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On the cover: MBA student Joel Meyers and accounting undergraduate Nadine Honda uphold the college’s vision of turning out profession-ready graduates. (Photo by Chris Ho)
At right: Ilene K. Kleinsorge, dean of the Oregon State University College of Business. (Photo by Chris Ho)
Leading the Charge

Now is the time, and we are the ones. In these tough economic times, our faculty and students examine old assumptions, explore new concepts, and hold a vision for sustainability as we build a stronger economic foundation for future generations.

As a professional school, we start with the best and brightest—those students who possess the “right stuff”—and cultivate their innate ingenuity and drive to succeed in business. Experiential learning is a key component of all our classroom activities, and our MBA candidates must prove their mettle by presenting an investor-ready business plan to a panel of business professionals before they can graduate. In this issue, you will read about this year’s Integrated Business Project competition, which prepares students to succeed while supporting OSU-generated science and technology.

You will also read about how the Oregon State Investment Group, composed of OSU students, is making its presence felt. These students earned the confidence of the OSU Foundation when they bested the S&P 500 benchmark on a $50,000 investment. The foundation recently entrusted the students with $1 million in investment capital. We are proud that our students are learning by doing, proving their savvy, and benefiting the university in the process.

It takes a core of top-notch, innovative faculty and staff to lead the charge. Take a look at all the great successes they have had this year in our article about the Celebration of Achievement awards dinner. We also highlight two of our faculty members, Byron Marshall and Cory Cromer, who are finding new ways to mine large data sets to provide deeper insight into human behavior as it relates to business and social systems.

We continue to attract top scholars. Three new faculty members are joining us as we begin the 2009-10 academic year. In an era when businesses are being called to a higher standard of accountability, James Hansen is investigating the “hidden earnings game” and other accounting methodologies. John Becker-Blease’s studies on gender equality in business and finance already have people talking, and he is also doing timely and relevant work in corporate governance and social responsibility. In an age when people are living longer, Michelle Barnhart is asking the questions someone needs to be asking about how business can support people through the aging process without making them feel “old.” Her research has the potential to affect policymaking in elderly care in the years to come.

Friends of the college have incredible wisdom and insight to pass along to our students, which is why we frequently invite them to be guest lecturers. These professionals in the classroom enrich the learning experience and help bridge theory and practice. In October 2008, we were thrilled to host Alfred Lin, chief operating officer at Zappos.com, as our Dean’s Distinguished Lecturer. Lin shared his insights about the Zappos.com culture and spent a day on campus inspiring and coaching students about how to succeed in business.

We never want to forget the truly significant contributions our alumni and business partners make to the College of Business and to the world. Many attendees traveled long distances to join us at this year’s Alumni and Business Partner Awards. It was a delightful evening I’m sure we won’t soon forget.

We appreciate your support as the College of Business moves boldly into its second century full of vigor and progressive ideas.

Ilene K. Kleinsorge, Dean
Sara Hart Kimball Chair
Alumni and Business Partner Awards Dinner Expands to University-wide Celebration

By Abby P. Metzger

Staff, alumni, and students from OSU’s 12 academic colleges don’t often gather under one roof for an awards dinner, but such a gathering took place during the 2009 College of Business Alumni and Business Partner Awards dinner. The dinner was held in early May at the Governor Hotel in Portland, Ore.

More than 300 deans, directors, students, and supporters assembled to celebrate the global impact of business leadership and the importance of collaboration. Many attendees traveled from locales across the nation and around the world to support the College of Business.

During the awards ceremony, College of Business Dean Ilene Kleinsorge said the current economic climate demands principled business leaders. “There probably hasn’t been another time in recent history when the importance of business leadership is so apparent for ensuring our quality of life and prosperity for future generations,” she said. “Responsible leadership is a critical component of our future and the future of our communities.”

Consistent with previous annual ceremonies, the College of Business presented five Alumni and Business Partner Awards, including the Hall of Fame designation, which recognizes a business alumnus who has made sustained and meritorious contributions throughout his or her career.

This year’s Hall of Fame inductee was Ruth Fisher (’54), president and CEO of Jim Fisher Volvo. Fisher has worked as a business teacher, executive secretary, and realtor. After the death of her husband Jim in 1987, she became president of the family’s award-winning auto dealership. Fisher has held significant positions in eight OSU organizations, including the OSU Foundation board of trustees, the Mothers Club, and the Council of Regents.

Alumni and Business Partner Awards were presented in four additional categories.

Accounting firm KPMG LLP won the Distinguished Business Partner Award, which honors non-alumni or companies that have distinguished themselves through professional practice and service. KPMG—a firm that offers audit, tax, and advisory services—operates from 87 offices with more than 23,000 employees and partners throughout the United States. George Graves, a partner with KPMG, accepted the award on the company’s behalf.

Courtney Carter (’05), of Soccer United Marketing and Major League Soccer, received the Distinguished Young Business Professional Award. Carter works on business development for the organization and was instrumental in the development and launch of women’s professional soccer.

Steven Zamsky (’90), portfolio manager for Pequot Capital, won the Distinguished Early Career Business Professional Award. Zamsky joined the firm in 2003 and his responsibilities included long, short, and short-dedicated credit portfolios, and implementing leveraged strategies in the corporate bond, loan, and credit derivative markets.

John Stirek (’82) won the Distinguished Business Professional Award for his service in Trammell Crow Company, a national real estate development and...
investment firm. As president of the company's development and investment group, Stirek has been involved in the development of more than five million square feet of office, industrial, and retail space in his career.

For the second consecutive year, the College of Business and the Portland Tribune and Community Newspapers—the premier sponsor of the event—recognized several high school teachers with the Outstanding High School Business Educator Awards. The awards identified educators whose efforts have improved student achievement, demonstrated innovative and exemplary instructional strategies, and enhanced student learning of business concepts.

Sonja Holcomb from Elkton High School, Elkton, Ore.; John Dixon from South Salem High School, Salem, Ore.; Frank Drew from Lost River Junior/Senior High School, Merrill, Ore.; and Michael Gump from Lake Oswego High School, Lake Oswego, Ore., received the awards.

In addition to its flagship Alumni and Business Partner Awards, the college presented the inaugural Innovative Business Leader Award to 12 university alumni, one from each OSU college.

“The pairing of strong business skills and industry-specific knowledge has given rise to innovations in every sector of our economy,” said Kleinsorge. “We wanted to honor individuals who have used their business skills and principles to bring opportunity to communities throughout the region and world.”

Twelve alumni received an Innovative Business Leader Award, as listed below:

**Agricultural Sciences: Carl Casale**
Casale is a 1983 OSU graduate and the executive vice president for strategy and operations for Monsanto Company. Growing up on his family’s truck farm in Northeast Portland prepared him well for a 25-year career with Monsanto.

**Business: Rob Pace**
Pace recently retired as an advisory director of Goldman Sachs, where he worked for more than 20 years. He received a BS degree from OSU in 1984 and later an MBA from Harvard.

**Education: Eric Meslow**
A 1991 graduate of the College of Education, Meslow is the president and CEO of Timbercon Inc. Timbercon is a product development and manufacturing company serving niche markets for fiber optic solutions.

**Engineering: Abhi Talwalkar**
Talwalkar is the president and CEO of LSI Corporation, a leading provider of innovative silicon, systems, and software technologies. In 1985, he received a BS from the College of Engineering.

**Forestry: Ken Wightman**
Wightman graduated from the College of Forestry in 1968. He eventually joined David Evans and Associates, a national leader in sustainable design and management solutions. Today he is the company’s chief executive officer.

**Health and Human Sciences: Kathleen McNally**
McNally earned a bachelor’s degree from the College of Health and Human Sciences in 1986. After working in apparel design for high-profile companies such as Nike, she launched her own apparel design consulting firm, Kleen Creative, LLC.

**Honors: Ruth Beyer**
Beyer grew up in Oregon and graduated from the Honors College in 1977. Today, she is an attorney with Stoel Rives, one of the largest and most prestigious law firms in Portland, Ore.

**Liberal Arts: Jim Wiggett**
After earning his degree in 1975, Wiggett held a number of executive positions within large, multinational corporations. He is the founder and president of Jackson Hole Group, a leader in human capital management.

**Oceanic and Atmospheric Sciences: Gustavo Montero**
Montero earned an MS from the College of Oceanic and Atmospheric Sciences in 1984 and an MBA a year later. He is a managing partner with the GAM Consulting Group in Switzerland.

**Pharmacy: Steve Oliva**
Oliva graduated from the College of Pharmacy in 1963 and then launched his career as a business owner and entrepreneur. He is the president of a locally owned and operated chain of pharmacies called Hi-School Pharmacy.

**Science: David and Christine Vernier**
The Verniers are co-owners of Vernier Software & Technology, a company based in Portland, Ore., that offers a full line of award-winning interfaces, software, sensors, and curriculum. David earned an MS from the College of Science in 1976.

**Veterinary Medicine: Scott Campbell**
After receiving a BS in 1980 and a DVM in 1985, Campbell purchased Banfield, the Pet Hospital, which is today the world’s largest private veterinary practice. Campbell recently retired and now spends time on his ranch between John Day and Burns, Ore.

Photo page 6: The college presented an Innovative Business Leader Award to 12 alumni—one from each OSU college—as part of the 2009 Alumni and Business Partner Awards. President Ray (far left) and college deans joined honorees on stage to celebrate. (Photo by Chris Ho)
Celebrating Achievements, Recognizing Excellence

By Knox Richardson

The College of Business pauses briefly at the close of the academic year to honor the achievements of its faculty and staff. This year, it celebrated the excellence of its scholarship, teaching, service, and leadership for academic year 2008-09.

This was the second year for the rebranded College of Business Celebration of Achievement awards dinner. Associate Dean Jack Drexler served as host and emcee for the celebration that included invited family and guests. Drexler, along with Dean Ilene Kleinsorge and Corvallis Gazette-Times publisher Mike McInally, presented the awards.

“Here we are at the close of a stellar year, and once again, we have a lot to celebrate,” said Kleinsorge at the event. “Our faculty and students garnered awards for business excellence, our curriculum expanded to reflect the growing demands of a global economy, and our programs continued to promote critical experiential learning opportunities.”

Faculty achievements

Throughout the 2008-09 academic year, College of Business faculty demonstrated leadership in scholarly productivity, teaching, and outreach.

“Together, our faculty helped position the College of Business as a nationally recognized institution with excellence in innovative business programs and scholarly research,” said Dean Kleinsorge. “Collectively, our faculty published at least 30 peer-reviewed articles, some of them in top-tier journals.”

Accounting faculty Monica Banyi, Amy Bourne, Carol Brown, Larry Brown, Dennis Caplan, Roger Graham, Byron Marshall, and Jared Moore received Oregon State University’s Student Learning and Success Teamwork Award for their excellence and innovation in student mentoring, teaching, and curriculum development. The team received $5,000 to support student learning and achievement activities.

Management Professor Erik Larson received the 2009 Betty and Forrest Simmons Excellence in Graduate Teaching Award. The award honors the teaching excellence of faculty members who have taught in the MBA program during the past three quarters. It was established in 2008 to ensure a strong graduate program in the college. Larson has been instrumental in helping the MBA teams to more effectively prepare their Integrated Business Projects.

The Excellence in Scholarship Award for 2009 went to Jared Moore, an assistant professor in accounting. This award is given to faculty members who have demonstrated outstanding scholarly activity. Moore recently received two article acceptances, one from the Journal of the American Tax Association as lead author and, more recently, from the National Tax Journal as second author. He has presented at two major tax conferences and other academic forums.

Byron Marshall, an information management assistant professor, was given the Byron L. Newton Award that honors excellence in classroom teaching. Marshall’s teaching record is particularly impressive because he has borne the difficult load of preparing for several new classes. Even with his extensive research requirements, he has selflessly taken on new courses solely to meet the interests of his students. He was instrumental in the college’s effort to gain Information Systems Audit and Control Association certification.

The recipient of the Outstanding Professional Faculty and Staff Award was Nancy Homan, who was recognized for her exemplary service to the College of Business. Even with an advising load of nearly 500 students, she serves on the new business core task force and employment committees and spends as much time behind the scenes on countless administrative programs, scholarships, and internships as she does advising students.

Carol Brown, an associate professor of accounting, received the Outstanding Faculty Service Award that recognizes excellence in professional, university, and college service. Brown chaired the OSU Curriculum Council and was instrumental in shepherding the college’s proposals to formalize several business disciplines into academic majors.

Jimmy Yang, associate professor of finance, was recognized by McInally with the Gazette-Times Faculty Leadership Award for his role as faculty advisor to the Finance Club and the Oregon State Investment Group.

In addition, the college awarded several Newcomb Fellowships to recognize specific educational or scholarly contributions that enhance the reputation and (Continued on page 8)
fulfill the objectives of the college and Oregon State University. The Newcomb Fellowships were established by Bernie Newcomb ('65), and co-founder of E*Trade. This year, five fellows were honored.

Mark Van Patten, director of the Business Solutions Group, has consistently exceeded expectations of College of Business faculty. Through his dedication, vision, and strength of character, Van Patten has successfully transformed the Business Solutions Group into a distinctive program that pays dividends throughout the college.

Don Neubaum, associate professor of management, was nominated for the quantity and quality of his scholarly productivity, his performance as an instructor, and the service he provides to his profession and to the college and university. He has made impressive contributions to the body of management literature through his scholarly productivity. He has published 17 peer-refereed journal articles and has made 24 peer-refereed presentations at professional conferences; seven of his 17 published articles are in the highest rated journals.

Julie Elston, assistant professor of international business, teaches at the OSU Bend-Cascades campus. Although she has been a member of the college faculty for only a handful of years, she has consistently exceeded expectations in research scholarship. She excels in both the quantity and quality of her research. Elston has published 17 refereed journal articles and books, has published eight conference proceedings, and contributed chapters to eight books. She has also brought in grant dollars. She serves as associate editor for Small Business Economics and as an editorial board member for the Journal of Corporate Ownership and Control. She remains a Fellow and Visiting Scholar of the Max Planck Institute of Economics in Germany.

Jimmy Yang was honored for his continuing service to the college, especially as it relates to developing programs for students that transcend traditional academic approaches to finance education. When several student members of the Finance Club developed an interest in an investment group, Yang, as faculty advisor, rose to the challenge by developing the Oregon State Investment Group. The group established itself as a separate entity and a highly professional organization composed of about 25 undergraduate and graduate students. (See related story on page 21.)

Tom Dowling, a management faculty member, was honored for his mentorship and leadership in the MBA program's Integrated Business Project. Since the Integrated Business Project's inception in 2001, Dowling has been deeply involved in its development to ensure that the program meets the standard for academic rigor and practical experience appropriate for a professional school curriculum. (See related story on page 24.)

Student achievements

Business students distinguished themselves through clubs, experiential learning activities, and national competitions.

Early in the school year, the OSU Foundation entrusted students in the Oregon State Investment Group with managing a $1 million fund. The group saw an annual return of nearly 24 percent on a $50,000 investment in 2007.

A team of students participating in a freshman entrepreneurship class was inspired to join Students in Free Enterprise (SIFE) and launch ThinkBLUE, a social entrepreneurship venture seeking to educate students and the local community about water-related issues. The students designed a sales and marketing campaign for reusable water bottles and sourced production to a

2009 faculty and staff award winners (from left): Carol Brown, Mark Van Patten, Byron Marshall, Julie Elston, Don Neubaum, Jimmy Yang, Jared Moore, Nancy Homan, Erik Larson, and Tom Dowling. (Photo by Alex Thorpe)
North American company. OSU’s team competed against 106 other teams in the SIFE Waste Management Environmental Sustainability Topic Competition and took third place. They were named and recognized at the recent SIFE National Exposition in Philadelphia.

Students across disciplines undertook experiential learning projects that gave them an up-close view of real business practices. Classes like Mark Elton’s Essentials of Management and Marketing, Geoff Archer’s Business Now, René Reitsma’s Information Systems Design and Development, and Erik Larson’s Project Management are just a sampling of courses that provided students a platform to distill applied learning concepts.

College of Business students also demonstrated their scholastic merit on statewide exams. Accounting graduate Robert Wolfer (’07), earned the second highest score on the 2008 State of Oregon CPA examination. This was the third year in a row an OSU accounting student was among the top three finishers in the state CPA exam.

**Program achievements**

During the 2008-09 academic year, the college expanded its curriculum by launching a new online minor in business and entrepreneurship that offers a comprehensive series of courses to provide flexible learning options for both undergraduates and working professionals.

Programs within the college also improved student learning opportunities and added new outreach activities. The Austin Entrepreneurship Program initiated a year-long course open to all academic majors called the Austin Enterprises. Students in the course create, launch, and manage a campus-based start-up company and learn venture skills such as business plan writing, concept feasibility, and market assessment.

“Our outreach programs took bold steps in new directions and enhanced experiential learning opportunities,” said Dean Kleinsorge.

Now five years old, the entrepreneurship program held its inaugural Entrepreneurs and Innovators Awards in a ceremony that also honored the 80th anniversary of Weatherford Hall.

In the spring, the American Forest Foundation gave a $510,000 grant, payable over three years, to Oregon State University and the Austin Family Business Program’s “Ties to the Land” series to help address growing concerns about the future for many of America’s ten million family forest owners.

Two of the college’s experiential programs—the Close to the Customer Project and the Business Solutions Group—continued to push the envelope of experiential learning.

The academic year brought diverse audiences and new clients to the Close to the Customer Project, including nonprofit groups such as Corvallis Clinic and cutting-edge organizations such as the Oregon Wave Energy Trust in the emerging field of wave energy production.

The Business Solutions Group provided experiential learning opportunities for nearly 50 students via consulting and development projects with OSU, the Oregon Department of Energy, Oregon Department of Transportation, and major private sector clients. The group brought in outside revenue of more than $1 million for OSU and the program.

Upon closing the evening, Kleinsorge reflected on the past while welcoming the future. “When the College of Business was established a century ago, we became one of the first 12 schools of business in the nation,” she said. “We closed our centennial celebration at the end of 2008 examining past successes and preparing for future achievements. Right now, I look forward to our next 100 years.”
Investing in a Wildly Successful Corporate Culture

By Thuy T. Tran

When Zappos.com’s founder Nick Swinmurn offered Alfred Lin the chance to invest in an online shoe company, Lin balked. He didn’t know it at the time, but he was just one keystroke away from missing the investment opportunity of a lifetime.

“I had my finger on the delete button because selling shoes on the Internet seemed like such a preposterous idea at the time,” said Lin, who is now the company’s chief operating officer, chief financial officer, and chairman.

Lin came to the OSU campus in October 2008 to give the College of Business Dean’s Distinguished Lecture and to spend a day meeting with students and faculty. What people learned about the man, his story, his philosophy, and his company left a lasting impression.

“The great lesson from Alfred is that while there might be a million different ways to run a successful business, delighting the customer and treating your employees well will always be a sound strategy,” said Don Neubaum, associate professor of management, who interviewed Lin for the Dean’s Distinguished Lecture. “Unlike footwear, those things never go out of style.”

The Zappos.com story began when Swinmurn was looking for a specific pair of shoes. Walking down a mall in San Francisco, he went to one store and couldn’t find the right size. He went to a second store and couldn’t find the right color. He went to a third store and couldn’t find the right style. He returned home empty-handed and frustrated.

When a Google search on his home computer was equally fruitless, Swinmurn recognized an opportunity. It was 1999, and Silicon Valley was roaring. He decided to quit his job and start a company. One of his first calls was to Lin and Tony Hsieh. Hsieh and Lin had co-founded Venture Frogs, an incubation and investment firm that invested in Internet start-ups.

“His pitch was so bad,” said Lin. “He didn’t have a business plan. He left a voicemail: ‘Hey, I’ve got this crazy idea, uhh… I want to sell shoes on the Internet.’”

Lucky for shoe aficionados across the globe, Lin didn’t hit the delete button. Because of his flirtation with a so-called risky investment, the world of e-commerce has never been the same.

Realizing the potential market size of the venture, Hsieh and Lin began investing in the idea. Over time, they wanted to be more integral to the company—not necessarily for the business opportunity, but because
they thoroughly enjoy being part of its culture. Hsieh and Lin joined the company full time in 2000 and 2005, respectively. Hsieh is now Zappos.com's chief executive officer.

Lin and Hsieh’s partnership goes way back to their college days. Hsieh was entrepreneurial and liked to take risks. He put pizza ovens in the dormitory and started selling pizzas, realizing they had a much higher margin than the hamburgers and fries that were available. Lin would go downstairs and buy whole pizzas from Hsieh and sell them at a profit to roommates upstairs.

“Tony worked very hard,” said Lin. “He made a lot of pizzas. The joke is that he takes all the risk and I do as little work as possible to arbitrage away any risk that there is in the business. That’s why I am the CFO and COO and he is the CEO and entrepreneur.” The two had several other ventures together, including LinkExchange (which they sold to Microsoft for $265 million in 1998) and Venture Frogs, before teaming up to head Zappos.com.

The Zappos.com goal is to position itself as an online service leader. The entire organization is aligned around one mission: to provide the best service possible. Lin believes that great service can only happen if the company fosters a great culture.

“We have more than 1,200 brands, but over time, people can copy that,” he said. “We have great training programs and policies that are very pro-consumer, but people can reverse engineer and copy that too. We think our corporate culture is our only strategic advantage.”

Zappos.com invests a lot of time and energy in cultivating the right culture from the very beginning. It starts with the process of interviewing potential employees. Determining whether a candidate can technically do a job is only part of the process; the other portion gauges the interviewee’s fit with the corporate culture—whether the candidate believes in the company’s vision and core values.

All employees hired in the Las Vegas corporate offices go through a five-week training program. During the first two weeks, the employee learns about the company’s history, culture, core values, and the meaning and importance of customer service to the company.

At that point, Zappos.com offers trainees $2,000 to leave if they don’t think the company is a good fit for them. This idea was first met with great resistance from the company’s legal and human resources departments, but the logic that bad employees cost the company much more than $2,000 won out. The “bonus to leave” program is seen as a more cost-effective and quicker way to get people who don’t align with the company’s asset—its culture—Lin hopes to create a special environment for all employees.

Zappos.com has an internal saying: “We are a service company that happens to sell shoes. And apparel. And handbags. And accessories. And eventually anything and everything.” Although 90 percent of the company’s sales come from footwear, Lin said there are three specific occasions when the company would consider entering new markets.

“First is when our customers tell us what they want to buy,” he said. “Second is when our employees are passionate about a product category. A third way is when our brand partners are very passionate about it.” New sites, including Running.Zappos.com, Couture.Zappos.com, and Outdoor.Zappos.com are all examples of employee-initiated product category expansions. For a long time, Zappos.com was one of the biggest retailers of Oakley golf shoes. The company added Oakley sunglasses based on the suggestion of an Oakley brand manager.

“When we started selling sunglasses, our warehouse wasn’t ready for them, so we’d ship these small sunglasses in the smallest boxes that we were shipping shoes in,” Lin recalled. “Within a few weeks, it was a top 300 brand. So that turned out to be a pretty good idea.”

As the company and its product categories grow, so does its workforce. “When a company is small, you [the founding/senior management team] have the luxury of interviewing all candidates who come in to figure out whether they fit into the company,” said Lin. “At some point, you can’t do that. You just have to put frameworks in place that allow you to have checks and balances to check for culture.”

Lin believes that constantly taking the culture to the next level is the biggest challenge. So far, Zappos.com has successfully found innovative ways to make sure everyone—not only employees, but also customers and brand partners—understands and becomes a part of the Zappos.com culture.
The ‘When’ and ‘How’ of Innovation

By Marie Oliver

Many businesses thrive on innovation; they fund huge research and development departments intended to move the company forward. Billions of dollars in revenue have been generated, and consumers’ lives are better because of advances in technology, medicine, food distribution, and scores of other industries.

After working for ten years in new product development in the biotechnology sector, Cory Cromer focused his academic research on when and how companies and institutions develop and market new products and processes. As a result of his studies, he thinks there is room for improvement.

Cromer, an assistant professor of marketing and entrepreneurship, said innovation is obviously a good thing—it leads to advances that benefit both companies and consumers. He warns, however, that introducing new products or processes without fully understanding the market being targeted can actually have a detrimental effect on a company’s bottom line. “We have to be solicitous in our innovation,” he said.

The adoption cycle for any new product or process can be charted as a bell curve that maps early adopters through late adopters. Under normal circumstances, adoption gradually gains momentum, peaks, and then gradually drops off. Although many adoption curves look similar in shape, Cromer said the trick is to know at which inflection points introducing something new makes good business sense. Introducing a product or process too early risks cannibalizing an existing source of revenue. “You miss reaping the rewards of efficiency and the momentum that can be gained in your processes and supply chain,” Cromer said. Introducing it too late might mean missing a golden opportunity or watching the competition thrive instead.

Cromer points out that the expense of introducing new products or processes can be quite high, and it is always a risk for a business. For that reason, he is exploring the intricacies of how to be proactive in directing innovations within a firm and for the marketplace. “Everyone talks about innovation like you have to be constantly innovating—it’s probably the most used word in any mission statement today,” he said, “but there is also a guidance of innovation that needs to take place and an understanding of the rate at which it can happen where the most benefit comes out of it.”

Cromer uses MySpace.com as an example. At the height of its popularity, MySpace.com was the nation’s hottest social networking site. “They had users that had been on the Web site more than two years, and they were using a majority of the functionality that was available,” he said. Advertisers were happy. Unfortunately, as features were continually added, new users were confused by the site and did not adopt at the same rate. “If you grew up with it and you were one of the first wave of people to use it,
the features didn’t overwhelm you,” said Cromer. “But MySpace was innovating so quickly with the development of their Web site, they were actually turning off their newer customers. You have to understand the audience it’s affecting, especially in Internet time.”

Companies also can turn off existing customers by changing things too much too fast. When customers have been using the same product or process for months or years, significantly changing it or adding something new can create confusion or frustration, especially if it adds work for the customer or discontinues well-liked features. “The worst thing that can happen is that you innovate so much that it’s overwhelming to your valued customers,” he said, adding that academia is not immune to the effects of bad timing. “If a professor drastically changes his or her pedagogy in the classroom halfway through an academic quarter, it can greatly hinder the educational process. If only two out of 45 students adopt, the class isn’t going to be successful for either the students or the professor.”

In fact, industries across the board would benefit from knowing more about how to gauge the consumer or end-user response. One might look at recent failures in the banking industry for an example of out-of-control innovation. “The thirst we have to be constantly innovating without totally understanding why and how can lead to inefficiencies,” he said. “We can be innovating faster than the economy can take in that innovation, or understand its effects.”

Cromer has had personal experience with rates of innovation gone awry. He uses an example of trying to buy something via a popular Web site: “I just wanted to hop on the site to buy a couple of books, and now they’ve got all these different options and I don’t know what it’s about,” he said. “I find out after checkout that my order isn’t completely in stock and one of the books is coming directly from another vendor. It’s my pet peeve. The company actually reaches a point of diminishing returns.”

Cromer said that Zappos.com, which is known for its dominance of the online shoe sales market, is a great example of how to delicately balance innovation while maintaining a customer-service orientation. “Every online retailer should look at Zappos.com and learn some lessons about understanding the voice of the customer in innovation,” he said.

But Cromer is studying more than the rates of innovation. He is interested in the gestalt of product/process research and development. In one of his latest studies, he is combining quantitative and qualitative methods to do an in-depth analysis of a product release by one of the top five biotechnology companies. The study, which also involves assessing the process used to develop and produce the product, has been in progress for the past year, and he has already collected and studied a large amount of quantitative data. He is now focusing on generating qualitative data on “core teams”—new product development teams—and recently completed a pilot study to test the efficacy of his qualitative method. The goal is to compare what he learns from the qualitative data with the available quantitative data.

The pilot study has already revealed some interesting information. For example, core teams are intended to streamline the new product development process, but Cromer discovered that some teams become dysfunctional because of the individual team members’ perceived needs for some form of self-protection. “These core teams are very tight, very close to each other because they can be on a project for years and they have to make that a success,” said Cromer. “Core teams in new product development are used to build a collective knowledge that travels with the project through all of the stages. But even with that collective work they’re doing, everybody keeps little bits of tacit knowledge to themselves.”

In other words, the team doesn’t function at top efficiency because instead of creating more collective knowledge, team members hoard knowledge for various reasons. “One woman said, ‘Hey, I’m the only one who understands how this really works; it’s job security for me. So I don’t write it down. If somebody needs help, they come to me,’” said Cromer. “There’s a little bit of a stake in having something that not everyone else knows.”

Cromer wants to understand how knowledge is either codified or remains tacit when the employees practice hoarding information from other team members and how that affects a company’s performance. He is excited at the breadth and depth of understanding possible from this major study. “I get to see a product and a process that are intertwined from the very beginning,” he said. The product has already been on the market for four years, so the company is well into the adoption cycle. The project promises to provide a rich data set for future studies.
Professionals Share
Triumphs, Pitfalls, Wisdom

By Abby P. Metzger

Experts in the classroom provide a crucial link between industry and academia. From supplying career advice to serving as role models, these professionals are a vital tool in higher education. Their stories build upon course principles and complement textbook theories. Each year, the College of Business hosts scores of guest speakers who visit classrooms and discuss a wide variety of topics that affect today’s businesses. In turn, students glean a treasure trove of insights that expand, enrich, and reinforce their learning.

Out of the classroom, into the zone

When Darren Dickerhoof was an OSU student in the late 1980s, he enjoyed classes with guest speakers. Now, as principal of the successful Dickerhoof Properties, he decided to give back to his alma mater by becoming a guest lecturer himself.

Admittedly, Dickerhoof was nervous the first time he spoke in the college’s Business Now class, an introductory course with enrollment typically exceeding 200 students. Nonetheless, he tells a compelling story. As a freshman in OSU’s construction engineering management program, he bought and remodeled his first house on 6th and Jefferson Avenue. Not long after his foray into real estate, Dickerhoof, along with his brother and father, was managing more than 250 apartment units in Corvallis and Portland.

About eight years ago, the Dickerhoofs decided to focus on retail development—a move that catapulted them into a string of lucrative remodeling projects. Today, Dickerhoof Properties focuses on retail real estate acquisition, development, general construction, and property management. The company owns and manages more than 700,000 square feet of retail properties and is remodeling the Rite Aid center in Corvallis.

Because Dickerhoof began his rise to success as an undergraduate, his advice particularly resonates with students. “It’s critical to figure out what you want to do and then pursue it,” he said during a recent class presentation. “It’s also important to learn from your errors. The best way to learn is from a successful failure.”

Dickerhoof supplied other gems of advice to students: set goals, formulate a plan, see things realistically, and above all, don’t carry a sense of entitlement. He compares the business world to stepping into a busy street where you don’t automatically have the right-of-way. “The real world is like crossing Interstate 5, not Monroe Street on campus where everyone will stop for you,” he said.

Luanne Lawrence, OSU’s VP for University Advancement, shares insights on mentorship as a guest lecturer for the College of Business. (Photo by Karl Maasdam)
For Dickerhoof, being a guest lecturer just makes sense. “You can only get so much from the books,” he said. Although not every student will take his lead, he believes connecting with even a handful of students is worth his time.

**Tending tradition, wearing many hats**

While Dickerhoof’s story appeals to would-be entrepreneurs who want to fast-track their careers, guest speaker Eric Thompson discusses his fifth-generation family business in Corvallis. The business started primarily in farming operations and has since diversified into the transportation, financial, and tree farming sectors. Thompson is president of the family’s timber operations, TTT Timber, Inc., a company that grows and markets trees for long-term timber management.

As a guest speaker, Thompson shares the rewards and challenges of managing the personal and professional dimensions of a family operation. “It’s a business of family and a family business. Those are two different things, but they come together,” he said. Additionally, being part of a family enterprise means that Thompson has “lots of hats to wear.” He’s part shareholder, part manager, part cheerleader, and part chief financial officer.

An OSU alumnus, Thompson said telling his story to students is a way to connect academia with the private sector and introduce students to current business practices. “Because I went to OSU, I want to put something back into the system,” he said.

**Putting out fires, gaining insight from mistakes**

Experts in the classroom tutor students on crucial elements of successful enterprises, but they also teach ways to avoid common business pitfalls. Anne Naito-Campbell is one such lecturer.

Naito-Campbell is a principal of Bill Naito Co., a prominent commercial, office, retail, and real estate management company in Portland, Ore. For years, the Naito family quarreled over company assets and management, until the business was split between two branches of the family. Recently, Naito-Campbell relayed her experience in a class taught by Robin Klemm, director of the Austin Family Business Program.

“Anne gracefully shared the painful story of the Naito family’s bitter feud,” said Klemm. “Her philosophy of sharing the story with students to help prevent the same trauma in other business families is to be commended.

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**Learning from others, passing it on**

Professionals in the classroom carry a wealth of experience, and they often become role models and mentors for university students. Luanne Lawrence is OSU’s vice president for University Advancement and a speaker in the college’s Leadership and Team Building course taught by Associate Professor David Baldridge. Lawrence discusses the challenges she has faced in her 20-year career as a woman in the field of communications and the mentors who have supported her along the way.

Pointing out that she has lived in four states and worked for five universities as evidence of the route that many women in higher education administration take to climb the career ladder, she speaks to the difficulty that women have traditionally faced in being promoted from within a university. She also speaks to the importance of mentors, sharing insights about how she has built her career on the strong shoulders of great people who have helped her become successful.

“Students talk to me about their future careers and their questions about the profession,” she said. “They ask me what I think is important for their career development.”

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Likewise, Steve Zika, chief executive officer of the forest products company Hampton Affiliates, walked students through several of the company’s strategic decisions in a class taught by Don Neubaum, associate professor of management. For each decision, Zika presented the circumstances Hampton faced, the strategy they took, and whether or not the outcome was successful. For the best outcome, Zika said companies need a combination of a sound strategy and tactics, and proper follow-through.

“Steve Zika’s lecture really illustrated the fact that two identical decisions can end completely differently, depending on the market,” said Alan Anderson, a student who attended the lecture.
Marketing to the Elderly (without Making them Feel “Old”)

By Marie Oliver

How can a person age without feeling “old”? How can families and caregivers help an elderly person with daily activities without negatively affecting that person’s sense of self? What do elderly people and their families really want from paid caregivers?

These may seem like sociological or psychological questions, and perhaps they are, but Michelle Barnhart will tell you that they are also relevant to business. Asking these questions can help product manufacturers, service providers, and others who assist the elderly understand how the aging population and their families define quality of life and thus the mindset that drives their purchasing decisions.

Michelle Barnhart, a newly hired assistant professor of marketing, didn’t start out asking these kinds of questions. She started out thinking she wanted to teach biology, so that is how she focused her undergraduate work at Stanford University. After earning a degree in biology and working for several years in the field, she sidelined that professional goal when she realized that working long hours in a laboratory dissecting human brains was not as fulfilling as she thought it would be.

After deciding to switch careers, she happened to renew acquaintance with another Stanford alumnus, Casey Pittock, who had just started a company called Telcare Systems. The company provided emergency response services for elderly people. She and Pittock worked together to build a substantial subscriber base, and after its first three years the company drew the attention of the industry leader Lifeline Systems. In 1999, Lifeline purchased the company and turned the location into its Denver, Colo., regional office. Barnhart ran the office for the next five years, continuing to focus on sales and marketing and on the elderly consumer market in particular.

With that experience under her belt, Barnhart realized she still had a strong desire to enter academia as a profession, so she decided to pursue a PhD in marketing at the University of Colorado in Boulder. She later followed her advisor to the University of Utah, where she earned her degree in spring 2009.

As a graduate student, Barnhart was surprised to find that many of the commonly accepted theories in marketing research did not extend to consumers of advanced age. While researchers in the fields of gerontology and nursing had often studied the elderly, little research in business was relevant to the elderly and their families. “In marketing research, almost nobody is looking at older people,” she said. “The literature really doesn’t have much to say about people who are well beyond the age of 65. It’s surprising, given the number of older people in this society.”
Recognizing that she had an opportunity to contribute knowledge in this area, Barnhart wrote her dissertation on the consumer behavior of elderly people and their families. She targeted her research to people in their 80s and 90s who need help with their daily activities, specifically focusing on how families coordinate paid and unpaid services to try to improve their loved ones’ quality of life. She was interested in how they provide and/or obtain support for activities that have a consumption component to them, such as grocery shopping, managing medications, and maintaining a home.

Two of the main things Barnhart wanted to know were how elderly people and their families value paid services and how families and paid service providers work together to create value for an older person and the family. Besides providing insight about how these “ensembles” define quality of life for an elderly person, she believes her findings could have implications for policymakers in the area of elderly caregiving.

She points out that programs such as Medicare and Medicaid are primarily concerned with caregivers’ technical qualifications, such as whether a caregiver can administer certain medications. “But that’s not necessarily what the family is looking for,” she said.

Barnhart learned that one of the main things families want for their loved ones is social contact. “They’re very concerned about their older family member being alone or being lonely,” she said. “So when they hire somebody to come in, above training or technical expertise, what many of them really want is somebody who can be a friend to the older person.”

Exploring quality of life issues led Barnhart to question how elderly people define themselves, and how that definition affects their decisions or their reactions to decisions their families make for them. One thing that became quite clear is that people resist being defined as “old.”

As a marketer for Telcare and Lifeline, Barnhart would encounter older people she thought would benefit from emergency response services, but when she suggested the service to them, they didn’t think it was something they needed. “Very often, these people who were literally pushing oxygen, walking with a walker, or had told me they had fallen three times in the past, would tell me, ‘That’s a great service for my friend, but it’s not for me because that’s for old people and I’m not old yet,’” she said. She began to understand that companies may be missing certain subtleties when marketing to this age group.

In the United States, we tend to hold a negative stereotype of elderly people as, for example, physically debilitated, lonely, confused, fussy, or grumpy. “We have lots of negative images of older people,” said Barnhart. She wanted to know how various ensembles can come together to help an elderly person adapt to the changes that come with aging without becoming associated with that negative stereotype.

“What do we help an older person maintain a sense of independence, get joy out of life, and age gracefully?” she wondered. “Even if they have some cognitive decline, how can we help them in their daily life to not feel like they’re confused?”

She wanted to know what it is about the way providers offer services that makes a person feel old, “because if we’re doing it in a way that makes them feel like our stereotype of an old person, they’re not going to want that assistance.”

Barnhart makes a distinction between aging and “getting old,” and points out that it is an important distinction when marketing services to the elderly. “Getting old has to do with cultural stereotypes,” she said. She discovered that people who don’t get assistance when they need it are much more likely to fall into negative patterns. On the contrary, if they do get help, they are more likely to perceive themselves in a more positive light and be happier as a result. “If older people can recognize they’re aging and they respond to that in a way that allows them to produce the meanings associated with not being old, they can age without getting old,” she said. For example, she relates the story of Bonnie, who was in her mid-80s when she took her tax records to her accountant and realized she had made several mistakes. She recognized that her memory was not as sharp as it used to be. Rather than continuing to try to handle her finances on her own, she hired someone to come in twice a week to help her manage her daily accounts.

“She didn’t see this as being a helpless, confused old lady; she saw it as exercising control,” said Barnhart. “She wasn’t pressured to do it; it was her independent decision. Having control is one of the things that make someone seem ‘not old.’” Bonnie was able to maintain her sense of independence and quality of life by taking charge and getting some help when she needed it.

Barnhart recognizes that she has just barely scratched the surface and that her research leaves many unanswered questions. “It’s a huge area for future research,” she said. Next, she wants to focus on the family members’ experience of providing support to an elderly individual and explore how their experience influences how they consume. For now, she is doing in-depth, qualitative research on limited subjects. Eventually, however, she envisions a more broad-based quantitative study that could be used to inform policymakers about issues related to caregiving for elderly people.

This fall, Barnhart will be teaching principles of marketing, a course she enjoys because it provides many opportunities to bring her business experience into the classroom with examples and activities. She is also developing a new experiential, project-based course in tandem with Keven Malikewitz, assistant professor of marketing, that will be offered later in the year. “We’ve been calling it a ‘lab-like’ course, but I prefer the term ‘boot camp,’” she jokes, pointing out that she believes the best way to learn how to do something is to actually do it.

“Just like boot camp, the course will be an intense, hands-on learning experience where students actually perform many of the tasks they will be doing later in their careers, she said. “I have no doubt that the skills they develop will be extremely valuable for their future success, both in business and in life.”
The 1983 film adaptation of Tom Wolfe’s book The Right Stuff explores a set of personal characteristics possessed by the earliest test pilots and astronauts—characteristics that made them fit to face the dangers of space flight. In 2006, the Oregon University System formally approved the transformation of the College of Business into a professional school, which makes it possible for the college to select students who possess certain behaviors and attributes—the “right stuff”—that promise to make them successful business leaders.

Freshmen now enter as prebusiness students. At the end of their sophomore year, upon successfully completing the required prebusiness curriculum, they must apply for admission into the professional school through a competitive process. Establishing these hurdles helps the college accept students into the program who are serious about their chosen profession and willing to accept responsibility for their learning. Joel Meyers and Nadine Honda exemplify the kind of students the college is seeking.

Academic leadership qualities: Joel Meyers

Meyers has the right stuff. College administrators recognize him as someone who demonstrates humility, politeness, and authenticity, but he has also been singled out by his peers for his leadership qualities. His four teammates selected him as team leader for the Integrated Business Project competition, a rigorous two-day event during which MBA candidates pitch their venture to business professionals.

The team’s task was to demonstrate to the judges the viability of NeoHope Biomarker, a company promoting two products that could reduce the mortality rate of patients with head and neck squamous cell carcinoma through early detection. Although every team member was expected to take on leadership roles during the nine months of preparation, Meyers continued in this capacity...
throughout the duration of the project. In this role, he clearly proved that he is an organizer and communicator who can make things happen.

As a leader beyond his team, Meyers motivated and helped fellow students work together to fully absorb and integrate the MBA curriculum by organizing a study group with eight other students. “We each created a paper that summarized contents from a specific course,” said Meyers. “We then organized a presentation and delivered the information to everyone who was interested in attending to help them prepare for the final oral exam, which tested our knowledge of the entire MBA curriculum.”

Meyers attributes his perseverance and determination to his ability to discipline himself—an ability he learned by being home schooled in middle school and high school. “I realized that the smarter, harder, and faster I worked, the sooner I would get my work done and the sooner I could go do other things besides school,” he said. “Whereas in a traditional school setting, you’re there for a specified amount of time and there’s no motivation to work harder to finish faster.”

Upon finishing the high school curriculum a year early, Meyers came to OSU for a bachelor’s degree in computer science and graduated with a 4.0 grade point average. Although staying focused on the academics has served him well, Meyers recognized the need to be flexible in order to deal with changes. He had planned to spread out the MBA course load over a few years while working part-time at Weyerhaeuser, but when he saw that the company was changing dramatically and the future of his job was becoming less certain, he decided to do the MBA program in nine months and move on.

Meyers’ leadership capabilities are no secret to the faculty, either. He was unanimously selected by the graduate faculty of the College of Business for the inaugural Dean’s Outstanding Leadership Award.

Professional development qualities:
Nadine Honda

Honda was a recipient of the Dean’s Leadership and Professional Achievement Award, the equivalent of the Dean’s Outstanding Leadership Award for undergraduates. This award recognizes students who demonstrate leadership
potential and support for the college's desire to promote a professional culture. She was the only award recipient who received perfect scores from all three judges during the competitive interview process.

Honda was accepted into the College of Business professional school last year and is currently a senior, majoring in accounting with a minor in health management and policy.

Through her resolve, determination, and personal commitment, Honda has successfully found the right balance between academic achievement and student involvement. Beginning in her first year at OSU, she became involved with the Native American Longhouse, where she organized events and shadowed the executive director of finance of ASOSU, the Oregon State University student government organization.

“Once I was engaged in leadership at OSU, I couldn’t stop,” she said. In her sophomore year, she held an executive position with ASOSU and was later elected as the organization’s vice president. In this capacity, she interacted directly with about 80 student employees, three faculty employees, and two attorneys on contract. She also administered a $1.2 million annual budget.

Honda served as representative to the ASOSU legislative branch, which reviews and approves the $18 million student fees budget. In addition to day-to-day responsibilities, she advised OSU administrators on student concerns and served as a liaison to various administrative groups.

Honda said her ability to juggle the academic and extra-curricular activities hinges on knowing her limits. “You really have to know yourself,” she said. “If you know that you can take on three big things and give 100 percent to each of those things, then it’s not good for the organization that you get involved in, for your self-esteem, or for your mental health if you take on four or five things.”

She admits that the balancing act is a learning process and that the mistake of overexerting oneself happens. “It is then your responsibility to reduce your commitment in a way that would not put the organization at risk,” she said. “It is your responsibility to find and train someone who can step into the role.”

Just like she recognizes her responsibilities as an elected member of ASOSU, Honda recognizes her responsibilities as a student in the College of Business professional school. “I am a piece of this organization and my performance will make a difference,” she said. She is motivated to make an impact and recognizes that although she had to work very hard to get admitted into the professional school, she knows that everyone else in her class is equally self-motivated, hardworking, and independent. It takes extraordinary effort to distinguish oneself in a field of exceptional people.

Besides the positive character traits Honda sees in herself and her cohort, she stressed the need for each student to nurture a viable support system. She knows she can seek support from her peers, more senior students, and faculty. “It’s not the hand-holding sort of thing or assigning mentors,” she explained. Rather, students are encouraged to develop their own relationships and networks.

### Raising the bar

As Dean Ilene Kleinsorge points out, targeting students who are motivated and energized around the curriculum raises the bar for everyone. “For faculty, there’s nothing better than a classroom of students who want to be there, who know why the class was required, and are glad to have to take it,” she said. “A higher caliber of students raises the dynamic of the classroom, the level of expectation and satisfaction, and the degree of engagement in learning.”

Although Meyers and Honda are different on the outside, they are similar in character. Both are unusually intelligent, unwaveringly determined, and remarkably humble. Through students like Meyers and Honda who possess the right stuff, the College of Business is successfully demonstrating its commitment to graduate profession-ready individuals and provide employers with flexible, knowledgeable business leaders.
Outperforming the Pros: The Oregon State Investment Group

By Abby P. Metzger

When the OSU Foundation entrusted students in the Oregon State Investment Group (OSIG) with managing a $1 million fund in October 2008, it might have seemed like bad timing. Industry giants like Merrill Lynch and Lehman Brothers had toppled. Lawmakers were negotiating a $700 billion bailout for distressed mortgages, and the nation could see a hefty economic crisis on the horizon. But even in the headwinds of a shaky market, the OSU Foundation remained confident the students could strategically manage the $1 million fund.

Their confidence was not misplaced. The OSIG, composed of a couple dozen finance-savvy students, already had an impressive track record. In 2007, the group made nearly 24 percent on its $50,000 investment portfolio—far above its benchmark, the S&P 500.

In many respects, the $1 million fund represents a new direction for the OSIG. It also reflects the hard work of preceding students and advisors who helped shape the organization into what it is today. The group has confronted challenges, reinvented itself, and enjoyed steady growth since its inception—much like a well-performing investment.

Moving beyond professional development

When Ray Brooks, finance professor, joined the OSU College of Business in 1997, the OSIG did not exist. A group called the Finance Club consisted of a loose association of aspiring financiers. Brooks became the club’s faculty advisor, and it joined the Financial Management Association (FMA), a global leader in developing and disseminating knowledge about financial decision-making. The FMA has approximately 200 student chapters around the world.

Focusing on professional development, the club started meeting more regularly, inviting speakers from Oregon businesses, and going on field trips and conferences. At a national FMA conference one year, the Finance Club got a glimpse of what was possible. A student group from Pennsylvania was investing real money, and OSU students wanted to do the same. “We had four students at the national conference that year, and they basically said, ‘we want to do more than professional development. We want to trade, and we want to invest,’ ” said Brooks.

(Continued on page 22)
Visiting the pros

The freshly formed OSIG didn’t need a lot of time to make headlines for its investing prowess. Still in its first year, the group considerably outperformed its S&P 500 benchmark. Earnings were reinvested or used for professional development activities, including partially funding a trip to visit New York’s financial giants. Justin Shanks, the first president of OSIG during the 2007-08 school year, played a key role in energizing the group and preparing for the trip, which required a lot of logistical planning.

During the summer of 2008, a cadre of OSIG members visited Fortress Investment Group, Goldman Sachs, and JPMorgan, among other firms. They also went to the NASDAQ for the opening bell. “It was really neat to see my classmates have a great experience and broaden their perspectives and aspirations,” said Shanks. “Being part of a team that has very similar goals is a great learning environment.”

The New York trip must have made a favorable impression on Shanks because just a few months later, he moved to the East Coast and took a job as an analyst with Wyatt Matas & Associates, a boutique investment banking firm based in Washington, D.C., that specializes in small- to middle-market mergers and acquisitions. The hours can be strenuous—he works from 70 to 100 hours per week—but Shanks said the OSIG prepped him for the real world. “The investment group gave me the in-depth experience that I wouldn’t have received anywhere else,” he said. “There is a direct correlation between what I did in the group and what I do now. Even though it was a load of work, the OSIG prepared me for the real world of time constraints and challenging demands.”

Implementing a winning strategy

Much of the OSIG’s success can be attributed to the group’s disciplined structure and investment strategy. The OSIG has a four-tiered structure, starting with the individual analyst. Analysts select and research stocks with guidance from sector leaders. Sector leaders oversee a particular industry such as financials, healthcare, consumer goods, technology/media/telecommunications, and industrial/material/energy/utility. They are supported by a management team consisting of a treasurer, a logistics coordinator, a director of human capital, two portfolio managers, and the president. Faculty advisors supervise the management team.

Selecting and approving a potential company to invest in can be a painstaking process. On average, an analyst spends 60 to 80 hours per term selecting a company and evaluating its financials, strengths, weaknesses, and investment potential. Analysts then compile a report and give a presentation explaining why they believe the OSIG should invest in the stock. After 25 minutes of Q&A, the entire group votes on whether or not to buy the stock. Throughout the process, OSIG faculty advisors Jimmy Yang and Prem Mathew act as sideline consultants.”In my role, it’s especially important to make sure the model they use is appropriate to evaluate a company,” said Yang.
The group’s disciplined, transparent, and collaborative structure has proven to be a successful market strategy. As Mathew explains, “In some ways, the OSIG strategy is better than a management company’s because here we have a whole group of students all looking at individual stocks.”

The OSIG is open to any student and recruits for new members every fall and spring. “You basically need to fill out the application form, and we schedule an interview,” explained Yang. “While taking finance courses is not a requirement, I think that students need to be very interested in investment.” Once they are selected, new members are asked to make a one-year commitment to the group.

Earning today and tomorrow

After Justin Shank, Adam Gulledge, who had helped form the group, was next in line to lead the OSIG. His first day as president on September 29, 2008, was ominous: the Dow dropped almost 800 points—the biggest point loss ever for the index. According to the Dow Jones Wilshire 5000, $1.2 trillion dollars suddenly vanished from the market. Despite the stock market’s precipitous drop, the OSU Foundation officially presented the OSIG with $1 million a few days later.

How did they pull it off? It would appear that hard work, commitment to a vision, and painstaking attention to detail made the difference. Gulledge, who was one of the students who made the pitch, borrows a metaphor from Jim Collins’ book, Good to Great, to describe the OSIG. He imagines the group as a giant wheel pushed by several people. It took Finance Club President Byron Williams’ vision to lay the groundwork, Justin Shank’s hard work to get the OSIG on its feet, and Gulledge’s strategy to keep the club model sustainable in the long run. Each student—from the president to the analyst—was and continues to be an integral part of the OSIG and its success.

The academic year 2008-09 was exceptional for the group. Despite the current economic climate, the $1 million investment, called the Large Cap Domestic Fund, performed relatively well. In mid-June, the portfolio value was more than $955,000. The group scheduled a second trip to New York, where a handful of OSIG members planned to visit twice as many firms as the previous year.

Gulledge said the group continues to demonstrate tremendous commitment and motivation. “Everybody is willing to help everybody, but there’s no hand holding,” he said. “That’s because we have some really self-motivated people who want to get things done. I’m excited to see where this group will be in ten years and whether my two years of work made a difference.” Given the results of his efforts to date, there is little doubt that Gulledge has already established a legacy for himself.

Student Michael Beall recently succeeded Gulledge as OSIG president. Beall, a senior in finance and accountancy with a minor in economics, said he has some new plans sketched out for the OSIG. “Overall, I think my focus for next year will be increasing our capital and making us a more competitive group at the national level,” he said. “When you think about how Wall Street works, a lot of mutual funds and companies pin their performance against other companies. So I think it’s important for us to also compare our performance against other schools.”

Ray Brooks, the retired advisor who helped resurrect the Finance Club, never thought students would be able to achieve this much so fast. “I think they’ve done a marvelous job, and the speed at which they’ve accomplished things is amazing,” he said. “I feel like a proud grandparent.”
MBA Students Gain Commercialization Experience through Integrated Business Project Competition

By Knox Richardson, Abby P. Metzger, and Thuy T. Tran

Going up?

It may be the shortest 45 seconds of your life. Without notice, you find yourself in an elevator with a prominent venture capitalist. You have a business idea to pitch. Where do you start? Better yet, when do you quit? If you haven’t captured the essence of your proposal by the time the lift reaches the penthouse, you’ve missed the chance of a lifetime.

The 45-second elevator pitch is the most visible component of the annual Integrated Business Project competition, the team-based alternative to a master’s thesis in the OSU College of Business MBA program. The elevator pitch competition is just the beginning of a two-day series of team presentations to a panel of prominent OSU business alumni and friends serving as judges.

Ten teams competed this year, most with five members each. Students had only their fall and winter terms to prepare comprehensive, professional-quality, investor-ready business plans for the competition. Later in the year, the students formally defend their plans to faculty graduate examining committees that also measure the students’ mastery of the graduate course material and topics.

For the third year running, the College of Business partnered with the OSU Office of Technology Transfer to provide MBA teams with projects based on technologies developed by OSU researchers. Six of the ten teams this
year developed business plans for the commercialization of OSU agriculture or physical science inventions. For the first time, one team took its technology from the College of Pharmacy and Oregon Health and Sciences University. Of the remaining three teams, one was sponsored by the Boeing Company and two projects were generated through student ideas.

The competition is a win-win-win situation. Students win because they have the opportunity to test their skills by promoting real ideas with solid market potential. “The Integrated Business Project has allowed me to understand the challenges of venture management and planning,” said MBA candidate Garrett Vogenbeck, originally from El Paso, Texas. “It has also prepared me for the real world by forcing me to work in a team and innovate collaboratively.”

OSU wins by moving a step closer to creating revenue through the translation of academic ideas into market-ready ventures. “We give the teams fresh, embryonic science and they come back with complete development and marketing programs,” said Brian Wall, director of the OSU Office of Technology Transfer. One team called NeoHope Biomarker prepared its commercialization plan promoting a genetic testing tool for early detection of head and neck cancers while scholarly journals were publishing the original OSU scientific research.

“If we keep using technologies developed at OSU as the basis for the business plans, we will be growing our technology transfer program exponentially,” said Integrated Business Project judge Tim Myers, a patent attorney with HP. “Each year I have been involved in the Integrated Business Project competition, the students outperform presentations I review on a regular basis.”

In the end, the world wins through the implementation of new ideas that make society a better place. For example, the Integrated Business Project allows students to apply environmentally sustainable business concepts and methods as they promote commercially viable ideas. “The movement toward sustainability and becoming more eco-friendly was one of the driving forces behind our project—an OSU-invented selective bioherbicide,” said native of Hilo, Hawaii, and MBA candidate Aaron Brown of team Inno-Green. “The companies that have already initiated the change to sustainable practices will not only improve the environment and their image, but also their bottom line.”

Vogenbeck was a member of the team sponsored by the Boeing Company that addressed the problem of discarded carpeting from refurbished airliners. The team, CLS Xchange, proposed a recycling scheme that would help Boeing and its partners to keep thousands of pounds of waste carpet out of landfills and help to create a zero waste aircraft cabin. “CLS Xchange sought to create a value-adding business model in which sustainability actually creates cost advantages,” he said. “If society wishes to perpetuate green business practices, entrepreneurs and innovators will need to find ways to make it economically feasible.”

Translating scientific findings into commercially viable products, processes, or services is a significant challenge, even beyond manufacturing, marketing, and financing. Students who meet the challenge often experience results that make a difference in their careers, Julie Wrazel, chief technology officer of Home Dialysis Plus, Ltd., appreciates the real-world application of the Integrated Business Project. “This competition gives a large student population the chance to really think through what it means to make a business proposal that is reasonable, actionable, and also favorable to investors,” she said.

The current MBA class was the seventh to employ the Integrated Business Project in lieu of a thesis, and competition judges continue to extol the quality of the projects presented. “Overall, I was impressed again with the business plans. They are not perfect, but then none are,” said returning judge Kathleen Sego, chief financial officer of Innovation Asset Group, Inc. “I’m most excited when they spot potential issues and then come up with creative ways to address them. For instance, the Green Viking Mead team recognized that their expected market doesn’t watch conventional media, so they came up with a viral video approach that would reach them.”

The MBA program continues to impact local and regional business and economic development through commercializing cutting-edge technology, observed by management faculty member and MBA advisor Tom Dowling. “The graduates in this year’s MBA class represent the best of what OSU has to offer Oregon and the world in bringing breakthrough knowledge and innovation to bear on society’s most pressing problems,” he said.

So if you meet a College of Business MBA graduate in an elevator in the future, it might be worth your while to perk up your ears for 45 seconds.

(Continued on page 26)
Team Members:

**Caspian Cooling Technologies**
Arjang Fartash  
Debra Gilbuena  
Kevin Hollinger  
Timothy Maciejewski  
Jane Wall

**CLS Xchange**
Alex Brenner  
Cody Mack  
Amanda Mornaeult  
Mariah Van Winkle  
Garrett Vogenbeck

**CommonSensors**
Jacqueline Bruns  
Jeffrey Munsey  
Phuong Nguyen  
Martin Onstot  
Matthew Smith

**Green Viking Mead**
Aaron Deen  
Lucas Friedrichsen  
Hunter Gamblin  
Nicole Hunter  
Lacey Mc Neely  
Khoa Nguyen

**If You Build It Incubator**
Michael Chowdhury  
Bjorn Lapakko  
Matthew Lewis  
Jennifer Martin  
Thao Tran

**Impact Pharm**
Kyle Anderson  
Melissa Bowers  
Kurtis Meidinger  
Takafumi Watari  
Garren Wood

**Inno-Green**
Aaron Brown  
Jaemin Kim  
Leo Mardjuki  
Justin Poteet  
Stephanie Reckard

**NeoHope Biomarker**
Joel Meyers  
Brandice Miller  
Reed Reeve  
Sithiphon Suwanboriban  
Robin (Roberta) Weber

**North American Shellfish Co-op**
Jakrapol Baesuvan  
Calvin Evans  
Christina Kinney  
Burke Lodge  
Li Wang

**Perseco Innovations**
Ryan Dixon  
Christopher Gormley  
Brodie Harvey  
Weiwei Liu  
Josiah Moses

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**Judges**

*Steve Allen,* Belle Valle Cellars Winery founder and attorney; *Christina Bailey,* TRW Commercial Steering senior account executive; *Larry Brown,* PricewaterhouseCoopers retired partner and OSU College of Business executive in residence; *Richard Carone,* Korvis Automation chief executive officer and executive chairman; *Joe Fazzio,* HP retired senior project engineer; *Dean Hansen,* Pacific Continental Bank senior vice president; *Catherine Mater,* Mater Engineering president and the Pinchot Institute for Conservation senior fellow; *Tim Myers,* HP patent attorney; *Skip Rung,* Oregon Nanoscience and Microtechnologies Institute president and executive director; *Kathleen Sego,* Innovation Asset Group chief financial officer; *David Skillern,* Sunriver Group LLC senior consultant; *Jeff Strickers,* NW Evaluation Association chief operating officer, chief financial officer, and vice president of corporate services; *Craig Topping,* Qwest senior account executive; *Dan Whitaker,* D & W Enterprises president and chief executive officer; *Julie Wrazel,* Home Dialysis Plus chief technology officer.

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MBA advisor Tom Dowling times students during the elevator pitch segment of the Integrated Business Project competition.  
(Photoby Karl Maasdam)
Team Summaries

Caspian Cooling Technologies: Caspian Cooling Technologies offers liquid-based cooling systems for today's high-performance microcomputer processors and systems.

CLS Xchange: CLS Xchange provides a trading-based solution for airlines, hotels, and other users of industrial carpeting. It secures discarded products via a national network and centrally recycles the waste.

CommonSensors: CommonSensors offers a real-time temperature tracking system for perishable, refrigerated shipments during transportation using wireless radio frequency energy for both communications and power.

Green Viking Mead: Green Viking Mead is a producer of an updated variety of an ancient honey-based, wine-like adult beverage.

If You Build It Incubator: If You Build It is a nonprofit sustainable business incubator for start-up construction firms that provides essential business training and services for new companies.

Impact Pharm: Impact Pharm is a manufacturing and consulting services provider for pharmaceutical and biotech companies for large and small clinical trials.

Inno-Green: Inno-Green provides selective organic bioherbicides that will enable seed farmers, organic farmers, golf courses, and other volume landscapers to effectively control grass weeds in an environmentally friendly way.

NeoHope Biomarker: NeoHope offers two products designed to help in the early identification of head and neck cancers and track the progress of patient treatments.

North American Shellfish Co-op: The cooperative features tools and information useful in combating the Vibrio tubiashii bacterium that secretes a pathogen causing both toxigenic and invasive diseases in shell fish.

Perseco Innovations: Perseco features a laser ablation technology attached to a microscope that works at the submicron level to cut cells.
If you're tempted to make fun of people who switch majors five or six times, reserve your judgment. As an undergraduate, John Becker-Blease did just that—from chemical engineering to electrical engineering to theater to political science—before earning a bachelor's degree in history from the University of New Hampshire in 1993. Finally settling on a career path, he earned degrees in insurance and finance from the University of Florida in 1996 and a PhD from Lundquist College of Business at the University of Oregon in 2002.

This 2008 MBA Society Professor of the Year's tendency to get interested in a wide variety of subjects hasn't changed, but that seems to be working to his advantage. And, as a recently hired assistant professor of finance, he is asking some interesting questions that someone needs to ask.

"A lot of people will get their degree, find one particular area, and spend their entire careers examining that," said Becker-Blease, "but I just find the general field of finance interesting. Once I learn about almost any topic, I'll find that there are some interesting unanswered questions in that area." As a researcher in the field of finance, Becker-Blease has explored numerous topics, but most recently has focused on corporate governance, gender equality in angel investing, and corporate social responsibility.

**Corporate governance**

Becker-Blease is traditionally trained in corporate finance, which he calls his “bread and butter” area of expertise. His early work centered on understanding company values and the drivers of value. More recently, however, corporate governance has sparked his interest. "In the post-Enron era, we've spent a lot of time wondering what makes effective governance for companies," he said. In particular, he wonders whether the pendulum has swung too far in valuing boards of directors more as executive monitors than as strategic advisors.

"A lot of the research over the last 15 or 20 years is primarily focused on the board of directors as a monitor of managers," he said. "Their job is to make sure that managers don't misbehave. It seems to me that it's very likely—and this is known in the management literature but hasn't been explored very much in the finance literature—that the board can also provide important strategic guidance to companies."

Becker-Blease notes that various requirements over the past decade or so restrict a company's flexibility in choosing board members, which can affect the ability of the board to act in an advising capacity. "We have restrictions on the proportion of directors who must be independent from the executives, suggestions..."
explains why so few women entrepreneurs seek angel investment remains an open question,” said Becker-Blease. Entrepreneurship meeting, finds evidence that men and women angels do invest differently. “Whether this was awarded the John Jack Best Paper Award at the 2008 United States Association for Small Business and important source of investment for women entrepreneurs, invest in a manner similar to men. This study, which we have are not the whole story. Our conclusion was that the likelihood of a woman entrepreneur receiving an over-simplified and perhaps misinterpreted the results. “It’s difficult to talk about, because we think the results capital compared to male entrepreneurs. Although the study has been widely cited, he worries that the media wonders led to Becker-Blease’s interest in exploring nontraditional topics in business and finance. One such topic concerns gender equality in angel investments.

“I was talking with my wife one night and realized there’s some real opportunity to understand whether women have access to this incredibly important type of early-stage financing,” he said. That wondering led Becker-Blease and a co-author to investigate whether female entrepreneurs have restricted access to early-stage capital compared to male entrepreneurs. Although the study has been widely cited, he worries that the media over-simplified and perhaps misinterpreted the results. “It’s difficult to talk about, because we think the results we have are not the whole story. Our conclusion was that the likelihood of a woman entrepreneur receiving an investment, given that she had asked for it, was equal to a male entrepreneur. But women appear to be asking for financing at a much lower rate. So it’s an interesting question: why so few?”

In a follow-up study, Becker-Blease and his co-author have asked whether women angels, who are an important source of investment for women entrepreneurs, invest in a manner similar to men. This study, which was awarded the John Jack Best Paper Award at the 2008 United States Association for Small Business and Entrepreneurship meeting, finds evidence that men and women angels do invest differently. “Whether this explains why so few women entrepreneurs seek angel investment remains an open question,” said Becker-Blease.

Becker-Blease has also explored whether women have equal access within the executive ranks, including whether women enjoy longevity of leadership equal to men. For example, in a situation where a corporation fails, would a female chief executive officer be disproportionately blamed compared to a male chief executive? Again, the results are nuanced. “Generally, we don’t find evidence supporting that,” he said. “We find that women executives, in most cases, appear to be dismissed at rates equal to men. While this is consistent with equality among executives, we did find some suggestive evidence that male-dominated boards are more likely to fire a woman executive than a board with more women on it. Women also appear more likely to leave a firm, in general, but the cause isn’t always clear. This is a difficult area to research because firms rarely publicly admit why an executive left.”

It is clear to Becker-Blease that there is still a lot of work to be done to answer these kinds of questions. “I’m excited to keep pursuing those topics,” he said.

Corporate social responsibility

It’s probably fair to say that one of the things that sparked the interest of the College of Business in bringing Becker-Blease on board as a faculty member is his work with the Aspen Institute. Becker-Blease has spent most of his free time in the past two years working on behalf of the organization. “Aspen is centered on the idea of a more holistic approach to managing a firm,” said Becker-Blease. “There has been a historic favoritism toward the shareholder primacy model, which basically means that companies should focus on share price, and managers should manage toward the share price and allow markets to handle everything else. What we’ve seen over the last decade is that while this model is not necessarily broken, it is not complete.”

He notes that implementing the model is at issue. “If nothing else, you can look at environmental records of firms,” he said. “If we’re not able to adequately protect the environment with rules and regulations, is there a role or duty for businesses to engage in some degree of corporate social responsibility—responsibility to something other than shareholders and stock price? I think the answer is ‘yes.’”

The Aspen Institute, which fosters values-based leadership, ranked OSU’s MBA program among one of the top 100 “greenest” in the world, so Becker-Blease is in good company here. “I think I’m going to find a lot of kindred spirits,” he said.

Bringing it all to the classroom

Becker-Blease’s interest in academia is grounded in a love of teaching, and he will teach introductory and advanced corporate finance at OSU. He will also teach students about financial institutions, which is a topic he taught for several years at the University of New Hampshire. He said he was beginning to think of that course as pretty routine until the recent economic meltdown hit. “I got kind of bored with financial institutions and banking because nothing much had happened; nothing had changed,” he said. “Well, now I’m chomping at the bit. I think this area of finance is going to be very interesting for the next five to ten years.”

He said many students struggle with finance because of a lack of confidence, so he tries to keep the introductory classes simple and focus on the basics. “Most students dread finance—it’s one of those classes you survive,” he said. “I try to tell them that what we learn in finance is critical to business success. You need to understand it. You can add the details in later, but you need to understand the basic financial and economic intuition of business.”

The College of Business strongly supports sustainability as a core business value, and Becker-Blease will bring this perspective to the graduate-level corporate finance classes he is teaching to MBA students this year.
Calling Accountants to Accountability

By Warren Volkmann and Marie Oliver

Business tycoons and financiers are fond of describing business as a “game”—a game in which the score is kept in dollars. One key tally of corporate performance is earnings—the dollars a company has left over after it has paid its bills. Every three months, companies announce their quarterly earnings, and analysts rush to calculate a host of other measures, such as earnings per share of stock and the stock’s price-to-earnings ratio.

Most analysts and researchers regard earnings as a solid, bedrock number upon which to build their analyses. James Hansen, OSU’s new accounting professor, is convinced that some companies play games when they calculate that foundational measure.

“It’s referred to as ‘earnings management’,” Hansen explained. He began studying earnings manipulation during his doctoral studies at the University of Georgia in Athens. “I started looking at the games companies like to play with their earnings reports. Companies have a lot of incentives to manipulate their earnings. Maybe they want to report an increase over last year’s earnings. Maybe they want to beat analysts’ expectations. Whatever the incentive, it causes firms to play with their earnings numbers, even when you might not expect them to.”

Hansen said his dissertation research, which is titled, “The Effect of Alternative Goals on Earnings Management Studies: An Earnings Benchmark Examination,” will help other researchers. “My paper helps remind researchers that if your results don’t make sense, there may be other things—like earnings manipulation—that have interfered,” he explained. “Maybe the firms that don’t seem to have incentives to manipulate their earnings actually do have an incentive.”

Upon completing his PhD, he accepted a position at the University of Illinois at Chicago, continuing the research he began as a graduate student. At OSU, he will continue his efforts to investigate the hidden earnings game. “My goal is to help analysts detect bad earnings, but that’s a big challenge,” said Hansen. “We like big measures that apply to all firms, but the measures we use are not very good. It is hard to apply one measure to all firms because companies don’t all use the same methods to manage earnings.”

Today, the Securities and Exchange Commission primarily learns about irregularities in earnings reporting as a result of leads from company insiders. “A lot of their leads come from insiders in the company who call them up and say, ‘Hey, we’re doing something funny with our accounting’,” said Hansen. Although the commission is kept busy enough with these reports, Hansen’s goal is to find accounting and management patterns that might help them predict or detect which companies might be tempted to play the earnings game. “I don’t have the answer, but I’m working on it all the time.”

James Hansen (Photo by Ellie Hansen)
BYU has a very competitive accounting program—the kind of program where kids cry if they don’t get an A,” he explained. “I had all the prerequisites for it, so a buddy encouraged me to apply, and I did. I hadn’t been very serious about accounting, but I thought ‘if I’m going to do this well, I had better get after it.”

Hansen had another pivotal experience at BYU: tutoring students in basic accounting in the accounting lab. It was there that he discovered he loved to teach. Resolved to become an accounting professor, he fast-tracked his bachelor’s and master’s degrees, completing both in just three years.

Hansen wanted to be a professor who had real-world experience, so in 1999—at the height of the dot-com craze—he joined Arthur Andersen, which at the time was one of the nation’s top five accounting firms. He traded a campus in the mountains for Andersen’s office in Phoenix. Seven months after his arrival, he ended his corporate career and headed to the University of Georgia to begin doctoral studies in accounting.

Perhaps his early exit was for the best. The next year, Arthur Andersen collapsed, taken down by the fall of Texas energy company Enron.

Hansen’s love of teaching helped him land his first assistant professor post. The University of Illinois at Chicago found his earnings management research interesting, but it was his willingness to teach auditing that cinched the deal. “Nobody wanted to teach auditing,” he joked. “I love teaching auditing. I love working with the students and seeing them become successful. After five years in Chicago, I was starting to see students that I had in my first year becoming successful in their careers.”

At OSU, Hansen will be teaching intermediate financial accounting. He is excited by OSU’s emphasis on entrepreneurship, and said he will advise future business leaders to prepare themselves with a solid foundation of accounting. “Even if you don’t stay in accounting for your career, you should have a basic understanding,” Hansen advised. “Otherwise you’ll be like my father and his farm. We were terrible entrepreneurs because we didn’t understand the accounting side.”
Decoding Complexity in Law Enforcement Data

By Thuy T. Tran

- Incident Type: Drug investigation
- Incident Date & Time: 01/28/2008 7:22 pm
- Address: 700 block of South Park Street
- Weapon Found: Beretta 92
- Arrested/Suspect(s): Suspect is described as a white male, early 30s, 5'10" – 6'0", medium build, dark hair. He was arrested for possession of a firearm, possession with intent to deliver cocaine.

Crime statistics like these appear frequently on popular television dramas. A swarm of detectives, crime scene investigators, and prosecutors work on one case involving a single key suspect and his MO. But for Byron Marshall, assistant professor in information management science and researcher in the growing field of intelligence and security informatics, the science of crime is more complex than television dramas might lead you to believe.

Marshall wants to make law enforcement easier—not by reducing criminal activity down to a handful of facts, but by finding ways to organize, analyze, and make sense out of very large and diverse collections of law enforcement data.

“Link charts” are an essential tool in the law enforcement domain. They depict individuals and relationships discovered during an investigation and are used to focus investigations, communicate within and between agencies, and present data in court. In Marshall’s recent research report, which will be published in the Journal of the American Society for Information Science and Technology, he introduces an “importance flooding algorithm” that helps identify important associations among a subset of individuals out of large data sets of criminal incidents to help investigators create better link charts faster.

The data set Marshall used in his study includes details from 5.2 million incidents and 2.2 million people, drawn from incidents recorded by the Tucson Police Department and the Pima County Sheriff’s Department in Arizona. Two investigations provided the experimental test data. One case involved fraud and methamphetamine trafficking and the other focused on a single criminal investigation.

Link charts are now produced manually. For a major case, it can take an experienced crime analyst several weeks to create a link chart. Cascading changes to the chart resulting from a change to one node (one individual) discovered during the course of the investigation are extremely time-consuming to capture. Marshall’s algorithm promises a way to streamline the process.

The challenge for Marshall was to create a program that could take advantage of the power of computing without sacrificing the intuitive element humans contribute—an element that can be essential to solving crime. "Humans can do things that are more subtle and intricate than basic mathematical extraction techniques alone can accomplish," said Marshall. “So the driving force behind my research is to find ways to do searches better and faster by starting with a flexible computer algorithm that allows the addition of nonstandard information and notions from the user during the course of the analysis.”

Marshall’s computation starts with the target individual and looks at all other individuals in the criminal activities database to find connections to the target individual. “We begin with one person and we pass importance out to everyone else,” said Marshall. “Certain people rise to the top either because they are connected to the target or because they are involved in particularly noteworthy activity as defined by the detectives.”

“Flooding” in the term “importance flooding algorithm” refers to the idea that importance can flow between connected nodes. “You start with key nodes and you pass importance to people nearby,” said Marshall. “You can visualize it as going to all the people who meet our definitions of what is important and pouring water onto them and see who it runs off onto.”

Numerous relationships can be extracted from police records to form an association network. The analysis module computes an importance score for individuals in the network using link weights and importance values. This computation mimics rules of thumb, intuition, and experience—elements used by detectives when evaluating criminal records. For example, when investigating a burglar (the target) who may be associated with two individuals because all three were present at a bar fight, the officer would be more interested in the one with a history of selling drugs. Their presence at the same bar fight as the target is reflected in the equal link weights. However, the “pusher” earns a higher importance value than the other individual of interest.

The importance flooding algorithm addresses the basic idea that a node is more interesting when it is connected to other interesting nodes. “This is analogous to how Google revolutionized search,” said Marshall. “The basis for a Google search is that a page is more interesting if it is linked to interesting pages.” This is in sharp contrast to the algorithm used by early search engines, where a page was determined to be interesting based on its content alone.

At left: Police scenes like this drug bust in Portland, Ore., make for thrilling television dramas, but Byron Marshall’s research in intelligence and security informatics shows that solving crime is much more complex than what is portrayed on the screen. (Photo by Chris Ho)

(Continued on page 34)
Marshall’s research benefits criminal investigators in several ways. In the past, some major criminal case investigators created profiles and then searched through data for individuals who fit the profiles. This approach may run counter to fairness ideals such as due process and probable cause. Marshall’s approach, on the other hand, starts with a specific target instead of “fishing” for suspects, thus reducing the potential for civil rights lawsuits.

Another advantage of Marshall’s methodology is that the output—a list of individuals to be included in the link charts—is more actionable for law enforcement agents. “A police officer usually won’t knock on someone’s door simply because a statistical model says that he’s a bad guy,” said Marshall. “It’s just not compelling evidence.” However, by beginning with a target and spreading (or “flooding”) to individuals connected to the target through documented associations and activities and by employing heuristics normally used by investigators, Marshall’s technique produces outcomes that are useful for law enforcement tasks and appropriate for criminal justice purposes.

Marshall believes his study provides the missing link between two extremes. “There has been a lot of work done through various artificial intelligence techniques that use highly computational, mathematical, and accurate approaches to information retrieval where people declare their victory by increasing their F-score by two percent,” said Marshall. In statistics, an F-score measures the likeliness of finding the right answer from a given list. “At the other end of the spectrum, people just give up because they can’t define what it means when someone thinks something is important because it depends on specific situations.”

He is trying to find the middle ground between these two extremes. “Maybe I can take some of the ideas that are squishy, messy, and semantically rich and leverage them without really comprehending them or resolving them into a totally mathematical expression,” he said. “I think the importance of this work is that it invites people to find new ways to systematically and flexibly employ heuristics in information retrieval and analysis.”

Marshall says the purpose behind his work is to develop an improved methodology for integrating data from multiple sources and for systematically incorporating heuristics into analysis processes. Although his computer application addresses a real-world investigational task—link chart creation—the same technique can be expanded to aid, for example, biologists looking at the vast amount of literature in medical journals or business people doing patent searches. He hopes to expand his research stream by broadening the technique to other applications in the areas of bioinformatics (for example, literature searches for related studies) and K-12 education (for example, identifying lesson plans that meet specific educational guidelines).

“My goal is to help the experts guess better,” said Marshall.

Byron Marshall (Photo by Thuy T. Tran)