



# PAUL POST

PETER T. PAUL COLLEGE OF BUSINESS AND ECONOMICS | PAULCOLLEGE.UNH.EDU | SPRING 2016



## ALL THINGS DIGITAL

In this issue we shine a spotlight on the rapidly evolving digital universe and how it is influencing

how we research, educate and prepare our students for professional success. The amount of digital data is doubling every two years, dramatically changing how we do business and live in the world. The growth of wireless technologies, smart products, the Internet of Things, and cloud-based businesses are transforming how we market products and serve our customers; how we work, communicate and engage with each other; and how we protect our data and economic and technologic infrastructures from cyber threats.

For our students, the lessons begin in the classroom with the faculty, and are broadened by engagement with alumni and industry leaders who are at the forefront of innovation. The stories you read in this newsletter illustrate how every part of the Paul College experience gives students the tools they need to succeed as the next generation of business leaders.

—Dean Deborah Merrill-Sands

## Data Traveler

### Adobe's Garrett Ilg '83 thrives at the forefront of innovation and technology

**G**arrett Ilg '83, senior vice president and head of worldwide enterprise sales and field operations at Adobe Systems Inc., received the Association to Advance Collegiate Schools of Business inaugural 100 Influential Leaders Award last fall. For almost 30 years, he has held leadership roles in driving major business transformations fueled by advances in technology—mobile, Internet, e-commerce and now digital. The Paul College Post recently spoke with Ilg, who resides in New York City

and Palo Alto, Calif., about his career, Paul College and the Internet of Things in general.

#### You recently spoke at a UNH Business on the Move event in New York City.

First of all, I thought it was a great gathering of alums, students, faculty and friends of Paul College that mirrored the kind of networking event you'd see in the corporate world. My role was to speak a bit about what was happening in technology from the perspective of trends and careers.

#### What did you talk about?

My topic involved the massive transformation—revolution, really—now underway that's dramatically changing the way we work, communicate and engage with one another. I'm talking about the digital revolution, of course, and it's relevant no matter what industry you're in. This transformation isn't so much about this technology or that one, although without the development of computers and Internet the digital revolution wouldn't exist. It's really more about a whole new environment that is projected to go from \$16.8 billion to \$27.4 billion—explosive growth!



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### **What advice did you offer to the students and alums?**

One of the things we talked about was the opportunity this change provides to current alums who are already working and future alums who are figuring out what they want to do after they graduate. My message was simply that if you are looking at, or working for, a company and want to stand out, you should create a digital agenda. I've done it, and others can too. Recently, I was with the CIO of Coca-Cola and he told me that digital wasn't just an agenda—it was their business plan. Coke has 400 websites and this is how they drive the brand. If you're interested in an organization and they're not interested at all in digital, then stay away. They aren't going to succeed in the long run.

### **Talk a little about digital agendas. What has been your agenda?**

Adobe's main business involves creative tools for building content. For years, we had been providing these tools to companies like Target, REI, Nike, Delta Airlines and Gap—very retail heavy—but also to airlines and to the hospitality industry. I looked at our traditional, core business and asked, "Why stop at providing the tools? Why don't we go a step further and help our clients push their content out across the digital landscape and monetize it?" So, Adobe acquired several smaller companies that gave us capacity to provide this service to clients on enterprise scales, both in the U.S. and internationally. These clients include companies such as Sony, Sumitomo Mitsu Bank, BMW, Chelsea Football Club, Uber, Major League Baseball, 20th Century Fox and Coca-Cola. During the past five years of our own digital transformation, Adobe's valuation has risen threefold, and then some.

### **What got you interested in an international career?**

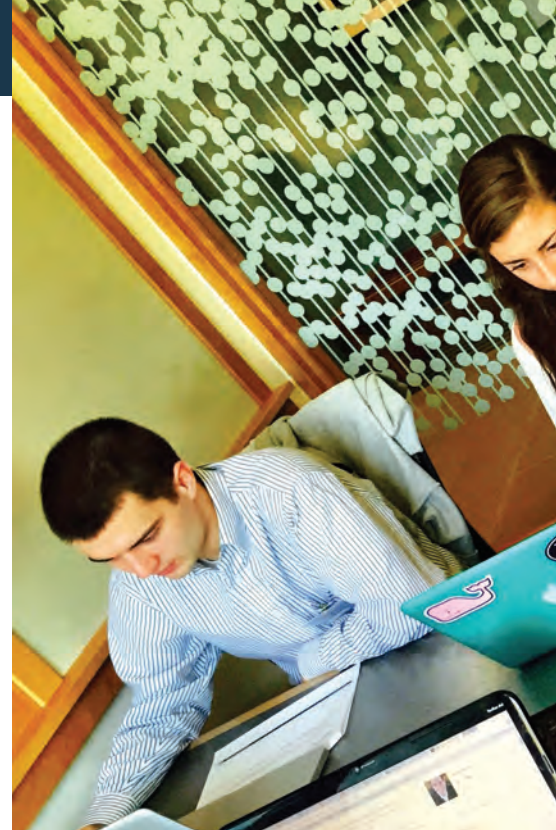
I was born in Nashua and consider myself to be a proud U.S. citizen, but I actually came to UNH from Tokyo, where we'd moved when I was 10 years old and my father was transferred to Raytheon's Japan headquarters. That was 1972 and not a lot of Americans worked overseas. I wanted to come back to New Hampshire for college. When I got to UNH, it was a culture shock. Don't get me wrong—I loved it. I was able to play rugby and also join a fraternity. My teachers were fantastic and helped me earn a degree in business with a lot of focus on economics that also included a computer course (thank you Barry Shore!). I always knew I'd go into international business. When I graduated in 1983, I got an opportunity to return to Japan and worked for Mitsubishi Electric in Tokyo.

### **What have you learned as an international businessperson?**

I've spent more than 25 years of my career living abroad and working for major global brands. If I've learned anything it's that you can't force two cultures to be exactly the same. I've had success using the 80/20 rule for global brands. What that means is simply that you maintain strict brand discipline for about 80 percent of your operations while allowing about 20 percent of the local culture to impact your brand. It might be as simple as one country preferring "stamps" to signatures on official documents. I'm very proud to have helped Japanese firms develop one of the first mass market mobile telephone platforms in the world.

### **You've lived in Tokyo, Hong Kong, Palo Alto, California, and New York. Any plans to stay put?**

Not very likely! My career has been all about identifying and pursuing strategic opportunities created by fast-moving developments in technology, wherever it takes me. Besides, I like to surf so I may end up in Hawaii.



Jamin'  
helps students  
exploit decision-  
shaping power  
of big data

**A** "data jam" is a workshop exercise where people solve problems using big data sets to produce visual data, analytics and practical application of findings. Originating in obscure corners of the federal government, jams have spread to industry, government and organizations seeking to harness and exploit the decision-shaping power of big data.

In the fall, Paul College held its own DataJam in partnership with Liberty Mutual—a top Fortune 100 company and major recruiter of the college's graduates—and invited junior and senior students in the Information Systems and Business Analytics (ISBA) option to participate.





Spencer Kennedy, Camille Govoni and Kieran Sexton were among the students given four hours to analyze a representative clickstream data set of a half million rows of data. The challenge for the students was to visualize and analyze the data quickly and then report to a panel of judges how well Liberty Mutual is doing monetizing interactions from their web presence.

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**“This offered a great experiential learning opportunity for students to see how actual firms use data. The competition lends fun and energy to it.”** ROGER GRINDE, ASSOCIATE PROFESSOR OF MANAGEMENT SCIENCE

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“This offered a great experiential learning opportunity for students to see how actual firms use data,” said department chair Roger Grinde, who, along with associate professors Jing Wang and Khole Gwebu, served as faculty advisers. “The competition lends fun and energy to it.”

Fourteen teams of four or five students each were given four hours to analyze a representative clickstream data set of a half million rows of data. The data set was developed by ISBA student Justin Millette '16 and Matt Keane, Liberty Mutual's DataHub manager, with whom Millette interned the previous summer.

The students were presented with a data set similar to what Liberty Mutual uses to track user traffic on their websites via Clickstream. The challenge was to visualize and analyze the data in a four-hour time frame and report to a panel of judges how well Liberty is doing in monetizing interactions from their web presence. The students also had to make suggestions on how Liberty

could help drive new decisions and/or strategies (marketing, sales, etc.) based on their analyses.

As the teams prepared to compete, Millette offered words of encouragement: “In the classroom we learn how to use business applications for data. By the end of the day, you will be able to use this knowledge to decode trends in a large data set and make a data-backed business decision.”

By the afternoon's conclusion, the students had wowed their Liberty guests with what Keane described as some very “creative” and “inquisitive” thinking.

“Those of us who think about insurance every day take a lot for granted,” said Keane. “The students opened up lines of inquiry we hadn't considered.”

For example, the winning team of Mike Shanahan '17, Kyla Wester '16 and Charles DeMarco '16 used enterprise-level statistical software to show a significant trend among younger people using the website to buy insurance.

“We noticed the longer they stayed on the site, the less ‘confident’ they seemed to become and the less likely they were to buy a policy,” said Shanahan. “We thought this was because the site was too busy and information-packed for our age group.”

To test their theory against reality, the teammates jumped on to Liberty's real website and, lo and behold, the pages bore out the team's analysis of the representative clickstream data. They presented this finding to the judges—along with an instructive comparison to Google's legendarily simple, yet powerful, interface.

“The lesson was clear,” said Liberty Mutual's Keane. “Our content did not speak to this audience.”

If the jam taught the students a lesson, it taught Liberty Mutual one, as well. Keane and his colleagues are piloting a new approach to designing simpler customer interfaces they call “Google Experiences” and report that they are earning “rave” reviews.

The faculty advisers witnessed a competitive zeal among their students that propelled their performance.

Student Mike Shanahan saw teamwork as critical to their success.

“Most work settings center around group participation and individual contributions to a whole,” he said. “The jam replicated this so that everybody felt ownership of the achievement.”

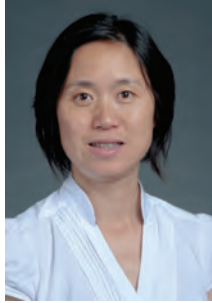
Honor and glory weren't the only prizes of which Shanahan's team assumed ownership. Each also received a \$50 Amazon gift card and a team lunch at Liberty Mutual's Portsmouth office with chief technology officer Mark Kirby.

# Cyber security:

**WITH REPUTATIONS (AND MILLIONS)  
ON THE LINE, SOLUTIONS PROVE CRITICAL**



Khole Gwebu



Jing Wang

“So many people are connected through the so-called ‘Internet of Things’ in ways they don’t even understand. People want everything to be wired together, but that comes at a security cost as boundaries between work and home life are more tightly connected.” JING WANG, ASSOCIATE PROFESSOR OF DECISION SCIENCES

**D**ata security breaches are one “growth industry” that Paul College would like to stop dead in its tracks. According to the Open Security Foundation, incidences of data security breaches have skyrocketed from 774 in 2007 to 1,474 in 2015. Recent high profile examples of such breaches include Sony’s loss of 70 million customer records, T.J. Maxx and Marshall’s loss of at least 94 million customer records, and Heartland Payment Systems, Tower Federal Credit Union and Beverly National Bank’s loss of 130 million customer records.

In many cases, firms pay dearly for their data security debacles. Choicepoint, for example, was forced to pay \$15 million in penalties and saw its stock price fall. And Target’s well-publicized breach in 2013 resulted in net losses in excess of \$100 million.

With such breaches increasingly commonplace, Khole Gwebu and Jing Wang, associate professors of decision sciences at Paul College, have pooled their considerable talents to uncovering the best ways to protect a firm’s reputation and economic assets following a breach. They became immersed in the subject

when they joined with a colleague at the University of Akron to co-author a paper offering new insights into various cost implications of data breaches on businesses. These included the impact of a breach on a company’s market value and the response strategy the company adopts to manage the breach.

Wang and Gwebu discovered that, in general, while data breaches have negative impacts on a company’s market value following a breach, firms with good reputations will suffer significantly less declines in market value following the announcement of the breach than firms without good reputational standing. However, for firms without good reputational standing, response strategies that place emphasis on commitment to stakeholders’ well-being and seek to convey the message that the firm cares about the victims will reduce the negative impact of the breach on the firm’s market value.

The intriguing results led Wang and Gwebu to explore the topic further. They are working on a series of papers dedicated to uncovering useful ways of preventing and, when all else fails, recovering from a breach.

## Employees are good front line defense

“There are so many vulnerabilities in data security there is a good chance you’ll be breached,” Wang said. “On the prevention side, we are focusing on employee compliance with data security policies within a company. What motivates an employee to comply with what are often complex data security policies.”

The questions and answers are more than academic. The authors contend that employees comprise “the weak link” in many data security breaches—not as perpetrators, but as those who leave the back- or even front-door open for hackers to enter and “clean out the house.”

“We surveyed 400 employees at numerous organizations across multiple industries,” Gwebu said. “We found that violation of cyber security policies is high in organizations where ethical work climate is dominated by egoism, in other words where employees tend to consider their own personal preferences or the organization’s interests at the exclusion of all else.”

On the other hand, violation of cyber security policies tends to be low in organizations characterized by a climate



where adherence to internal and external regulations, professional codes of conduct, and laws and rules are important.

"Looking at ethical climate as the key to compliance represents a new perspective in data security research," Gwebu said, noting that most scholarship in the field tends to focus on policy setting at the senior management level.

## Stepping out of the breach

Wang said recovering from data breaches is the other side of the equation. While short-term changes in stock price offer a somewhat reliable measure of a breach's financial impact on a company, different companies feel the market's displeasure in dramatically uneven fashion.

"Let's just say firm reputation matters," Wang said. "On average if you're a powerful brand such as FedEx or Verizon Communications, you're going to fare better."

For instance, in their data set she and Gwebu found that while a company such as FedEx suffered multiple breaches, in the vast majority of cases it did not suffer significant declines in market value following the announcement of the breach.

Gwebu and Wang said they ventured into the field because it gives them the chance to make a difference with a multi-million dollar problem that hurts businesses, individuals and organizations of every kind.

"So many people are connected through the so-called 'Internet of Things' in ways they don't even understand," Wang said. "People want everything to be wired together, but that comes at a security cost as boundaries between work and home life are more tightly connected."

## In Brief



### Paul College ranked among top 100 best undergraduate business schools

Bloomberg Businessweek released its 2016 rankings of the best undergraduate business schools in the U.S., and the University of New Hampshire's Peter T. Paul College of Business and Economics has been named among the top 100. Overall, Paul College ranked 57 among business schools in student satisfaction. Paul College placed 81 among all ranked business schools and 38 among public universities. It is the only business school ranked from New Hampshire.



### Alumni helping students secure topnotch internships

Landing an internship in an expensive metropolitan area, at a non-profit, social enterprise or start-up with limited financial resources may be attainable but out of reach for many students low on cash. Paul College doesn't want finances to hold them back and has launched an **Internship Opportunity Fund (IOF)** to provide \$2,500 stipends to students who secure topnotch internships tied to their career objectives. This kind of hands-on learning helps them stand out among employers and land rewarding jobs.

The Dean's Advisory Board launched the fund, which also is supported by alumni and friends. To support the IOF, visit: [give.unh.edu/paul](http://give.unh.edu/paul).



### Peter T. Paul Scholars program attracts top students

The ability of Paul College to attract and retain outstanding students is critical to our growing and deepening the educational experience and our academic reputation. High-achieving students energize their classmates and raise the level of rigor and discussions in an out of the classroom.

This year the college launched the **Peter T. Paul Scholars** program, funded by Peter T. Paul, to support and recognize the most academically promising students. The \$5,000 scholarships are awarded in addition to other UNH merit aid. Scholars

also have access to expanded academic and career readiness support, priority access to hands-on research opportunities, and will be living in a designated living/learning communities. Visit: <http://paulcollege.unh.edu/scholarships>.



### Students develop anti-extremism media plan

Paul College marketing students competed with their peers across the country to develop methods of countering violent extremism in communities and online. The students used a State Department grant to develop a proposal that included a **social media campaign**, teaching curriculum and a public pledge to help young people resist radicalization.

U.S. Sen. Jeanne Shaheen, who came to campus to attend their presentation, said young people are particularly vulnerable to attempts to spread hate and violence online, so it's critical to have their input and perspective. Media outlets including the *Washington Times*, *The Nashua Telegraph*, *Concord Monitor*, *Fosters.com*, *Seacoastonline.com*, and *WMUR9* covered the students' work.



### New academic programs launched

Within the **Flexible MBA Program** a specialization has been added in **hospitality management**. This specialization is directed toward working professionals in the industry, positioning them for additional professional growth and advancement. It is perfect for those who want to take a coherent set of advanced hospitality management courses offered within the general framework of the MBA. Visit: [tiny.cc/paulflexmba](http://tiny.cc/paulflexmba).

Paul College also is partnering in a new **Master of Science in Analytics** program. The analytics program is an interdisciplinary graduate program that offers students in-depth training in quantitative analysis, applications and reasoning, critical thinking and analytics. It is a cohort design, full-time program intended to engage students in real-world projects with external partnerships that provide them with unique opportunities to apply their skills, solve real-world analytics problems, and develop connections for employment. Visit: [unh.edu/analytics](http://unh.edu/analytics).

# Exploring the Latest Trends in Digital Marketing

Since the 1990s, the Internet has presented a dynamic and interactive channel for companies and organizations to market their products and services. According to the marketing research firm Magna Global, digital ad spending is projected to grow 13.5 percent in 2016 to more than \$180 billion. These changes represent a major opportunity for current business students. A recent report by Gartner Research predicts that demand for digital business workers will grow 500 percent by 2018.

The challenge for business schools, however, is that technology moves so quickly it can be difficult for the classroom to keep up with the industry.

Paul College is meeting this challenge by connecting students with industry professionals who can inspire them and help teach them the “tools of the trade” that will allow them to hit the ground running when they graduate.

Case in point: Last fall, the college organized its second Digital Marketing Symposium to help students and faculty explore digital marketing from both an academic and career perspective, and to develop stronger ties to the local business community.

The fall 2015 event, organized by assistant professor of marketing Matt O’Hern, built on the success of the inaugural 2014 symposium, drawing 150 students, alumni, faculty members and marketing professionals.

“We wanted to use this event to engage with alumni and the community, while providing experiential learning opportunities for students and their faculty mentors,” said O’Hern. “Networking and professional development helped provide the common currency all our



attendees want no matter where they are in their careers.”

The participants included a who’s who of iconic companies with Paul College alumni ties, including Allagash Brewing from Maine, King Arthur Flour from Vermont, Stonyfield Farm and Lindt & Sprüngli from New Hampshire as well as a host of digital marketing service providers, such as PixelMEDIA and MicroArts.

Participants had their choice of

three tracks focused on student career development, how firms are capturing and using customer data, and ways organizations can cultivate “digital brand communities” using social media.

Speakers included DJ Haskins ‘99, ‘05G, director of business development at MicroArts Creative Agency. He is a “double Wildcat” with a bachelor of science in business and an MBA, and is an adjunct





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MATT O'HERN, ASSISTANT PROFESSOR OF MARKETING

Heather Atwater '10, now a senior digital marketing coordinator at PixelMEDIA (founded by CEO Eric Dodier '92), served as a panelist in the career development track. She says she was “surprised to see how full the room was and to see how interested students were to develop their own careers—even as sophomores.” She also enjoyed networking

how they used cutting-edge tools like Pixel Compass to do data analysis,” Atwater said.

In the brand identity track, representatives from Allagash Brewing talked about experiential marketing. They focused on the balance the firm strikes between appealing to beer aficionados interested in the technical aspects of brewing, and “lifestyle” customers who equate Allagash beer with the feelings of adventure and camaraderie.

Honors students were invited to spend extra time in small groups with managers and speakers.

Said one student of the experience, “It was extremely insightful for those of us who have an interest in marketing to actually be able to meet and network with people who are doing our dream jobs on a daily basis. I wish there were more events like this with younger UNH alumni attending.”

O'Hern invites all who are interested in participating in or attending this year's Digital Marketing Symposium to contact him at [Matthew.OHern@unh.edu](mailto:Matthew.OHern@unh.edu).

lecturer at the college, where he teaches digital marketing.

“The application of digital marketing isn't covered in most textbooks because it is changing and evolving so fast,” he said. “As we prepare the next generation, we've got to show students how theory is applied. My presentation was on showing students how they can take charge of their careers by learning to stay current and constantly self-educate.”

with fellow panelists and attending the analytics discussions.

In one analytics presentation, representatives from Stonyfield walked the audience of students, faculty and practitioners through their work—including work with PixelMEDIA—on pay-per-click advertising.

“When I was a student, I would have liked to hear representatives from Stonyfield and PixelMedia talk about



**University of  
New Hampshire**

**Peter T. Paul College of  
Business and Economics**

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## Engage with Paul College on Social Media



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## Upcoming Events

**Executive Development  
Programs**  
**Leading Systematic Change**  
**May 17 & 18**

**Business and Professional  
Writing**  
**May 24 & 25**

**Managing Five Generations  
at Work**  
**June 14**

**Be a Catalyst for Innovation**  
**July 19 & 20**

**Managing Yourself and  
Leading Others**  
**Aug. 17 & 18**

**Finance and Accounting for  
the Non-Financial Manager**  
**Sept. 13 & 14**  
[paulcollege.unh.edu/executive-  
education/edp-calendar](https://paulcollege.unh.edu/executive-education/edp-calendar)

**Paul J. Holloway Prize  
Championship**  
**May 11**  
[paulcollege.unh.edu/events/  
paul-j-holloway-prize-championship](https://paulcollege.unh.edu/events/paul-j-holloway-prize-championship)

**Center for Family Business  
The Challenges Facing Next  
Generation Leadership**  
**May 11**  
*Featuring: Greg McCann, Author of  
When Your Parents Sign The Paychecks*  
[familybusiness.unh.edu/  
programs.html](https://familybusiness.unh.edu/programs.html)

**Paul Graduate Programs  
Hooding Ceremony**  
**May 20**  
2 p.m., Johnson Theater,  
Paul Creative Arts Center

**UNH Commencement**  
**May 21**  
10 a.m., Memorial Field, Durham  
[unh.edu/university-ceremonies-  
and-events/commencement](https://unh.edu/university-ceremonies-and-events/commencement)

FOR MORE EVENTS VISIT:  
[tiny.cc/paulevents](https://tiny.cc/paulevents)

**Don't miss a thing.** Become part of the UNH Connect alumni network and learn about activities and people in your area. Be sure to update your contact information at [unhconnect.unh.edu/contact](https://unhconnect.unh.edu/contact) to receive all of the latest news from Paul College and UNH. View Paul Post online at [PaulCollege.unh.edu/paul-post](https://PaulCollege.unh.edu/paul-post)