



### Power Sharing

The new economy challenges the traditional role of leadership.

### DoD Partners with Smith School

\$2.2 million contract establishes Department of Defense Supply Chain Integration Center.

### Spotlight: All Systems Go

Julia Pulzone '84, MBA '93, is CFO at SPACEHAB, Inc., one of the world's leading providers of commercial space services.

### Real Time

Executive John Brophy discusses the changing nature of leadership.

### Connections

Corporate recruiters help Smith School undergraduates build job search skills.

### Academic Focus

Profiles of three new graduates demonstrate the quality of our student body.

### Faculty Up Front

Certain dimensions of patented inventions influence technology entrepreneurship, according to Professor Scott Shane.

### Alumni News

**In the kingdom of e-business, there are many houses - typically ranchers.**

With information moving rapidly through electronic networks directly into the hands of the employees who need it, horizontal, team-based, network-based, and alliance-based organizational structures with short chains of command are fast replacing yesterday's hierarchical pyramids. In corporate headquarters and in separate business units spread around the world, more employees do their jobs independently or as members of teams with the responsibility and authority to manage themselves as they move from one project to the next.

The technological revolution is helping to level the hierarchies-but what of the "rulers"? Is leadership as flexible and flowing as the workforce it manages? How is management evolving to fit the digital economy? Six professors at the Robert H. Smith School of Business discuss the trends.



The context in which leaders operate in the new economy is quite different than a few years ago," says Anil Gupta, professor of strategy and global e-business. "The ongoing rapid pace of the technological revolution calls for a more frequent rate of change. Effective leaders in the new economy need to have the ability to make rapid decisions, more so than would have been required in the past."

The continuing globalization of business also impacts leadership. "The activities and teams that

leaders have to manage are more geographically dispersed," states Gupta, co-author with Vijay Govindarajan of Dartmouth

College of the recently published book, *The Quest for Global Dominance* (2001, Jossey-Bass). "As a consequence, leaders need to be very good at managing people, not just through face-to-face interactions, but also remotely and virtually through media such as e-mail and teleconferencing."

Some of Gupta's favorite executive leaders of recent times are Bill Gates of Microsoft, Scott McNeely of Sun Microsystems, and Ken Iverson of Nucor Steel. "Gates and McNeely are almost unique among high-tech leaders in having navigated their companies through several generations of massive and rapid technological change," Gupta states. "Ken Iverson is remarkable for having created one of the world's largest, most efficient,

and most profitable steel companies in a relatively high labor cost market - the United States - and in a context where the steel industry was not just mature but actually shrinking.”

## Leading Others to Lead Themselves

Today’s flat, decentralized organizational structures speed the flow of information, diffuse decision-making authority, and empower even ordinary workers, states Henry P. Sims Jr., professor of management and organization.

“The business organization is clearly moving from an industrial-enterprise model toward a knowledge-based enterprise model,” says Sims, co-author with Charles C. Manz, the Nirenberg Professor of Business Leadership at the University of Massachusetts, of *The New SuperLeadership: Leading Others to Lead Themselves* (2001, Berrett-Koehler). “The hard-nosed autocrat is quickly becoming an artifact. The essence of leadership in today’s information age is to develop the capacity of people to lead themselves.”



Children of the information revolution are better educated and demand more from their job than a paycheck, Sims says. Frequently, employees are more committed to their profession than to their company. “This means that most people won’t stand for being closely managed and directed anymore, and they would probably be wasting their unique talents and capabilities if they did.”

Sims cites Dennis Bakke, co-founder and CEO of AES Corporation, as a “SuperLeader.” AES is an international independent power company that offers electricity in an environmentally responsible way.

Bakke believes that “people are special and unique; they are creative, accountable, and trustworthy,” Sims reports. “He desires to engage the whole person in the business enterprise and treats mistakes as learning opportunities.”

Bakke wants people to have fun in their work. He elaborated for Sims: “By fun we don’t mean party fun. We’re talking about creating an environment where people can use their gifts and skills productively to help meet a need in society and thereby enjoy the time spent at AES.”

## Openness to Change

Everyone is a ‘leader’ in the current economy, asserts V. Sambamurthy, an associate professor of information systems at the Smith School who studies corporate leadership in

the information economy. “Every employee needs to tap into his or her entrepreneurial spirit and be prepared to make decisions independently and quickly. In today’s customer-centric environment, if your business isn’t responsive to the customer, punishment is very swift,” he notes.

Sambamurthy’s ongoing research examines what chief information officers (CIO) and top managers do at innovative, successful companies such as Intel, Dow Chemical, 3M, and Marriott International to maintain their companies’ competitive advantages. The professor looks at their skills and leadership qualities, and at the organizational structures and processes that influence the adoption and use of advanced information technology (IT). He has shared his findings at CIO forums and in executive education courses on the use of information technology and e-business strategy.

In today’s technology-powered business environment, “Innovation is the only thing that stays constant,” Sambamurthy says. “Leaders must be change oriented. They cannot let their current successes blind them to future projects.”

Howard Frank, dean of the Smith School, who is former director of the Defense Advanced Research Projects Agency Information Technology Office and former technology company CEO, agrees. He notes that the pressure to deliver is tremendous in the fast-paced digital world. “If you look across major corporations it’s difficult for a CEO because the quarterly stock market report has become more sacred,” Frank says. “Long-term research and development investments have changed because the definition of long-term has become shorter.”

Sambamurthy cites the senior leadership at Marriott International, especially Carl Wilson, executive vice president and chief information officer, as an exceptional example of leaders willing to embrace change.

“When Wilson joined the firm as IT leader, it was clear to him that Marriott was doing a good job of deploying information technologies in its business activities,” Sambamurthy says. “Yet it was also apparent that with impending changes in the hospitality and travel industries - the development of Web sites such as Travelocity, Expedia, and Priceline and new opportunities for creating customer value utilizing wireless technologies - IT would be called upon to not just be a strategic enabler, but in fact a strategic differentiator.”

Marriott’s subsequent initiatives included strategic consulting and guidance to individual business units to think of “frame-breaking” ways in which information technology could be used for strategic advantage. As a result, Sambamurthy reports, the company has invested in the Internet and customer relationship systems that enable customers to directly access hotel reservations and manage their entire travel experience.

## Defining the Leadership Skill Set

A popular approach to describing managerial leadership is to precede the word “leader” by an adjective, says Martin J. Gannon, professor of management and organization, and

director of the Smith School's Center for Global Business. People speak of, for example, the transactional leader -one who emphasizes rewards (and punishment) for performance - or the transformational leader - one who has a visionary, charismatic, and long-range perspective on changing the behavior of organizational members.

“General Electric's Jack Welch is often cited as the classic transformational leader. However, it is frequently difficult to define the characteristics of a transformational leader, and often a manager will be a successful transformational leader in one situation but not another,” notes Gannon.

In more recent years, another approach to leadership has emerged that attempts to profile the abilities, skills, and background required to become an effective leader, regardless of labels. Included in the skills needed to lead major organizations today is experience living abroad, according to Gannon.

“In today's global market, companies such as Mercedes Benz prefer and sometimes require that even entry-level candidates for managerial positions live outside of their native countries for at least one year, as they believe that such experiences enrich a person's understanding and ability to adapt to rapid changes, a common feature in today's organizations,” he says. “Companies such as Ford much prefer that candidates for top positions live outside their native lands for three to five years and speak two or more languages.”

Further, as the world's economy not only globalizes but becomes increasingly technology-based, the need for some background in technology among managerial candidates at all levels has also risen. “Thus, the adjective preceding the word ‘leadership’ is much less important than the emerging profile of the modern manager,” Gannon says, “who must be multiculturally-sensitive, flexible, and technologically and cross-functionally knowledgeable so that he or she can energize an organization and successfully direct the inevitable rapid changes to which it is subject.”

### Leadership Demands Timeless Qualities

Ultimately, although the workplace has been altered by IT and the Internet, the fundamental qualities of a good leader - intelligence, competence, energy and drive, confidence, and a passion for the work - have not, asserts Edwin Locke, professor emeritus and former holder of the Dean's Chair in Motivation and Leadership at the Smith School. “Leaders must have vision, and they must be able to implement that vision. They must have a selfish love of the work-not just the money. They must be creative, skilled in managing people, in selecting, training and developing employees, and in team building. They also must push the company to change even when employees are resistant.

“Being a CEO is extremely hard to do well,” Locke concedes. “There is a very high turnover. When you find someone who is really good, he or she is a treasure.”

## New Centers Generate Strategic Knowledge for 21st Century Business

Academic research centers play a crucial role in understanding the dynamic forces that impact business management in the digital economy. The Robert H. Smith School of Business recently launched two new research centers: the Center for Human Capital, Innovation, and Technology and the Center for Electronic Markets and Enterprises. The new centers bring the school closer to realizing its strategic goal of multidisciplinary research centers aligned with each academic department.

### **HCIT: Exploring complex interactions**

The Center for Human Capital, Innovation, and Technology (HCIT) studies the ways organizations, especially those in highly competitive environments, create value through development and application of human resource systems, innovation, and technology.

“Think about business today,” says Susan Taylor, professor of management and HCIT director. “It’s a complex interaction among people, structure, processes, financial resources, and the external environment. When organizations get these elements working together effectively, there’s no doubt they achieve a competitive advantage.”

Utilizing multiple research perspectives, HCIT scholars work on both macro and micro levels to solve real-world problems. “Our goal is to translate this knowledge into actionable strategies that enable firms to enhance and maximize organizational effectiveness.”

The center’s cross-disciplinary research projects draw on the expertise of internationally recognized members of the Smith School faculty and University of Maryland colleagues in related areas, including strategy, human resources, organizational behavior, marketing, information technology, and organizational psychology. Smith School faculty members Paul Tesluk and Riitta Katila serve as associate directors of HCIT.

### **CEME: Getting e-markets right**

With over \$6.3 trillion in annual online activity projected by 2005, the stakes to get an electronic enterprise right—and not to repeat the mistakes of fallen dot-coms—are enormous. And now, with the help of the Center for Electronic Markets and Enterprises (CEME), organizations stand a much better chance of doing exactly that.

CEME’s mission is to provide a unique, cross-functional, multi-dimensional perspective on emerging electronic markets and enterprises. “We have brought together distinguished Smith School faculty and renowned scholars from the university at large to conduct cutting-edge research,” says Henry (Hank) Lucas, center co-director and holder of the Robert H. Smith Chair in Information Technology.

Working with corporate sponsors from a range of industries, CEME's interdisciplinary faculty develops concepts and strategies to assist business leaders in meeting the challenges of succeeding in electronic enterprises. The research is shared with the academic and business communities through conferences, seminars, symposia, and an annual publication, CEME Reports.

CEME also provides valuable consultative services to corporate sponsors. "Private industry drives our research agenda, so our work is practical and results-oriented," states G. (Anand) Anandalingam, center co-director and the Ralph J. Tyser Professor of Management Science. "We can work directly with a company to build its electronic enterprise literally from the ground up."

For additional information, visit [www.rhsmith.umd.edu/hcit/](http://www.rhsmith.umd.edu/hcit/) and [www.rhsmith.umd.edu/ceme/](http://www.rhsmith.umd.edu/ceme/).



Julia Pulzone is in the midst of packing up boxes and moving. The chief financial officer of SPACEHAB, Inc., in Washington, D.C., Pulzone has lived in the same home since childhood. But recently, she noticed a house on the market “that I’ve always loved.” Pulzone’s sister is in real estate and offered to take her for a look at the house.

“I can’t do this,” she told her sister. But, after seeing the house, she did just that, putting a contract on the house and selling her own home in “literally a week.”

“When I set a goal, I go with it,” says Pulzone. And, houses and moving aside, one could say much the same about her professional life. For Pulzone, a 17-year veteran in corporate finance, does not back down from a challenge. Her new position with SPACEHAB is a good example.



SPACEHAB is the first company to commercially develop, own, and operate habitable modules that provide laboratory facilities and logistics re-supply aboard NASA’s space shuttle. With its Johnson Engineering and Astrotech subsidiaries, SPACEHAB is the world’s leading provider of commercial space services.

Pulzone, who oversees all of SPACEHAB’s financing operations, including corporate finance, budgeting, regulatory compliance reporting, and investor relations, was not that familiar with the space industry when she accepted the position.

The Smith School graduate recalls with a smile one of her first daily briefings. “I left the meeting asking, ‘Is there a book for all these acronyms?’ My co-worker looked at me and replied, ‘No.’” Never mind, as Pulzone states, “The core financial concepts are pretty much the same at any company.” Early on she had decided that this would be her field of expertise.

Pulzone, who received a bachelor's degree in accounting in 1984 and an MBA in 1993, followed in her father's footsteps - he was also an accountant. But she had a practical motivation as well.

"One of the reasons I chose accounting was that I wanted to be able to support myself," she says, recalling that when she graduated as an undergraduate the job market was very tight. "It was a competitive marketplace at that time, with interest rates in double digits. The economy was not good," she says.

However, according to Pulzone, her degrees from the business school have "served me well. I felt I was competitive with my peers." This has been especially true of her MBA. "My MBA made a significant difference in the opportunities available

to me as a financial professional," she says. "I have often found that it is a differentiating factor between myself and other job candidates. And, I feel that the MBA program at Maryland has prepared me well for the challenges ahead."

Pulzone began her early career as a CPA with Grant Thornton and later joined Price Waterhouse in Washington, D.C. However, it was as director of accounting with AMISYS Managed Care Systems, Inc., in Rockville, Md., that Pulzone found "a job that I loved with co-workers that I really respected" and learned many valuable lessons. Unfortunately, she says, "the rug was pulled out" when the successful company was sold three years after receiving its initial venture capital investment. She found herself looking elsewhere for work. "You can't be afraid of change," she says. "I've gone through three acquisitions since 1997, but I always seem to bounce back and do just fine. The important thing is to learn as much as you can wherever you are."

Prior to her job with SPACEHAB, Pulzone also served as director of financial reporting and taxes for the Telos Corporation in Ashburn, Va., and worked for three years as vice president and chief financial officer for Paragren Technologies, a leading provider of high-performance marketing automation software in Reston, Va. Pulzone left after the successful sale of the company to Siebel Systems in San Mateo, Calif.

Since joining SPACEHAB a little more than a year ago, Pulzone has quickly adopted the lingo (including the acronyms) and can talk knowledgeably about the products SPACEHAB offers.

"It's been a challenging year," she notes. "We've made a lot of financial changes, trying to reduce costs and change the way we do business. We're coming to a better realization of what we can and cannot afford to do, and have developed a philosophy of, if you want it and commit to it, we'll build it for you."

The job can be all the more challenging due to the company's global clientele. Says Pulzone, "Besides NASA, the international community is a large part of our customer base. We're working with the Russians, the Italians, the Germans, and the Japanese."

For example, SPACEHAB is currently working with RSC Energia - one of the most experienced aerospace manufacturers in the world, responsible for Soviet-Russian spacecraft ranging from Sputnik to Mir - in the development of a commercial space station module project, Enterprise. Plans are to transport the Enterprise module to the International Space Station in late 2003.

On a more personal level, besides meeting “legends in the space industry,” as she calls them, former astronauts Jim Lovell and Buzz Aldrin, other highlights have included seeing her first launch. “Having an up-close view of the equipment, being within a few feet of the space shuttle and its engines, that’s pretty incredible,” Pulzone says, a hint of awe in her voice.

## Hire the Best and Watch Them Excel

by John Brophy  
President, ACS State and Local Solutions  
Corporation

Someone asked recently if it is easier for me to lead now than it was 20 years ago when I first started building a business. The more I examined it, this seemingly innocuous question became increasingly complex. The fact is, it may be neither. There are differences, to be sure, but not as many as you may think.

In the early 1980s, I was running a small consulting firm with a handful of employees, a couple of offices, and only one clearly defined marketplace. I was always pursuing opportunities - literally *pursuing*, because I was constantly on the road. Here in 2001, I head up a company that has become the nation's largest provider of customized services and solutions for state and local governments. We have grown to 5,000 employees scattered among 250 offices in 46 states, Canada, and overseas. We operate five distinct business lines and a dozen sub-lines, and potential business opportunities are more numerous but also are more readily identifiable. Our 30 percent annual average growth rate over the past decade was the highest such rate in all of Lockheed Martin, and all of that growth was organic. We did not rely on acquisitions to grow.



In the early years, I was a very visible leader. I knew everyone by name, and my employees all knew me. They also knew what I wanted for our company and what I expected of them. While that level of intimacy simply is not possible today, the guiding principles from our founding days remain.

In a nutshell, this is what I have learned and this is what I live by: A leader makes everyone feel good about the leader; a great leader makes everyone feel good about themselves and what they do. The great leader can confidently delegate leadership - an approach that works whether you have 10 employees or 10,000.

From the beginning, I have told anyone who would listen that the strength of our company - called Lockheed Martin IMS until we were purchased this summer by Affiliated Computer Services, Inc. (ACS) - is its people. And when it comes to people, we only hire the very best. Our company's core is a group of 500 subject matter experts, or SMEs. They are accomplished professionals who ran - and in some cases created - some of the nation's most successful and visionary government programs. As our SMEs, they can draw on their wealth of insider knowledge, experience, and talents to help our customers design and implement the solutions that meet their specific needs.

Of course, I can talk informatively about any of our business divisions. However, it is our hand-picked experts who know their businesses inside-out, and they, therefore, accept the mantles of leadership and inspiration within their respective areas of specialization. This approach is then passed along throughout each of the business lines and sub-lines. Leadership is assumed by those who best know and understand their subject areas, responsibilities, or tasks. The result? Everyone feels good about their managers, their colleagues, their company, and, above all, themselves.

And, while I believe the hallmarks of great leadership are involvement and inclusiveness, that does not mean that I promote consensus at all costs. If everyone is in true agreement when they present a recommended course of action, so be it. But I welcome conflict between divergent but equally persuasive points of view. I recruit and hire people for their expertise, not their obedience. When I make a decision, I want all the critical background information available. Conflicting opinions or recommendations may make my decision more difficult, but this process ensures that it will be the best-informed decision possible.



Another of my high-priority leadership responsibilities is to keep the torch lit for our corporate culture - the only company culture I'm aware of that officially encourages a "sense of humor" among its core values. Growth, of course, is opportunity, but it also poses the greatest challenge to culture and leadership. What have we done to preserve our unique and valuable culture through a decade of incredible company growth? We've worked hard to adapt to rapidly changing environments.

Not many years ago, we didn't need a culture committee or our Statement of Core Values and Culture. We have both today to ensure that our core values are communicated to and understood by all employees. This is another example of inclusive leadership - everyone is responsible for living the culture.

Our growth has been strong and consistent because when you put people in the right jobs, you don't have to lead them. They'll lead themselves. If they are encouraged by a culture that tells them they can make a genuine difference, they'll take the business farther than anyone could imagine. nSb

*John Brophy, a 1971 University of Maryland graduate and a member of the University of Maryland College Park Foundation, Inc., Board of Trustees, was president and CEO of Lockheed Martin IMS until Lockheed Martin recently sold the IMS subsidiary to Affiliated Computer Services, Inc. (ACS). ACS is a Fortune 1000 company that provides information technology and business process outsourcing solutions to government and corporate clients. Currently Brophy heads ACS State and Local Solutions Corporation, which will remain based in Washington, D.C.*

## Learning from the Source

As a junior finance and marketing major at the Robert H. Smith School of Business, Barrett Wragg was hard at work developing the tools he would need to begin his business career. Then he began a second, concurrent program of study: learning how to acquire his first professional position with the help of the school's Leo Van Munching Jr. Undergraduate Business Career Center (UBCC). For Wragg this second education was as valuable as the first. "The whole purpose of pursuing an education is so that you can use your skills in a professional setting," he says.



UBCC assists undergraduates in achieving their career development and employment goals. This includes going straight to the source and inviting to campus corporate representatives to participate in workshops on resumé writing, interviewing, and more. "Our students are learning from the professionals. And employers have an opportunity to take a closer look at potential employees," says LaVern Chapman, director of the center.

Among the activities UBCC offers is a one-credit mandatory course that addresses topics ranging from business ethics to negotiation skills, "covering the entire career management process," says Chapman.

"UBCC activities are an opportunity for students to learn things you just don't get in course work," says Lois Lyons (pictured above with Afzalul Bari, undergraduate student), a university relations manager at AMS and a participant in UBCC's various programs, as well as a 1985 University of Maryland alumna. "The students who take advantage of this are the wise ones."

Adds Connie Kline, a campus recruiting manager for Grant Thornton and another participant: "This gives students the chance to learn what employers are really looking for in a candidate. And, it gives me and my company one-on-one exposure with students, which helps get the Grant Thornton name out on campus."

This is especially true during the Employer of the Week and Employer of the Day programs offered by UBCC. "The companies think of it as their own mini- or personalized career fair with no competitors," says Chapman. "It's a great opportunity for them to network with students. And, our students get a chance to look at the company, feeling much more comfortable in this informal venue."

This up-close-and-personal approach can be very beneficial to companies, says Lyons. She notes that AMS has hired "a lot of people ... and built a very strong relationship with the business school."

In working with students, Lyons tries to incorporate the whole recruiting process into each session. For instance, she says, “I won’t just focus on how to interview. Because it doesn’t just end with a 30-minute meeting, but is a lot longer process that all ties together.”

Lyons urges students to be “informed” and suggests particular periodicals they should be reading. “You don’t want to just memorize a company’s bio,” she says. “You want to have read an article about something fascinating and be able to ask relevant questions about it.”



“I see more students taking advantage of the resources available to them to get information and make informed decisions,” says Paul Hagerty, an employee development manager at Hershey and frequent UBCC presenter. “They seem to have a good idea of what they want to do and where they want to go.”

An added advantage can be all the more important when a student is eyeing Wall Street for that first professional position. “To be competitive with candidates from other schools, the recent graduate needs a better understanding of what the job entails; how to go about learning about the job; and how to prepare for the job,” says James Spencer, a 1990 graduate of the Smith School who now works as an investment banker at Credit Suisse First Boston and participates in UBCC programs.

Spencer’s description fits Wragg, who graduated in May 2001 and is now working for T. Rowe Price. Describing his experience with UBCC as “unbelievable,” Wragg was so inspired by the resumé workshop that he asked the center to provide a similar session for Smith’s Black Business Association, of which he was president at the time. “Once I realized the value in doing this, I wanted to share it,” he says.

Representatives from Black & Decker, PricewaterhouseCoopers, and Andersen attended the session, critiquing resumé one-on-one. “That night,” says Wragg, “almost everyone walked out with a ready-to-use resumé.”

And a better chance at landing that first job.

For further information on how your organization can participate in undergraduate and MBA career management activities at the Smith School, visit [www.rhsmith.umd.edu/career](http://www.rhsmith.umd.edu/career).

## Andersen is Tops

The Undergraduate Business Career Center (UBCC) took the occasion of the First Undergraduate Awards Banquet to recognize Andersen as its 2000-01 Employer of the Year. The company, formerly Arthur Andersen, was chosen for the honor based on three criteria: number of 2001 hires of Smith School undergraduates, current financial support, and level of participation in UBCC activities.

“The reason for Andersen’s significant presence at the business school is the large number of Smith School alumni who work there and their participation in school functions,” states LaVern Chapman, UBCC director. “They’re also very masterful at recruiting. The students they hire come back the very next semester as part of the recruiting team. And Andersen’s corporate presentation is unique: after a full information session, students have an opportunity to meet with representatives of each of the company’s service lines.” In 2001, more than 40 Smith students accepted full-time and summer internship positions at Andersen.

“We are very impressed with the quality of the students and with the quality of the program,” states Dia Harris, recruiting manager at Andersen, about his company’s activities at the Smith School. “In addition, the relationship that we’ve built through the years is one that we truly value.”

## Uncommon Scholars

The Smith School of Business attracts some of the best and most promising students from the U.S. and abroad. In May, before they embarked on their post-Smith lives, we interviewed three of them to share their stories.

- Elliot Rabinovich, Ph.D.
- Kelly Nelson, MBA
- Margaret Lassack, B.S/B.A.



### Elliot Rabinovich, Ph.D.

The first thing you should know about Elliot Rabinovich is that he completed the Ph.D. program in logistics in four years. “Finishing in four years is very difficult when you also have multiple articles in print and under review as Elliot does,” states Phil Evers, associate professor of logistics and Rabinovich’s dissertation advisor (with Joseph Bailey, assistant professor of logistics).

Rabinovich’s accomplishments reflect his strong work ethic and enthusiasm for research. “He’s very diligent,” Evers notes. “You could find him in his office almost any time of the day or night.” In addition to his dissertation research, Rabinovich worked on projects with faculty in logistics, business and public policy. He has published research with Evers, Bailey, and professors Martin Dresner, Thomas Corsi, Sandor Boyson, and Robert Windle.

“Conducting research is fascinating to me,” Rabinovich says. When he came to the U.S. from Colombia in 1996, his goal was to gain a master’s degree in engineering management from University of Maryland, Baltimore County, and then return home to work in industry. But conducting research as part of the program was “an eye-opening experience.” He says, “The fact that you can set the course of your career based on your own initiative and the opportunity to further knowledge of a field were appealing to me.”

“Elliot relishes the opportunity to work on hard problems,” Evers says. “We joked with him that his dissertation was really two dissertations in one.” Rabinovich’s study evaluated supply chain transaction efficiency and product distribution efficiency effects obtained from Internet-based purchases by end consumers. His work garnered a first place doctoral dissertation award from the National Association of Purchasing Management. Recognition from the Smith School has included a 1999 Krowe Award for Teaching Innovation with Thomas Corsi for their revisions to the undergraduate course, Computer Models in Supply Chain Management, and the Frank T. Paine Award for Academic Achievement in 2001.

After receiving five job offers last fall, Rabinovich stopped going on interviews for faculty positions. He joined the up-and-coming supply chain management department at Arizona State University in August.

“Our graduates are distinguished by their integration of information technology and supply chain issues,” Evers says. “Elliot is going to make a name for himself and bring a lot of credit to the Smith School and the University of Maryland.”

## Kelly Nelson, MBA

Smith's MBA students are among the most talented in the country, and the list of top companies recruiting the school's graduates grows each year. One 2001 grad is both the product of a Smith School education and a contributor to the success of her classmates: Kelly Nelson.

After graduation from Yale in 1993, the environmental studies and psychology major worked on a cattle ranch in California before beginning her business career. At the time she decided to pursue an MBA, Nelson was lead specialist in executive communication at Northrop Grumman, based in Baltimore.



she

At Smith, Nelson focused her elective courses in finance, strategy, and management science. She was chosen to serve on the Mayer Fund, a \$1 million investment portfolio managed by a team of second-year MBA students. Nelson was also co-president of the Consulting Club and led the team that organized the 2000 MBA Consulting Forum, an annual conference and career fair that connects recruiters from consulting firms with Smith MBAs.

Impressed by her classmates' knowledge and skills, Nelson wanted to give them a boost in their career searches. Last fall she developed two intensive career preparation programs. The first, eNGAGE, brought together graduating students with Smith alumni and corporate recruiters for a full day of mock interviews and career advising. The audience for the second program, Internship Edge, was MBA students about to embark on their search for summer internships. In addition to enhancing students' job search skills and career networks, the workshops strengthened the school's contacts with top consulting firms. Both programs will be repeated this fall.

For her efforts, Nelson won the 2001 Graduate Business Foundation Leadership Award. The award is given annually to a team or individual at one of the member schools of the Graduate Business Foundation, an organization comprising the Business Week top-30 business schools and select international programs.

"Kelly has been an exceptional leader, mentor, and student at the Smith School," wrote Marlene McNamee, current MBA Association president, in the nomination letter. "She embodies the leadership and innovation that our students can achieve." In September, Nelson joined the Boston Consulting Group as a consultant.

### **Margaret Lassack, B.S./B.A.**

Maggie Lassack entered the Ph.D. program in economics at the University of Michigan this fall. Although that may seem like a giant step for someone who just completed undergraduate studies, it's not so surprising once you get to know Lassack.



The Ellicott City, Md., resident graduated in May summa cum laude with two degrees: a B.S. with a concentration in international business and a B.A. in economics. A regular on the dean's lists in the business school and the College of Behavioral and Social Sciences, Lassack earned citations in Spanish and honors. Her list of activities is as impressive: she was a member of the university Student Honor Council, Omicron Delta Kappa Leadership Society, and the Smith School Academic Integrity Task Force, among other activities. At the Undergraduate Awards Banquet in May, Lassack was awarded the first Dean's Graduate of Distinction Award.

Lassack's disarming manner disguises the fire within. Of her academic concentrations, she says, "I like everything." Her choice of international business stemmed from an interest in Spanish (she's taken classes in the language since seventh grade). And her second degree concentration, in economics, was the result of encouragement from her first economics professor, Mahlon Straszheim.

The Smith graduate's intensity is revealed in an eagerness to be thoroughly engaged in whatever interests her. Lassack's participation in the school's Academic Integrity Task Force stemmed from her service on the university's Student Honor Council. "(Classmate) Osama (Olabi '01) asked me to be on the task force," she relates. "We had worked together in our honors courses and he knew I cared about the issues and would get the job done."

Lassack got a taste of research last summer working on a project with her mentor in the economics department, Jonah Gelbach. As she tells it, from there it was a logical step to apply for a Ph.D. program in economics. She's now also considering studying law, an interest inspired by her work on the honors council. It seems almost serendipitous that at Michigan, as she reports, "The law school and the economics department are five feet apart."

## Identifying Inventions that Lead to New Business Ventures

by Rosemary Faya Prola

The technology revolution is as familiar a concept to many of us today as major league baseball. As if following a pennant race, the media daily trumpets the latest technological advance with the power to enhance, extend, shorten, or disrupt our lives.

How do these discoveries advance from the laboratory to the marketplace? Smith School Professor and Chair of the Entrepreneurship Department Scott Shane offers some explanations, based on his ongoing research on technology entrepreneurship. “I want to learn what it is about the inventors, the technology, and the industry that influence technology start-ups,” Shane says of his scholarly quest.

In a paper published in *Management Science* (February 2001), Shane describes the effect of technological opportunities on firm formation. With access to a unique data set of 1,397 inventions patented by the Massachusetts Institute of Technology from 1980 to 1996, the professor examined the effect of three dimensions of new technologies on their commercialization: importance, radicalness, and patent scope. He defined these attributes as follows:

- Importance measures the magnitude of the economic value of the invention;
- Radicalness measures the degree to which the invention differs from previous inventions in the field;
- Patent scope measures the breadth of intellectual property protection for the invention.

Shane conjectured that the more important the invention, the more radical the invention, and the broader the scope of the patent, the higher the probability the invention will be commercialized through the establishment of a new firm.

The professor calculated a series of predictor variables for each patented MIT invention to determine the effect of these dimensions on firm founding. To eliminate individual entrepreneur characteristics, he developed relevant control variables, e.g., measuring prior firm-founding experience of the inventors. Shane also established controls for industry characteristics, including capital availability, R&D intensity, and incumbent innovation.

Utilizing the MIT data set, Shane was able to prove the validity of his hypotheses. He summarized, “...more important inventions, more radical inventions, and inventions with a broader scope of patent protection were more likely to be commercialized through the creation of new firms.” In addition, Shane found that there was a low level of correlation between the dimensions, indicating that the significant presence of any one dimension could result in a new tech start-up.

Shane’s study illuminates other characteristics of technology entrepreneurship as well. The findings broaden our understanding of the technology entrepreneurship process, he stated, because “while previous research has shown that patent importance influences

several aspects of technology commercialization and economic growth, it has not considered the possibility that patent importance would also influence the decision to establish a new company.”

In addition, evidence that inventions are more likely to lead to new ventures when the scope of patent rights is broader, Shane noted, “demonstrates that inventors are influenced by the breadth of intellectual property protection in making the decision of whether or not to start a firm to commercialize their inventions.” The finding that radicalness of the technology influences firm founding by entrepreneurs provides empirical support for the established view that new entrants are more likely than mature firms to commercialize radical technologies.

The study also produced useful findings for universities managing the technology commercialization process, Shane notes. “Knowledge of which inventions are most often commercialized through the creation of new organizations may prove useful in determining university policies toward firm formation.” Shane has explored the issue of university technology transfer for a number of years including recent work with Smith School colleagues Wesley Sine, assistant professor of entrepreneurship, and Ph.D. student Dante DiGregorio.

Finally, the professor’s work reinforces the position of researchers who insist that studies of technology firm formation must consider the personal characteristics of the inventors. Shane is among the young scholars making significant contributions in this area. He and Rakesh Khurana of Harvard University received the 2001 Best Paper Award in Organization Theory from the Academy of Management for their paper, “Career Experience and Firm Founding,” which shows that prior career experiences of inventors influence the establishment of new businesses to commercialize technology.



To learn more about Scott Shane’s research, e-mail [sshane@rhsmith.umd.edu](mailto:sshane@rhsmith.umd.edu).

## Labor Rights Necessary Provision in Global Trade Agreements

International trade agreements must take into account the interests of many and diverse players in the global economy, states Peter Morici, professor of international business at the Smith School of Business. He cites intellectual property, workers' rights, antitrust, investors' rights, and the environment as some of the significant issues that must be addressed by trading nations and the World Trade Organization (WTO), the international body that seeks to promote global trade to encourage economic growth in all nations.



Morici, an adjunct Senior Fellow at the Economic Strategy Institute, has studied issues at the intersection of international economics and public international law for much of his career. Prior to joining the University of Maryland in 1995, he served as chief economist at the U.S. International Trade Commission (ITC). An expert on international economic policy, commercial agreements, and macroeconomic conditions, he is a frequent commentator on Bloomberg News, Reuters, CBS, NPR, and other television and radio programs.

Morici is author of *Labor Standards in the Global Trading System*, the third volume in his series of studies on the future of U.S. trade policy (Economic Strategy Institute, 2001). The study was supported by a grant from the Ford Foundation.

Utilizing economic theory supported by empirical research, Morici makes the case that "lax reinforcement of workers' rights encourages prolonged reliance on less-skilled labor intensive activities and does not encourage economy-wide capital formation and long-term growth." Simply put, if the 10-year-olds in a developing country are working in rug factories, they are not going to school. With an uneducated workforce, the prospects of moving into even marginally more complex manufacturing - clothing production, for example - and stimulating national economic growth are limited.

Morici urges the United States to bring before the WTO a multilateral labor rights and trade agreement similar to the labor provision of the U.S.-Jordan Free Trade Agreement currently awaiting ratification. A key feature is that each party promises to uphold and protect three internationally recognized core labor standards: prohibition of child labor, prohibition of forced labor, and protection of freedom of association. As the recognized tribunal for world trade disputes, the WTO would have the power to enforce the multilateral agreement.

The WTO's first opportunity to move toward such an agreement could come as early as fall 2001 at a scheduled ministerial meeting in Dubai. Whether or not the WTO launches a new round to consider labor rights and other critical issues impacting global trade, an

action thwarted in Seattle in 1999, Morici is optimistic that the ministers will create a “work program” to study this area.

“I think that, in the end, the WTO will do a round with labor rights or the environment as issues. Without one or the other, it would be difficult to get the U.S. Congress to ratify any agreement,” he states, noting the body’s authority over revenue-producing statutes. “The consensus among observers is that the member countries of the WTO will go forward together to shape an agreement.”

In his next study, Morici has turned his attention to the challenge of integrating multilateral environmental agreements into the WTO. The results of this study, funded by a major grant from the Rockefeller Foundation, should be published next summer.

To learn more about Peter Morici’s research, e-mail [pmorici@rhsmith.umd.edu](mailto:pmorici@rhsmith.umd.edu).

[Marvin Jolson](#), professor emeritus in marketing, passed away July 24, 2001.

Jolson received his Ph.D. from the University of Maryland and joined the business school faculty in 1968. His expertise in the areas of personal selling and sales management was internationally recognized and based on his extensive publications (more than 80 journal articles and five textbooks), editorship of *The Journal of Personal Selling and Sales Management*, and numerous consulting engagements. In addition, he served at one time as senior vice president/marketing of Encyclopedia Britannica, Inc., and as founder of Crime Prevention Company of America, Inc.



In 1999, Jolson was named the first recipient of the Lifetime Achievement Award from the American Marketing Association's Personal Selling and Sales Management Special Interest Group.

“Marv was one of the significant contributors to the original growth and development of the University of Maryland business school,” said Burt A. Leete, associate dean. “Many of us will remember him for his good humor, creativity, and entrepreneurial skills in the academic arena.”

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### [Annual Awards for Teaching Excellence Spotlight 10](#)

Congratulations to the Smith School faculty members who received 2001 Krowe Awards for Teaching Excellence, established by Allen J. Krowe '54. This year, faculty members were honored at the Undergraduate Awards Banquet.

## Understanding is Professor's Goal

Ming-ger Chen, E. Thayer Bigelow Research Professor of Business Administration at the Darden School of the University of Virginia, often spends his last class of the semester imparting wisdom of another kind. "I want my students to think about achieving a balance between their lives and their careers," the Smith School alumnus says.

This is not usual business course fare. But, then Chen, originally from Taiwan and founder and

former director of the Wharton School's Global Chinese Business Initiative, brings a unique perspective to his role as a leading international management and strategy specialist. Now he is sharing that knowledge in his new book, *Inside Chinese Business: A Guide for Managers Worldwide* (Harvard Business School Press, 2001), described as "an unrivalled insider's perspective on the intricacies of Chinese business."

Among the topics in *Inside Chinese Business* is the importance of business families and how they function. "Family businesses contribute a staggering amount to the economy of greater China," says Chen, who received both his MBA in 1985 and his Ph.D. in strategic management in 1988, from the Smith School.

Other topics covered in the book include *guanxi* (social networking that reflects China's relationship-based business culture) and how western managers can develop their own business networks; the concepts of "face" (one's standing within a social group), balance, harmony, and social roles and their influence on contemporary business conduct; and the Chinese's distaste for "negotiation" and how to better negotiate with them.

"I want this book to help managers develop a truly global perspective," says Chen. "In addition, I hope to inspire a better understanding and deeper appreciation of all cultures, including one's own."

## Transition in the Alumni Office

In July 2001, Tamara Maull resigned as director of alumni relations at the Smith School of Business in order to pursue other professional opportunities. In her nearly four years at the Smith School, Maull managed the highly-successful alumni chapter golf tournament, began a mentor program, and coordinated the popular undergraduate awards banquet and numerous regional networking events.

Francena Phillips Jackson, a 1987 journalism graduate of the University of Maryland and an experienced program and events planner, has been appointed interim director while a national search is being conducted for Maull's replacement. (Since publication, Francena has been named permanent director of alumni relations.)



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## Your Direct Link to Smith

Smith Newslink, an e-newsletter for alumni of the Smith School of Business, is now online. Visit [www.rhsmith.umd.edu/alumni/newsletter](http://www.rhsmith.umd.edu/alumni/newsletter) for a look at the latest edition. To begin your subscription, just e-mail [alumni@rhsmith.umd.edu](mailto:alumni@rhsmith.umd.edu).

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## A History of Taking Charge

Just doing the job has never been enough for Eva Neumann, founder and president of ENC Marketing, Inc., a full-service strategic communications firm for “high-velocity organizations” in Vienna, Va.

For example, Neumann, who graduated from the Smith School with a degree in marketing in 1981, became involved with the American Marketing Association during her sophomore year. By her senior year, she was AMA student chapter president, had increased membership significantly, and guided the organization to recognition as National Chapter of the Year. Prior to graduation, the business school's alumni chapter



recognized her as one of five outstanding business students.

“I’ve always been drawn to starting new ventures and building organizations,” says Neumann. She was recently named one of “10 to Watch” in 2001 by the Washington Business Journal for her success with ENC and role as president-elect of Women In Technology (WIT), cited as one of Washington’s most influential networking groups.

As a senior executive working for high-tech organizations, Neumann had never really considered starting a business of her own. That is, until she found herself becoming increasingly frustrated searching for marketing companies that understood technology and “were strategic in using different marketing tools.” Recognizing a need, she says, “I made some calls and immediately got an amazing amount of work.”

Now, nine years later, ENC is a thriving business, specializing in serving companies that are “pursuing extremely aggressive growth objectives in a rapidly changing, competitively charged business environment,” says Neumann. Among ENC’s clients are Fortune 500 technology blue chips such as Cisco Systems, Compaq, Hewlett-Packard, and Unisys.

Of her success, Neumann states, “It’s about looking on the other side of the fence, seeing what’s needed, and listening to your clients.”

## MBA Send-off and Faculty/Staff Picnic Photos



The mall in front of McKeldin Library was the scene of the 2001 MBA Class Send-off and Faculty/Staff picnic. The crowd feasted on such summertime delights as steamed crabs and enjoyed games and entertainment.

MBA Class of 2001 graduates (l-r) Patricia Martinez, Gianfillippo Cameli, Konya Hubbard



Magician "Magic Ken" entertains Anthony Flowers (l), son of Marie Flowers, associate director of development, with his slight of hand.

Finance professors Gurdip Bakshi (l) and Haluk Unal were among those who enjoyed the day with their families.

