a job in healthcare management.



THOMAS FARRELL '15

Wants to refine his analytical skills to better position himself for a career in the financial industry.



CHARLIE BALDWIN '15

Wants to become fluent in the language of business as he pursues career interests.

Q

&

A

**A conversation
with Georgette
Chapman Phillips,
dean of the
College of Business
and Economics**

Your mantra is “live in beta,” meaning that you can’t wait for perfection before you make a move. How does that relate to your role as dean of the College of Business and Economics?

There is sometimes a hesitancy to move forward on things until it’s absolutely perfect. *We can’t make this change until we’ve crossed every ‘t,’ dotted every ‘i,’ taken into consideration every possible contingency, played out every scenario.* By then the opportunity’s gone. There’s this sweet spot in any kind of change. This is not a license for recklessness. We’ve done our due diligence. We’ve gotten input from all the relevant stakeholders. We’ve done our benchmarking. We’ve done our contingency planning. We’ve looked at it from every angle that we can think of, and now it’s time to move, because you’re never ever going to answer everything. So that’s what “living in beta” is—understanding that you have to wait for it to roll out, perhaps, to see a flaw. And then when you see that flaw, you can go in and you can fix it.

Q. One of your first initiatives at Lehigh was the new Master in Management program. Why was it important to launch that program?

It fits right in between where we are and where we want to be. We have a very, very strong undergraduate program. We have to build out more robust graduate offerings. The Master in Management is for people who have just finished college. It’s a really important first step.

Q. Where do you see the MBA (Master of Business Administration) program going?

We’re headed for a daytime MBA program. It will be a one-year MBA, following a calendar year, January to December. It would include an internship. The way that the faculty task force has put this together—I have to give them incredible kudos for innovation, creativity, thinking outside the box, thinking a totally new experience for students.

The MBA world is very crowded right now. So how do we add value to an already crowded field? Well, one year. But you don’t want to sacrifice quality. You want it to be a rigorous, pedagogically sound program delivered in 12 calendar months. We’re going to start faculty discussions this fall—what the program should look like, how to staff it. But it won’t look like anything else that’s being offered in the United States today. A lot of top-ranked MBA programs in Europe are one year. It’s innovative and creative, but it’s not crazy. The one-year programs in the United States are generally really for people who already have their undergraduate business degree. Our program will be geared toward people who are career changers, rather than career enhancers. You are going to be working very hard for 12 months. It’s not for the meek.

Q. As Lehigh launches Data X, its new data analytics initiative, what do you see as the potential impact on the College?

We are a small business school, and we can’t be all things to all people, but we can be really good in Data X. So, all of our present partnerships with the engineering school, such as the IBE [Integrated Business and Engineering] and CSB [Computer Science and Business] programs, will be strengthened. We are working a data analytics perspective into, for example, the new MBA course offerings. We are putting together a certificate in business analytics. You’ll choose three classes, and you’ll have to take a computer science class. We’re saying, yeah, these are business students, and they are not going to be computer scientists, but they will know how programmers talk. They are not just in one narrow field. We want people to be broader than that. We want them to take finance, accounting, economics, marketing and business information systems, and choose among that.



Q. *What opportunities do you see with Executive Education?*

We have an interim director of Executive Education who's been doing a bang-up job. Soon it will be time to hire a permanent executive director. The key is to begin with better connections with the Lehigh Valley business community and then branch out from there. Learning doesn't just happen on the undergraduate level or the graduate level. Hopefully, it's what happens on a life-long basis. That's what executive education is about—delivering learning to Lehigh Valley companies either through custom programs or open programs.

On the custom program side, we really want to partner with Lehigh Valley businesses. We ask, what do you need? And working very closely with our faculty, plus other faculty we can bring in, we teach that. On the open enrollment side, we figure out what types of programs we think we could offer to individuals, usually sponsored by their companies.

We've restarted the Breakfast Roundtables, bringing together industry professionals and industry leaders from across the Lehigh Valley to hear a speaker. It's a networking event, because we want people to give as good as they get here.

Q. *You welcomed new hires for the 2015-16 academic year. What do they bring to the table?*

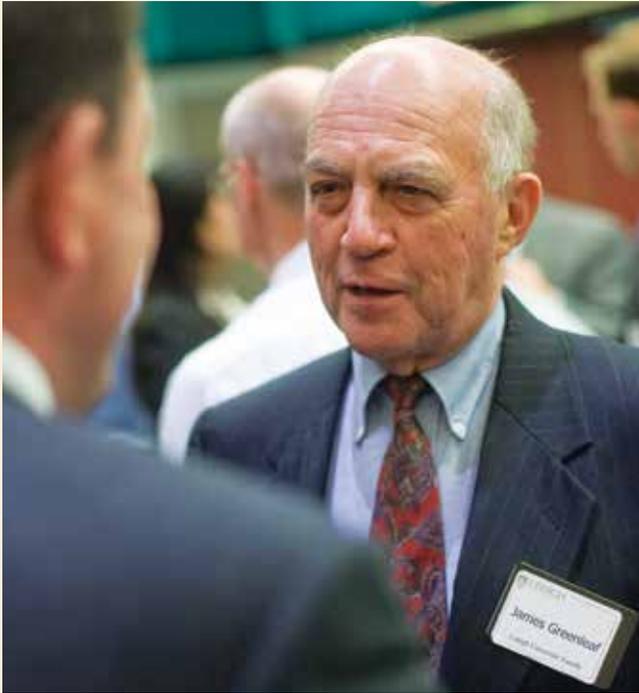
Every department has a new assistant professor, except finance. They bring youth and energy, and they bring new research insights. You have to keep hiring on the junior level or else you become stale. You have to build your future, and you build your future by hiring the right junior faculty. On the senior level, we made two very good hires this year. One in accounting [C. Bryan Cloyd], and one in finance [Kathleen Weiss Hanley]. Both of them bring decades of experience and name recognition in the business and

academic community as being top flight. They're both very good teachers.

Q. *What are your plans for expanding Lehigh's presence outside the United States?*

It's strategic. We've got to become much more global. We are starting, hopefully, a certificate in international business for our undergraduates.

I've been working hard, other people have been working hard, in beginning relationships with universities in Latin America for faculty exchange, student exchange, research, with ideally reaching a point where, if you want to study international business in Latin America or if you want do research on international business in Latin America, we're the place to go.



In Memoriam

James A. Greenleaf '66G '93P, who influenced the lives and careers of many Lehigh students and alumni as professor and chair of the Perella Department of Finance, died July 22, 2015. He was 75. At Lehigh, where Greenleaf served for 38 years, he specialized in the areas of derivatives, risk analysis and portfolio management. He served as chair of the Perella Department of Finance from 1997-2003 and served as a principal and consultant with several money management firms. A mentor beloved by many graduates, he leveraged his familiarity with a variety of financial institutions to provide his students with meaningful and practical experiences in the financial services industry.

HIRED



Kathleen Weiss Hanley, a prominent teacher and researcher in the areas of capital formation and regulation, has assumed one of four Joseph R. Perella and Amy M. Perella Chairs in

Finance and the Directorship of the Center for Financial Services. She was previously deputy chief economist and deputy division director at the Securities and Exchange Commission. "The College has demonstrated a strong commitment to high quality research and teaching and attracts some of the best students in the country," she said. "I look forward to interacting with them in the classroom."



C. Bryan Cloyd, a leading teacher and researcher in the areas of tax policy and the effects of taxation on business decisions, joined Lehigh as a Joseph R. Perella and Amy M. Perella

Chair in the department of accounting. Cloyd most recently was the John E. Peterson Jr. Professor of Accounting at Virginia Polytechnic Institute and State University, where he taught various courses on income taxation and a Ph.D. seminar in accounting research methods. "Lehigh's accounting program has an excellent reputation for preparing students for full-time employment," he said. "I am impressed with the strong student body and look forward to sharing with them my passion for accounting."

NAMED



Economics professor **Todd A. Watkins** was named executive director of the Martindale Center for the Study of Private Enterprise. 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 at Lehigh. He also co-founded the Integrated Product Development (IPD) 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 succeeds Rich Aronson, who retired.

Several assistant professors and a professor of practice have joined the College faculty.

- **Keith Botner**
assistant professor of Marketing
- **Michael Catalano**
professor of practice in Marketing
- **Dawei (David) Zhang**
assistant professor of Management
- **Weijia (Daisy) Dai**
assistant professor of Economics
- **Seth Richards-Shubik**, *assistant professor of Economics*
- **Neal Snow**
assistant professor of Accounting
- **Bright Asante-Appiah**, *assistant professor of Accounting*



Buying Abroad vs. Buying at Home

An assistant professor of finance examines how foreign investors make real estate decisions.

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An assistant professor of marketing examines how colors impact perception.

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DOES COAL-FIRED POWER PLANT POLLUTION AFFECT BIRTH WEIGHT?

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MORE FACULTY RESEARCH

Across departments, faculty members are engaged in research.

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When is Female Leadership an Advantage?

BY WENDY SOLOMON

When the Great Recession began in 2008 with the collapse of Lehman Brothers, some in the media speculated it would not have happened if the firm had been run by women and had been more of a “Lehman Sisters,” as it were.

It was a notion that intrigued Corinne Post, an associate professor of management who studies women in leadership positions. While having more women in leadership may seem the obviously right thing for companies to do, Post wondered if, in fact, it could be proved that women make better leaders. And if so, under what circumstances?

Her curiosity led her to pursue questions about the effect of women on boards and as team leaders.

“As a researcher, I’m always worried about blanket truths,” Post said. “It’s not necessarily always the case that women are always better leaders. My question was, in what type of contexts would they be more likely to emerge? Are there certain qualities and characteristics” that make women better leaders?

Work in organizations has become increasingly “relational,” Post said, where collaboration and building trust and teamwork are important to getting a task successfully completed. Given the widespread assumption that women are more relationship-oriented than

men, perhaps it is also the case that women are better at being team leaders, Post theorized.

So she embarked on a study where she looked at more than 86 teams at 29 leading research and development companies. The study was conducted in 2008 and 2010 and supported by part of a \$265,000 National Science Foundation grant.

According to Post’s research, women excel in unifying large teams that consist of individuals from different departments with diverse specialties and who are spread out over a large geographic area.

Teams whose members come from a variety of departments and functions are notoriously difficult to work on, Post said. Employees

from technical and creative sides, for example, might not understand the work of the other or they make erroneous assumptions.

“They may assume, ‘Oh, you’re just the marketing guy, just tell us what we need,’” she said.

Post’s study showed that teams led by women were better at fostering cross-departmental collaboration.

The results also showed that women who led teams were better at building team cohesion, which may suffer because of turf wars between departments. And women who led teams that were both large and geographically dispersed performed better than those led by men.

“When you’re on a huge team, there’s a good chance people don’t speak up or



WHY IT MATTERS: When a team requires a lot of coordination—because of functional diversity, size and geographic dispersion—female leadership is an advantage. Women might bring leadership qualities that encourage high-quality relationships, bonding and connectivity among members.

are not heard. It can get really unwieldy,” she said. But Post conjectured that women may have better communication and coordination skills to work with large teams spread out over a distance.

Post’s work about women team leaders ties into her earlier research on women on corporate boards. Post and collaborator Kris Byron, an associate professor of management at Syracuse University, conducted a meta-analysis, in which they gathered every study—published and unpublished—ever done on the topic of women and boards, from small firms to large firms.

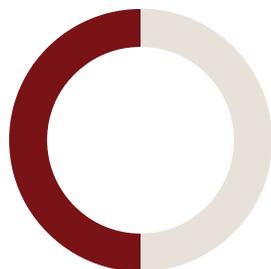
“We found across the board in all the studies, overall, firms that had more women on their boards tended to have higher accounting returns,” Post said.

INSIDE THE BOARDROOM



2014

Of the 339 new directors appointed in Fortune 500 boardrooms, 99 were women, representing 29 percent of the total.



2024 Projections

Women will account for 50 percent of new board directors in the Fortune 500 in the United States.

HEDRICK & STRUGGLES, JULY 29, 2015



WHY IT MATTERS:

The takeaway message, Puzakova said, is companies “have to be really careful about how they present their information, what color choices they make. It could be at a press conference background, a press release or a big ad they buy in The New York Times or Wall Street Journal.”

The Color of the Medium is the Message

An assistant professor of marketing examines how colors impact perception.

BY WENDY SOLOMON

Case studies of how corporations handle crises are a staple at business schools. Johnson & Johnson’s handling of its cyanide-tainted Tylenol in 1982, for example, is often taught as a classic in good crisis management. But if there are lessons to be learned from best practices, there are certainly lessons to be learned for companies that do the wrong thing.

Headlines filled with negative corporate news pique the interest of Marina Puzakova, assistant professor of marketing. Puzakova has found fertile scholarly ground studying how people respond to negative news, such as product failures, recalls or malfeasance.

She also has pursued a related line of intellectual inquiry by studying the effect of colors, specifically red and blue, on consumer perception.

After two years of experiments involving more than 800 participants, Puzakova and three other researchers from Drexel University, Texas A&M University and Monmouth University found those colors can have a major impact on consumer perception.

Puzakova hit on the idea several years ago as she was reviewing the literature in the field of color psychology, but found little on the use of color in corporate messaging of negative information. People associate the color red with feelings of danger, threats and mistakes, and blue with openness, peace and tranquility, previous studies showed. So she formulated a hypothesis: “If red is greatly associated with mistakes and threats, probably presenting information about failure could somehow influence consumers’ more negative reactions to the firm or to the brand.”

The project, which involved four experiments, took place between 2012 and 2014. In one, participants were asked to read a fictitious news story about a new laptop battery that drained too rapidly, then were presented with an online news page that included headlines that the fictitious company’s chief executive officer was addressing the stakeholders about the defective product. It included a photo of the CEO seated against either a red or blue background.

The results? People who saw the negative information followed by the presentation against a red background had a more negative attitude toward the CEO and the company, Puzakova said. Similarly, people who saw the presentation against a blue background had a more favorable attitude.

The study also looked at the effect of color in a company’s response. If a CEO offered remedial action, participants felt more favorable about the company and its CEO and were more open to additional information when the response was delivered against a blue background, Puzakova said.



Does Coal-Fired Power Plant Pollution Affect Birth Weight?

BY DARYL NERL

Women who live with pollution generated by coal-fired power plants may be far more likely to give birth to a child with below normal weight than women who are not exposed to similar pollution, according to a new study by Lehigh researchers.

Muzhe Yang, associate professor of economics, and co-author Shin-Yi Chou, professor of economics, studied 52,000 full-term births in a four-county New Jersey area immediately downwind of Portland Generating Station in Upper Mount Bethel Township, Pa., from 2004 to 2010.

They found that the likelihood of having a low birth weight (2,500 grams or less) baby jumped from 2 to 3 percent if the mother was exposed to sulfur dioxide emissions during the first month of pregnancy.

“This is a 50 percent increase in the occurrence of low birth weight among full-term babies,” Yang said. “So really, this is a big effect, and full-term, low birth weight usually results from intrauterine growth restriction.”

In 2011, the U.S. Environmental Protection Agency ruled that the plant—on the west bank of the Delaware River—was the sole reason that four downwind New Jersey counties often had sulfur dioxide levels in excess of EPA’s National Ambient Air Quality Standards. Warren County is across the river from the plant. Sussex, Morris and Hunter-

don counties are farther away, but close enough to be affected by sulfur dioxide released from the plant and carried by prevailing westerly winds, Yang said.

According to a 2007 report by the Environmental Integrity Project, the Portland Generating Station was ranked fifth among the top 50 “dirtiest” power

plants by sulfur dioxide emission rate. The researchers said the 30,465 tons of sulfur dioxide emitted by the plant in 2009 was more than double the sulfur dioxide emissions from all power-generating facilities in New Jersey combined.

Then-owner GenON REMA LLC challenged in court the EPA’s authority to impose emission limits on the plant. But in 2013, the U.S. Third Circuit Court of Appeals upheld the so-called “Portland Rule,” and in 2014, the plant stopped burning coal under a consent decree with the N.J. Department of Environmental Protection. The researchers recognized that the ruling provided them with a unique opportunity to study the causal impacts of a coal-fired power plant on its downwind neighbors.

“It’s about the most famous ruling in recent history because this is the first time that the EPA won the case where the sole contributor is identified,” Yang said. “In general, when we talk about air pollution, it is very difficult to identify one single source.”



WHY IT MATTERS:
Weighing the long-term impact of coal-fired power plant pollution on prenatal life can help improve the cost-benefit analysis needed in establishing EPA regulations.

The study—the first on the impacts of prenatal exposure to a uniquely identified large polluter, Yang said—notes that full-term, low birth weight indicates an intrauterine growth restriction and that low birth weight infants can die at rates of up to 40 times greater than their normal weight counterparts.

In addition to being capable of causing respiratory distress, sulfur dioxide also is a known precursor in the formation of fine particle, often referred to in the scientific community as PM_{2.5} (particulate matter smaller than 2.5 micrometers in diameter). These smallest of dust particles, which are about 1/30th the width of a human hair, are “actually the biggest threat of all air pollutants,” Yang said, “because they can just penetrate through our lungs and permanently stay inside our bodies.”

The researchers combined data from several sources: birth certificates, power plant emission records, air pollution data and weather data.



WHY IT MATTERS: Examining the differences between investment decisions at home and abroad may lead to a better understanding of the forces that are impacting our closely connected world economy.



stake in a big building. When controlling such matters as economic activity, real estate investment opportunities, depth and sophistication of capital markets, legal framework, administrative burdens and regulatory limitations, and the socio-economic factors at home and abroad, Price found that real estate investors tend to purchase larger foreign holdings but own a smaller stake in those assets compared to their investments at home.

This could mean that firms are looking to make the additional burden of foreign investment worthwhile by putting their money into larger assets than they would domestically, Price said. Conversely, the smaller stake taken in the foreign holdings might indicate a desire by the real estate investment company to reduce some of that burden by sharing it with other investors, he added.

The researchers also looked at the impact of capital market development on foreign investment, finding that firms tend to invest more in their home countries if the capital market is strong. Foreign investment is more likely when the capital market in the property nation is less developed.

Buying Abroad vs. Buying at Home

How do foreign investors make real estate decisions?

BY JENNIFER MARANGOS

Financial press reports on foreign investors buying prime U.S. real estate, like a Canadian investor's deal to buy a Manhattan office tower for \$2.25 billion, prompted assistant professor of finance S. McKay Price to delve into the differences between foreign and domestic real estate investments.

"Big money is flowing across national borders," says Price, an assistant professor in the Perella Department of Finance and the Collins-Goodman Fellow in Real Estate Finance. "Investment companies are buying in places where their headquarters are not." Price was curious: Is there something different to buying abroad vs. buying at home? If so, what?

Articles in *The Wall Street Journal* and other outlets are often about foreign investors purchasing large, iconic buildings, Price said. But what hasn't been clear is whether the real estate sales garner media coverage because the buildings are the more well-known and more valuable assets of a country, or whether they are the types of properties that attract foreign investors.

"Do they want the splashy stuff?" asks Price, who teamed with Nathan Mauck of the University of Missouri-Kansas City on the study. "Are they trophy hunting? When you go foreign, are you more likely to buy bigger?"

Based on the data, the answer is "yes," Price says. Foreign investors gravitate toward larger assets.

The researchers culled data from SNL Financial, which includes 70,000 properties in 84 countries, purchased by 699 publicly traded real estate investment trusts, headquartered

in 38 nations.

Price said that while the data represents a snapshot of time—the holdings of publicly listed real estate investment companies worldwide as of the end of the first quarter of 2014—the asset portfolios show clear connections to a specific country, based on the location of each asset. This is a key differentiator, Price said, as other efforts to figure out what has an impact on foreign investment decisions usually center on the buying and selling of securities, which have less distinct geographic lines.

Next, Price looked at whether foreign investors are buying an entire property or a

NEW YORK REAL ESTATE DEALS



Waldorf Astoria
301 Park Ave.

Buyer: Anbang Insurance Group, Beijing, China

Sale Price: \$1.95 billion



Three Bryant Park
1095 Avenue of the Americas

Buyer: Ivanhoé Cambridge, Canadian property investor

Sale Price: about \$2.2 billion



Time Warner Center
10 Columbus Circle

Buyer: Related Companies, Government of Singapore Investment Corp. and ADIA (Abu Dhabi Investment Authority)

Sale Price: \$1.3 billion

THE WALL STREET JOURNAL. TIMES WARNER. BLOOMBERG BUSINESS

More Faculty Research

Across the accounting, economics, finance, management and marketing departments, faculty are engaged in research. Among the work:



PAUL BROCKMAN

Senior associate dean, Faculty & Academic Affairs; Professor, Perella Department of Finance; Joseph R. Perella and Amy M. Perella Chair

RESEARCH STATEMENT

Most of my research is in corporate finance or market microstructure. In corporate finance, I have focused on managerial disclosure policy and dividend payout policy. In market microstructure, I have examined liquidity provision in an electronic limit order book environment.

JOURNALS

Journal of Finance, Journal of Financial Economics, Journal of Financial and Quantitative Analysis, Journal of International Business Studies, Journal of Corporate Finance, Journal of Empirical Finance, Journal of Banking and Finance, Financial Analysts Journal

SOCIETAL IMPACT

The financial press covers corporate payout policy, corporate disclosure policy and the liquidity provision process on a daily basis. I try to relate current events to my research during classroom discussions.



SHIN-YI CHOU

Arthur F. Searing Chair Professor, Department of Economics

RESEARCH STATEMENT

My research focuses on the economics of health and health care. My primary research interests are the health and well-being of children and the cost and quality of the health care sector.

JOURNALS

Journal of Health Economics, Journal of Law and Economics, American Journal of Economics: Applied Economics

SOCIETAL IMPACT

My research, especially on obesity, garnered much attention in the economics and health policy research community, and was mentioned widely in public media.



NEVENA KOUKOVA

James T. Kane Fellowship Associate professor, Department of Marketing

RESEARCH STATEMENT

I investigate how marketers should price the various formats of a multi-format product, what communication strategies to pursue for different formats and how to design the formats to improve consumer evaluations.

JOURNALS

Journal of Marketing Research, Organizational Behavior and Human Decision Processes, Journal of the Academy of Marketing Science

SOCIETAL IMPACT

I introduce *Wall Street Journal* articles about issues covered in class, and I discuss scholarly research in the marketing strategy domain that can help managers achieve desired outcomes.



HEIBATOLLAH SAMI

John B. O'Hara Professorship Professor, Department of Accounting

RESEARCH STATEMENT

I investigate issues related to foreign firms listed in U.S. markets. Additionally I investigate the implication of legislation. I am also conducting research in accounting information over time in developing markets.

JOURNALS

The Accounting Review, Contemporary Accounting Research, Auditing: A Journal of Practice and Theory, Journal of Accounting and Public Policy and Accounting Horizons.

SOCIETAL IMPACT

My research informs my students about the details of rules, regulations and standards and their effect on financial statements.



OLIVER YAO

George N. Beckwith '32 Professorship, Professor and department chair, Department of Management

RESEARCH STATEMENT

I focus on the intersection of information systems and supply chain management by examining the diffusion and use of information technology in supply chains and quantify the business value of information technology at the supply chain level.

JOURNALS

Management Science, Information Systems Research, Marketing Science, Production and Operations Management, Journal of Operations Management

SOCIETAL IMPACT

My research is related to many current business issues such as taming the bullwhip effect in supply chains using technology, e-tailers' pricing for "Black Mondays" to win the competition and designing successful information-enabled supply chain programs.



Cathy Engelbert '86

Deloitte's new CEO talks about her time at Lehigh, taking risks and balancing family and career.

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INSIDE

MAKING MEAD

Greg Heller-LaBelle '10G thrives on challenge.

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EXPANDING LEHIGH'S REACH IN CHINA

Yu Du '15G aims to establish an alumni club in his homeland.

pg. 20

SMARTER BASKETBALL

Glenn DuPaul '14 uses his analytic skills to help the NBA's Brooklyn Nets.

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FACE OF LEHIGH

Alumni share their milestone moments.

pg. 24

Making Mead

Greg Heller-LaBelle '10G thrives on challenge.

BY JOE MCDERMOTT

As a new entrepreneur in a unique field, Greg Heller-LaBelle '10G quickly realized the fruitlessness of trying to tell people what he did. Either they didn't understand him or they didn't know the product—even though it is one of the oldest beverages ever made. “Now I just say that I make alcohol out of honey,” he says with a laugh. “It's easier, and then I can explain it to them.”

The growing popularity of mead—an ancient alcoholic beverage most commonly associated with the Viking raiders of the Middle Ages—is no joke. As consumers continue to develop a stronger and more educated palate for craft beers and wines, Heller-LaBelle and partner Mike Manning, owners of The Colony Meadery in Allentown, Pa., have begun to capture a part of that market with a beverage that is quite different from most others.

Mead is fermented much like beer and wine, with hops, spices and fruits to add varying tastes, but it is honey-based and gluten-free. Archaeologists have found recipes and samples that are thousands of years old.



Because of his background as a beer blogger, Heller-LaBelle initially saw the Lehigh Valley as a great location for another craft brewery. With only two craft breweries at the time and more than a million people, he considered the region underserved.

After more thought, he realized a meadery would open a new market.

The partners opened The Colony Meadery in 2013 inside a former Mack Trucks facility, quickly sold more mead than they had expected and expanded.

A Pittsburgh native who grew up in Bethlehem, Heller-LaBelle earned his undergraduate degrees at the University of Pittsburgh. He spent a couple years working for a non-profit economic development organization in Pittsburgh before realizing, he says, that “I needed some letters behind my name.”

He chose Lehigh for his master's in business administration (MBA), a decision he says he never regretted.

It was Dale Falcinelli '70, '72G, '98P, who ran the VentureSeries at the time, who introduced him to Jeff Glassman of Fire Island Beer Company, who was giving a presentation.

Heller-LaBelle recalls: “Jeff was the one who told me, ‘Don't you realize how lucky you are. You know what you want to do. Do you realize how many people spend years in a cubicle trying to figure out what they need to be happy?’”

“I think about that conversation, a lot,” he says. “It means knowing you are never going to be happy under the wrong circumstances. But it took me a while to realize he was right.”

Expanding Lehigh's Reach in China

Yu Du '15G received his MBA from Lehigh in May 2015 and returned home to Shanghai, China. He did not, however, completely leave his alma mater.

Du worked with Oliver Yao, professor and chair of the Department of Management, and others to strengthen Lehigh's presence in China for prospective students and alumni.

With the support of the Of-

fice of Undergraduate Admissions, the Office of Alumni Engagement and the Lehigh in Shanghai study-abroad program, Yao and Du planned an information session in Shanghai in summer 2015 for prospective students. Du also planned to begin an alumni club to connect the many Lehigh graduates living in China.



“If there's an alumni club, we can create more events in China and more people can know Lehigh,” he says.

Megan Stevens of the Office of Alumni

Engagement says such clubs rely on strong volunteer support. She says Yu's excitement over gathering volunteers and bringing the network together “is inspiring.”



SPOTLIGHT

Cathy Engelbert '86

CEO, Deloitte LLP
New York City

Cathy Engelbert '86 rose through the ranks of Deloitte LLP to become its CEO. She's the first woman to lead a major U.S. professional services firm.

› **MY FATHER WORKED THREE JOBS** and my mother worked too, sending eight kids through college, five at Villanova, one at Lehigh, very excellent colleges ... He had a goal to send his eight kids to college. He accomplished that goal. Unfortunately he died young, at 51 years old, but it was after I graduated and had started with Deloitte.

› **I'M ONE OF EIGHT KIDS WITH FIVE BROTHERS**—so it's kind of a male-dominated family. I came to Lehigh when it was four-to-one, male to female, kind of male-dominated. I then went into the public accounting profession. It was extremely male-dominated. So I think it was my training from family, school and then into a profession that I actually just felt comfortable with.

› **I WAS IN THE TOP 10** of my graduating high school class. But then I came to Lehigh where everybody was valedictorian and top 10 in their class. It kind of shocked me from an academic perspective to be with my peers who were just as smart, or smarter, than I was.

› **I DON'T REMEMBER** who gave me the advice to transfer to accounting, but it was the best advice I could have gotten.

› **ONE OF THE MAIN REASONS** I went to Deloitte was because I played basketball here at Lehigh. Over the Christmas break we got three days off ... and the Deloitte people reached out to me knowing I was here at Christmas break in double sessions. In January when I scored I don't know how many points in a game,

they saw my name in the paper and wrote me a little handwritten note that said, "Congratulations, I saw you in the *Philadelphia Inquirer!*" So that kind of sort of connected me—sports and Deloitte.

› **FROM THE DAY I STARTED** at Deloitte, people would say, "Oh she has presence beyond her years." Well, that's what I got at Lehigh, the executive presence. And that's an important part of leadership because you need to gain followership from people who report to you. If they see you're able to handle stress—people call it grace under fire or be your best in your darkest moment—in a way that is measured, you're the calming influence.

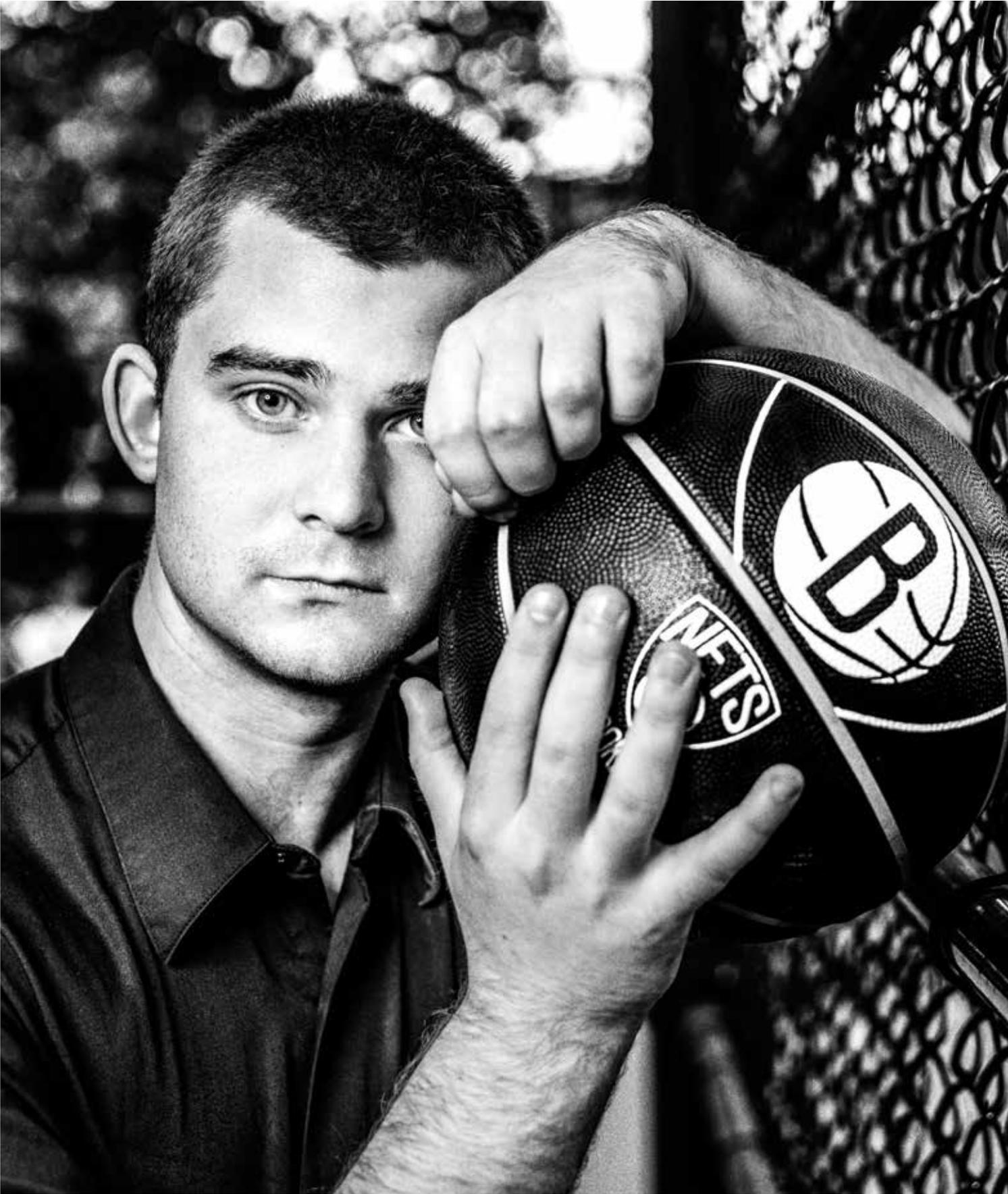
› **THE THING THAT STRUCK ME** when I was being interviewed by all the accounting firms was that everyone said, Lehigh produces the most well-rounded people in the workforce. And I'll never forget that because I always had that on my mind to prove that I could do it all.

› **ONE OF THE REASONS** I was able to [balance career and family] is I had a supportive spouse, reliable child care, and really a passion for making sure I spent quality time with them.

› **DON'T BE AFRAID OF TAKING RISKS** Don't be afraid of an opportunity. Don't be afraid of an overseas assignment.

› **IF YOU LOOK AT THE TYPES OF HIRES WE WANT**, we want them to have traditional accounting and audit [skills] but we also want them to have skills around data science, analytics and visualization—people who are good at helping us figure out artificial intelligence and things like that.

› **PEOPLE WHO KNOW ME WELL** know that I am uncomfortable with the attention around being the first woman CEO of a major U.S. professional services firm. What I've been inspired by the most are the handwritten letters I have received since my announcement went out ... They actually inspire me to be that role model.





Smarter Basketball

Glenn DuPaul '14 is using his analytic skills to help the NBA's Brooklyn Nets.

BY MARY ELLEN ALU

When the Brooklyn Nets made its 2015 NBA draft picks, Glenn DuPaul '14 joined the executives and scouts in the team's inner circle, providing input to those deciding who to draft and who to trade. As the Brooklyn Nets' director of basketball analytics—the first person to hold that title for the team—DuPaul applies his analytical skills to help inform the team's personnel processes and other decisions.

"I don't feel like I go to work," says DuPaul, who graduated from Lehigh with a degree in economics. "It's sports, and it's interesting, and it's what I like."

DuPaul broke into the world of sabermetrics (think *Moneyball*) as a Lehigh student. He interned with Baseball Info Solutions, a national baseball analytics firm in Coplay, Pa., and wrote for trade publications such as *Beyond the Box Score* and *The Hardball Times*. One of his articles, *Controlling the Strike Zone and Batting Average*, was nominated for an award by the Society for American Baseball Research. He later interned for two seasons with the Kansas City Royals.

As the NBA began to embrace advanced analytics, DuPaul recognized his expanding options. He landed his job with the Brooklyn Nets in November 2014 and now takes raw data to run models for the team to evaluate and project player performance. He not only looks at the team's players but also at the bigger picture, evaluating college players and those on other NBA teams. If an executive asks about a potential trade or a coach asks about opponents, DuPaul uses his ongoing research to answer their questions.

"It's trying to objectively evaluate talent and to do it better than other teams," he says. "Analytics are a tool. The general manager has to make player personnel decisions, and he gets as much information as he can to help him," including salary, medical and scouting information. "Analytics are a piece of that puzzle. You can weigh them more—or less."

All along, DuPaul's goal had been to apply his Lehigh degree and his sports knowledge to land a job with a professional sports team. He got help at Lehigh from his adviser, James A. Dearden, department chair and professor of economics, and Larry Taylor, also a professor of economics. Both guided him in choosing classes and internships so that he could eventually turn his dream into reality.

"I wanted to use the resources at Lehigh to mold myself into becoming the best candidate possible to get a job like the one I have," DuPaul says.

Given the dynamics of basketball—the motion of the sport and the teammate effect—the analytics can be more challenging than in baseball. He'll look at such things as which players can get to certain spots on the court and take shots they're most likely to make, or which players will force others into bad locations. He gets support from his colleagues.

"There's a lot of strong basketball knowledge and basketball talent here," says DuPaul. "I bring something to the table that they really didn't have, and that gives me confidence."

DuPaul, who as a student would reach out to professional teams for guidance in breaking into the field, is trying to pay it forward. He routinely gives advice to students, pointing out the need for a strong coding and statistical background to do the work he does. "It can be a dream industry," he says.

Faces of Lehigh

Tell us about the milestones in your life. Share your update at lehigh.edu/facesoflehigh.



Lauren Silberman '13 is one of a few young accountants to earn the Elijah Watt Sells Award for outstanding performance on the Uniform CPA Examination. She now works in the alternative investments assurance group at PricewaterhouseCoopers.

I am a firm believer that we should all learn something new every day.

LAUREN SILBERMAN '13



JOSHUA BARRICKMAN '00G

Joshua Barrickman '00G, money manager at Vanguard Group, Malvern, Pa., is headed to become the new industry "Bond King," according to a *Wall Street Journal* article. After completing his MBA at Lehigh, he was hired at Vanguard and later assigned to the bond index desk. He is now in charge of the firm's bond indexing across the U.S. and Canada.



THERESA GLEBOCKI '84

Theresa "Terry" Glebocki '84 was hired as the new executive vice president, chief financial officer and treasurer of Tropicana Entertainment Inc. She will serve in those capacities for the company and its subsidiaries. Glebocki received her bachelor of science degree in accounting from Lehigh.



ANDREW STANTEN '99G

Andrew Stanten '99G, co-founder and president of Altitude Marketing, has joined the advisory board of The Rising Tide Community Loan Fund, a credit supplier to Lehigh Valley small business and community development projects. RTCLF provides financing options to entrepreneurs with risk factors that make it difficult to obtain funds from traditional lenders.



MRITHYUNJAY "MITTU" CHANDILYA '02

The CEO of the AirAsia India airline and first employee of the clean sheet Airline startup, Mittu Chandilya '02, has recently also been appointed as the company's managing director and its first full-time independent executive director.

In an article from Press Trust of India, AirAsia India Chairman Subramaniam Ramadorai said, "[Chandilya] has managed to propel the airline forward in terms of its scale of operations and turn every challenge into an opportunity by building an agile and secure operations structure."

At Lehigh, Chandilya was a gryphon who earned his Bachelor of Science degree in business and economics with triple majors in marketing, supply chain management, and information systems. In 2010, he received his MBA from INSEAD (France) and Tsinghua University in Beijing. Prior to working for AirAsia, he was the head of services practices for Asia Pacific at Egon Zehnder International and part of management at Ingersoll Rand.

Chandilya has managed to propel the airline forward in terms of its scale of operations.

A photograph of three students smiling. In the foreground, a student is holding a laptop. The laptop screen displays a website with the word 'IMPACT' in large, stylized letters. The website also features a 'Playlist' section and various images. The background shows two other students, a woman and a man, both smiling.

Supporting Communities Through Hip Hop

A Mountaintop team explores music, entrepreneurship and software ventures.

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INSIDE

MANAGING HIS FUTURE

Mike Garzillo '16 sets his sights on Major League Baseball.

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THE WEDDING HOTEL

An IBE team explores the viability of a hotel dedicated to weddings.

pg. 28

CYBERSECURITY

The Business Information Systems Club hosts Cybersecurity Summit.

pg. 31

TAUCK SCHOLARS

Tauck Scholars Program celebrates its 20th anniversary.

pg. 30



Managing His Future

One of the best amateur baseball players in the country is also a Lehigh academic all-star.

BY DARYL NERL

Mike Garzillo was 3 years old when he first started telling people that he wanted to grow up to play shortstop for the New York Yankees. Now in his senior year in Lehigh's College of Business and Economics, Garzillo '16 still has that dream—or at least something very close to it—in his sights.

In June, the Mountain Hawks' starting second baseman was selected in the 38th round (1,143rd overall) of the Major League Baseball amateur draft by his favorite team.

"I think my family was just as excited or even more excited that it was [the Yankees]," Garzillo said. "It was really cool because it was something that I always wanted."

But the Yankees are going to have to wait. Garzillo decided to return to Lehigh in August 2015 to complete his studies in business management. He also intends to play one more spring for the Mountain Hawks.

"I'm extremely grateful for the opportunity to go to Lehigh and get a degree with that name on it," he said, "because I know that somewhere down the line, when I have to stop playing baseball and somebody tells me that I'm done, I'll have that degree and I'll be able to be successful in that regard as well."

Garzillo isn't just one of the best amateur baseball players in the country. He's also an academic all-star. His 3.45 grade point average earned him a spot on the spring Patriot League Academic Honor Roll. He has twice been named to the Academic All-Patriot League.

"I'm going back to school and then hopefully next year I can improve my draft stock and go a little bit higher in the draft," Garzillo said. The Yankees didn't make a contract offer that would have made it worthwhile for him to leave college a year early, he said.

"If things had worked out and there was an offer that would have been good for myself and my family, I would have loved to start my career this year," he said. "I think God has another plan in store for me. It's working out how it's supposed to. And this year, hopefully, it works out exactly how it's supposed to."

Garzillo thought he might have "a pretty good shot" in this year's amateur draft. *Baseball America* had named him a second team All-American player at the end of the 2015 college baseball season. The magazine then ranked him 201st out of all the amateur draft-eligible prospects in the country.

The accolades followed a breakout campaign during which he set a Lehigh record with 13 home runs, led the Patriot League with 54 runs batted in and was named Most Valuable Player in the Patriot League tournament, which the Mountain Hawks won. Garzillo's .651 slugging percentage was 19th best among all Division I college players nationwide and his 75 hits was the second highest total in Mountain Hawks history. Only Matt McBride, a AAA player in the Colorado Rockies farm system and the last Lehigh player to play in the Major Leagues, ever had more hits in a season.

In the classroom too, Garzillo's drive is evident.

"The same dedication Mike puts forth on the field he puts forth in the classroom,

and you can see that," said Anne-Marie Anderson, the Joseph R. Perella and Amy M. Perella chair in Department of Finance. "He has a desire to be successful, not only for himself, but for his peers too, which is why I say he is an all-around good guy."

Garzillo participates in Lehigh's Student-Athlete Mentors program, which partners upper-class and first-year student athletes to help them adjust to campus life.

"It's an awesome program because you get to meet so many new people and help them with some of the things we may have struggled with our freshman year," he said.

Garzillo said he chose business management as his major because it can be applied in numerous work settings when his playing



days are done, including, potentially, baseball front office work. But he acknowledged he hasn't given those possibilities a lot of thought just yet.

"Right now, I find it very difficult to think about anything other than becoming a professional baseball player, because I believe wholeheartedly that I will accomplish my ultimate dream," he said.

"However, I'm so grateful for the high-level education I am getting here at Lehigh that it would be silly to take it for granted and not do anything with it. If my degree doesn't open up doors for me after senior year because I start my baseball career, I have solace in knowing that it will somewhere down the road in my life."



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The Wedding Hotel

An IBE team explores the viability of a hotel dedicated to weddings.

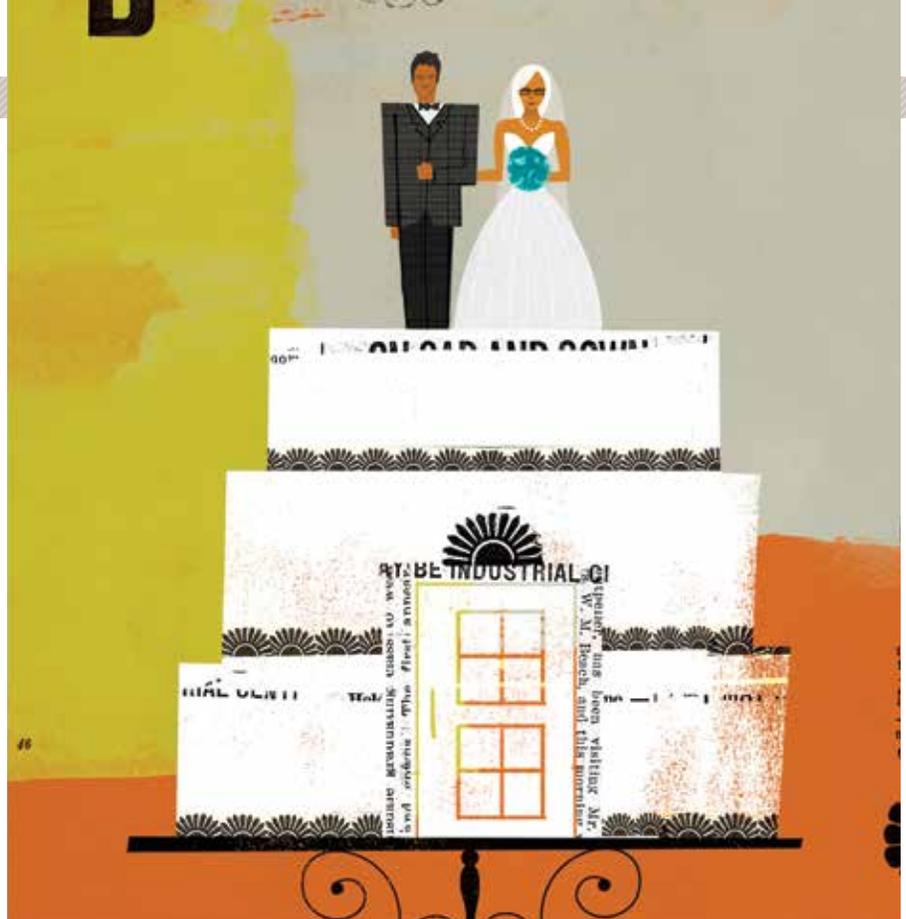
BY KELLY HOCHBEIN

Weddings are big business. Joe Volpe, owner and chief executive officer of the Philadelphia-based Cescaphe Event Group, would like to make them even bigger. Cescaphe orchestrates more than 600 events annually at its venues, and Volpe thought a hotel dedicated exclusively to weddings would enable his company to oversee even more of the customer experience.

Volpe enlisted students in Lehigh's Integrated Business and Engineering program (IBE) to explore its viability. Louis Battaglia '15, Jose Botran '15, Tyler Edwards '15, Tina Lu '15, Sto Mahoney '15, Henry Smither '15 and Caitlyn Tzou '15 spent a year developing a plan for hotel Nuziale, the Italian name for wedding.

Offered jointly by the P. C. Rossin College of Engineering and Applied Science and the College of Business and Economics, IBE integrates courses in business and engineering with mathematics, science, English, humanities and foreign language. Its two-semester, six-credit capstone design course allows student teams to work with faculty mentors on the feasibility of new product concepts.

Volpe says he felt the IBE program would be a terrific way "to bring life to the project through the eyes and imagination of motivated and exceptional students."



The IBE team received an education in both the wedding and hotel industries. After getting to know Cescaphe and its mission, team members gained a better sense of the market by meeting with hotel-management professionals and exploring existing wedding venues that offer overnight accommodations. Using Volpe's interest in building from the ground-up, students developed a plan.

"This is where the diverse background of our team really helped us excel," says Battaglia. "The civil engineers were able to design the structure, the industrial engineers planned how people and resources would move throughout, and the finance students forecasted the financials for the life of the project."

In its final presentation, the team recommended that Cescaphe build a

five-story luxury hotel on a pre-selected, 40,000-square-foot lot in Philadelphia's Northern Liberties neighborhood. Its plan included 29 large standard rooms and generous, well-appointed event spaces. Students also provided a marketing strategy and planned the flow of events.

Volpe was pleased to see his idea transformed into a concrete plan.

With a location in Philadelphia in mind, he hoped to "give new life" to an abandoned waterfront property with a one-of-a-kind wedding and event destination for the region.

"We really didn't know what we were getting ourselves into at first," says Mahoney. "Little did we know that we were going to have some of the most interesting and also challenging work of our college careers."

SPOTLIGHT

IBE Project

Integrated
Business and
Engineering



GONZO POCKETS

Students in Lehigh's Integrated Business and Engineering program (IBE) worked with Gonzo Pockets, a startup company in Allentown, Pa., that produces a specialized mesh for lacrosse stick heads. The team addressed marketing and manufacturing concerns and explored expanding the Gonzo product line. Team members included Eric Sciorilli '16, Josh Solomon '16, Tyler Stangle '16, Lisa Heintzelman '16, Geoff Gill '16 and Anil Tipirneni '15. Gonzo Pockets was formed by brothers Lou and Desi Gonzalez, who grew up playing lacrosse on Long Island, N.Y. They were always trying to find the best mesh.

Supporting Communities through Hip Hop

BY AMY WHITE

The proposal for the student project began with a line from rapper Jay Z: *No lie, just know I chose my own fate. I drove by the fork in the road and went straight.*

For faculty mentor Joshua Ehrig, the *Renegade* lyrics were a perfect setup for the project, which forced students out of their comfort zones to explore hip hop music, entrepreneurship and software ventures through Lehigh's self-directed 12-week summer Mountaintop program.

The diverse team of students who embarked on the journey of discovery had a goal of developing a "minimal viable product" that would go live by the program's end.

At the start, students quickly learned each other's strengths and differences and how to perform together as a team, said Asante Asiedu '17, a marketing major minoring in entrepreneurship and finance.

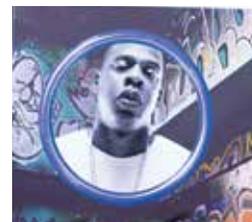
Their first few weeks were a crash course in entrepreneurship. They learned how to do business model canvases, conduct customer discovery and create an MVP—a rapidly built product with minimum features to test with customers. They learned about social media, guerrilla marketing and hip hop's history and culture.

"Generally, in an entrepreneurship course, you'll have CEOs or founders of startup companies," said Ehrig, a professor of practice in the department of management and a longtime hip hop fan. "In this case not only did we have that, but we had hip hop artists, graffiti artists, various facets of the hip hop community. And when you put those two together, it creates a special kind of dynamic, and it actually helps students develop a really unique skill set."

Team members were then set to develop their own ideas, seek customer feedback through focus groups, develop prototypes and test feasibility.

They came up with the idea of creating a website that would rank hip hop artists by metrics and assign them scores to highlight the most socially conscious artists and lead to discovery of their music. They called the effort "IMPACT." But they felt they wanted it to do more.

The team's final product is a web application



that selects an artist of the week and donates a portion of canned goods to that artist's hometown based on number of listens through the site.

"Our mission is to donate food to those in need while fostering music discovery of socially conscious artists," said Thomas Verdi '17, an English major with a concentration in creative writing minoring in entrepreneurship.

David Ro '15, a computer science and business major, built the site, including an algorithm that selects featured artists based on socially

conscious media presence, most recent donations and local impact.

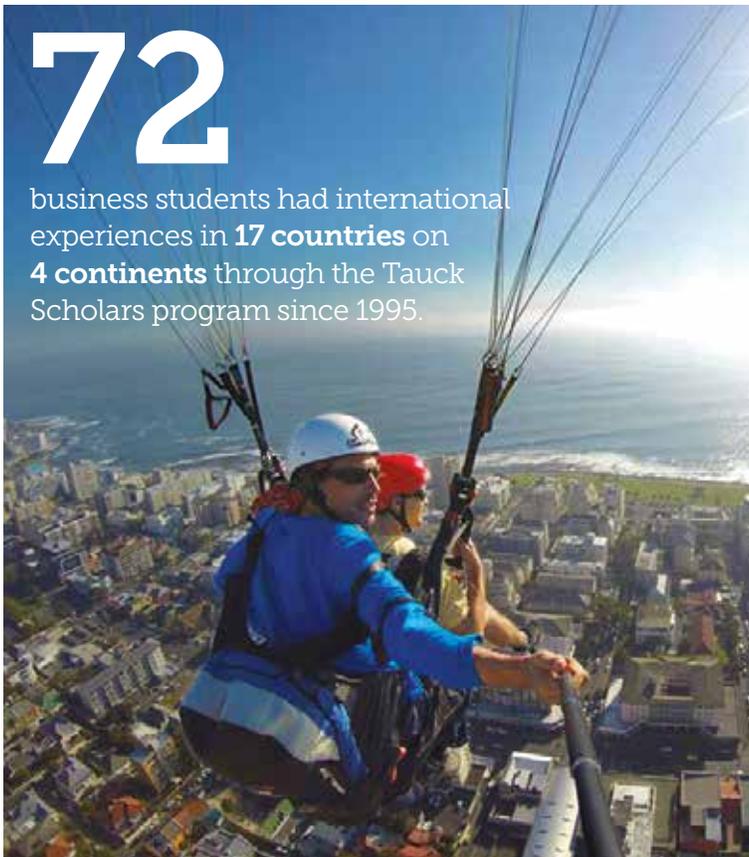
Ehrig, who teaches entrepreneurship through the College of Business and Economics and the Baker Institute for entrepreneurship, creativity and innovation, said the project opened the students' eyes to a new world and was impactful "not only in modes of thinking but potential new ventures and market opportunities."

For more information on Mountaintop, go to lehigh.edu/mountaintop.



72

business students had international experiences in **17 countries** on **4 continents** through the Tauck Scholars program since 1995.



Tauck Scholars Celebrate 20 Years

BY JENNIFER MARANGOS

Ryan Spirko '16 has come a long way since first setting foot on Lehigh's campus four years ago—both literally and figuratively. Spirko, who grew up in Easton, Pa., which he describes as a “far 25-minute drive from Lehigh,” had never been on a plane before enrolling in Lehigh's College of Business and Economics. “I'd never been out of the time zone,” the finance major recalls.

Today, Spirko has two back-to-back overseas experiences under his belt, including five weeks in Sydney, Australia, where, thanks to the Tauck Scholars Program, he interned in summer 2015 with KPMG's management consulting practice.

Celebrating its 20th anniversary, the Tauck Scholars Program was founded through the generosity of Arthur C. Tauck '53 as a way to allow rising seniors in the College of Business and Economics to complete an international summer internship. Since its inception, Tauck scholarships have been awarded to 72 highly motivated business students who have participated in internships and educational programs in 17 countries on four continents.

In addition to Spirko, three other students added their names to the Tauck alumni list this summer: accounting major Domenic DeNiro '16, who interned with Deloitte LLP in Johannesburg, South Africa; accounting major Emma K. Hillman '16, who interned at Ernst & Young LLP in Dublin, Ireland, and finance major Ariel Frazier-Freeman '16, who spent three weeks in Copenhagen, Denmark, with DIS (Danish Institute for Study Abroad) followed by three weeks in Dublin, Ireland as an intern with PricewaterhouseCoopers.

Spirko says he found the Tauck experience to be life-changing. “Working [in Australia] was a whole new experience, he says, “and I didn't anticipate it would be as rewarding as it was.”

Katrina A. Zalatan, associate dean, says the Tauck program is about more than an international summer internship. Tauck's vision, she says, is to offer learning opportunities to students in cultural settings that are new and “foreign to them.” Tauck recognized the importance of providing students with that international learning opportunity well before it was trendy to do so, she says.

“His generosity, not only in terms of funding the program ... but in terms of being willing to come back to campus to share his story and to be a part of the process is what has made the Tauck experience something to be coveted,” Zalatan says.

“We owe him a great deal of gratitude.”



Cybersecurity

BIS Club hosts hacking experts at summit.

BY MARGIE PETERSON

In 2012, an administrative staffer in South Carolina’s Department of Revenue clicked on a link in what turned out to be a malicious email. With that one click, international hackers were able to infiltrate the state’s computers and get access to 3.8 million Social Security numbers and nearly 387,000 credit and debit card numbers.

To cover the cost of that huge breach, South Carolina had to take out a \$20 million loan. That was just one of the cyber horror stories offered by Erik Avakian, chief information security officer for the Commonwealth of Pennsylvania, at the 2015 Cybersecurity Summit hosted by Lehigh’s Business Information Systems

(BIS) Club at the Rauch Business Center.

The summit was presented by the Greater Lehigh Valley Chapter of the Association of Information Technology Professionals. Avakian and a panel of information security experts tried to impress the enormity of the problem upon the students, faculty and others attending. Avakian talked about cyber attacks on Sony, Target, the IRS and the emerging threat of hacker assaults that will target power grids and other critical infrastructure.

“The bad guys are constantly at it, 24-7,” Avakian said. “JP Morgan is a company that has 2,000 people dedicated to cyber security. They have spent \$250 million dedicated to cyber security. They did everything right, and they still got hacked.”

To guard against attacks and to limit damage when they happen, Avakian advised frequent training of employees in cyber security best practices and testing them to make sure they’re effective. Computer users need to employ different passwords and companies can use encryption and take a layered approach to data “so there are different controls at all levels,” he said. It’s also important that vendors who deal with companies practice good cyber security, he said.

Because of the acceleration of cyber attacks in recent years, the job outlook for those in the information security field is exploding.

“This is such a great field to be in because there’s so much opportunity,” Avakian said. “If you like to multi-task, this is the job for you.”

SPOTLIGHT

Women in Business Club

A career conference and cookie conference are among club’s efforts.



Students were advised to be their “own best career advocate” as Lehigh’s Women in Business club hosted its inaugural career conference in Spring 2015. The conference aimed to inspire students as they prepare to launch their careers. Panelists, who included Lehigh trustee Maria L. Chrin ’87 and Cathy Engelbert ’86, chief executive officer of Deloitte LLP, advised students to seek out mentors and sponsors, believe in themselves, take risks and be passionate about what they do.

As part of its community outreach, the club will host its inaugural Cookie Conference on Nov. 15, 2015 as it works with Girl Scouts on the skills they’ll need for their annual cookie sales campaign: goal setting, decision making, money management, people skills, and business ethics.

BIZ quiz

We'll test your business knowledge in each issue of Lehigh Business, and give you an opportunity to win bragging rights and Lehigh swag. This Biz Quiz comes courtesy of Frank P. Gunter, professor of economics.



QUESTION:

After World War II, many European nations suffered from high levels of unemployment. Research showed that a large percentage of the unemployed had been employed previously but their employer had let them go—fired them—for one reason or another. To reduce unemployment, these nations passed laws making it more difficult for firms to fire an employee. In some cases, employers had to show cause before a judge before they could fire someone. As a result, unemployment increased! Why?

Think you know the answer?

You can win bragging rights—and some cool Lehigh swag. Submit your answer to bizquiz@lehigh.edu by Jan. 1, 2016. We'll post the correct answer on lehigh.edu/lehighbusiness by Jan. 15, 2016. One winner will be randomly selected from all the correct submissions.



Singapore & Dubai Global Lab

As part of Lehigh's Global initiative in the College of Business and Economics, 14 students took part in an intensive two-week global lab in Singapore and Dubai over winter break 2014-15. The students, led by Doug Mahony, associate professor of management, and Charles Stevens, assistant professor of management, visited a dozen companies and met with top-level business executives and Lehigh alumni. They also had time to take a desert safari and admire the views from Dubai's Burj Khalifa, the world's tallest building.



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