

# PAMPLIN

SPRING  
2006

COLLEGE OF BUSINESS

KIDS' ONLINE

PRIVACY

Developing tools  
for parents  
to protect  
children online

# Look who's talking



Jesse Jackson



James R. Smith



Douglass Tatum



Karen Goldhirsh

The college and its Diversity Committee joined various campus, community, and corporate organizations to sponsor the university's celebration of Dr. Martin Luther King Jr. Week that included a keynote address by Rev. Jesse Jackson.

The lecture by the founder and president of the Rainbow/PUSH Coalition and civil rights, religious, and political figure was made possible by contributions and assistance from ChoicePoint.

ChoicePoint president, chief operating officer, and director Douglas C. Curling (ACCT '76, MACCT '77) attended the lecture, along with other representatives from the company. ChoicePoint's support of the event, Curling said, was "a natural extension" of its in-house efforts to promote diversity. "We have a very robust diversity program that includes affinity groups and diversity councils at most of our major locations. For the past three years, we've been named as a best place to work for women in technology and achieved a perfect score from the U.S. Council on Human

Rights for our workplace policies and benefits."

Curling, who serves on the Pamplin Advisory Council, said he has "an intense interest in helping business students get a good feel for the issues they will face as graduates — including the challenges of building and leading an organization that openly seeks and values diversity."

## Wachovia Distinguished Speakers

The college also hosted three Wachovia Distinguished Speakers on campus last fall. Karen Goldhirsh (FIN '76, MBA '77), director of operations at Goldhirsh and Goldhirsh, discussed her career as a personal financial advisor in "Money Talks;" Douglass Tatum, founding chairman and CEO of Tatum Partners, spoke about the challenges facing small companies embarking on their next stages of growth in "No Man's Land — When Growing Companies Fail;" and James R. Smith (SOC '74), founder and CEO of Smith/Packett Med-Com, advised students that preparation and self-knowledge were fundamental to career success in "The Convergence of Preparation and Opportunity — Learning to Shoot."

The Wachovia Distinguished Speaker series is funded by a grant from Wachovia Bank.

## Mergers, economic espionage, China, called key IT issues

Participants at "The State of Information Technology" panel discussion organized by the MBA Alumni Advisory Board in Washington, D.C., last fall, got a glimpse of what global businesses face in protecting intellectual property, merging companies, expanding broadband, and competing with China.

On the panel were: Peter J. Ahearn, special agent in charge, Federal Bureau of Investigation, Buffalo, N.Y., Division; Rakesh Asthana, director, corporate information services, World Bank; Rakesh Bhatia, managing director, BearingPoint; William D. Evans, president and CEO, Energy Development Corporation; Robert L. Grey, president and CEO, IntelliDyne; Steven D. Sheetz, director, Center for Global E-Commerce and associate professor, Pamplin College of Business; and Catherine Szpindor, vice president, strategy and governance, Sprint.

China was a recurring topic. "There is a tremendous level of new building construction and economic activity throughout the country," said Evans, back from a recent visit. "I think every American in business should have to go to China to see what we're up against; the Chinese are moving like a house afire." The Three Gorges Dam on the Yangtze River, he said, "when completed in the next few years, will provide a non-oil-and-gas source large enough to produce 10-15 percent of China's energy needs."

Combining IT functions presents a challenge when two large companies merge — each with their

own legacy, application sets, and delivery system. It's not an easy task to combine the synergy of two different companies, said Bhatia. "IT is absolutely critical to a company's success." His advice: "Plan, prioritize the process for IT, and define a roadmap."

Szpindor, who was a part of the Sprint-Nextel merger implementation, said that the "people" factor is often overlooked. "Get the two IT staffs together," she said. "Let individuals know they are an important part of the new company. Help them understand priorities, and give them a vision of where they can go. Most highly motivated individuals want the opportunity to learn and to show that they can accomplish a difficult task."

Panelists agreed that with an expanding global marketplace, economic espionage is a difficult issue. Too many companies neglect to give due diligence to security, underestimating the need to protect their physical and intellectual property both inside and outside the company, said Ahearn, citing a recent FBI case where an employee sold a Corning Glass blueprint to a company in Taiwan.

"Once you go overseas, you can basically forget about intellectual property rights," he said. "You have to realize that intelligence services in foreign countries want the information you have, including intellectual property."

Charles Jacobina, executive director of the executive MBA program, moderated the discussion.— *Barbara Micale*

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Virginia Tech's nationally ranked Pamplin College of Business offers undergraduate and graduate programs in accounting and information systems, business information technology, economics, finance, hospitality and tourism management, management, and marketing. The college emphasizes the development of ethical values and leadership, technology, and international business skills. A member of its marketing faculty directs the interdisciplinary Sloan Foundation Forest Industries Center at Virginia Tech. The college's other centers focus on business leadership, electronic commerce, and organizational performance. The college is committed to serving business and society through the expertise of its faculty, alumni, and students. It is named in honor of Robert B. Pamplin (BAD '33), the former CEO of Georgia-Pacific, and his son, businessman and philanthropist Robert B. Pamplin Jr. (BAD '64).

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# American Woodmark seeks reasons for returns, reorders, new purchases

American Woodmark Corporation, the nation's third largest manufacturer of kitchen and bath cabinets, has contracted with the Sloan Foundation Forest Industries Center at Virginia Tech to study issues related to customer relationship management.

David Brinberg, marketing professor and director of the Sloan Foundation Center, said the Winchester company will provide \$30,000 for the marketing research project, which aims to help the company reduce costs incurred in ensuring customer satisfaction following the initial purchase of its cabinets. The project will identify key reasons for returns, reorders, or new purchases.

"Why does the customer initiate a return? How often do these transactions occur? How does the consumer describe this transaction?" Brinberg, who is leading a team of marketing and wood science faculty and students, said work has begun on various parts of the project, which will examine a range of issues related to the return decision, including customer demographics, interaction with the designer, delivery time and accuracy, installation, and product characteristics.

The study focuses on three categories of transactions: returns accompanied by an order of a different product, returns with no new orders, and new orders initiated without a return of the original purchase. Not included in the study are returns considered routine — products with manufacturing defects or that were damaged during shipment — which are accompanied

measurement mistakes, and to suggest ways to reduce such slips.

During the second phase, the researchers will conduct a broad-based survey of a sample of customers who recently bought American Woodmark cabinets. Brinberg expects to survey about 500 customers each from Lowe's and Home Depot.

The research project is part of a larger partnership envisaged between the company and the center, which signed an agreement last fall to collaborate in student recruiting and learning and faculty and student research.

"We will be working with American Woodmark to identify opportunities for other research projects as well as for internships and other possibilities for our students to gain industry experience," Brinberg said.

The company can play a role in student learning in several ways, he said, including sponsoring campus lectures by its representatives on business and forestry topics, plant visits, and a semester-long course project that examines a business or industry issue.

American Woodmark's annual sales, which were more than \$750 million in 2004, have grown at about 15 percent a year for the past 10 years. The company offers about 230 cabinet lines and operates 15 manufacturing facilities in 10 states and 10 builder service centers across the country.

The partnership with American Woodmark represents the center's first major collaboration with a company. "We have made significant progress in developing relationships with companies that represent the various industry segments," said Brinberg. "We are also beginning to work with American Home Furnishings Alliance (formerly American Furniture Manufacturers Association) on several proposals to develop a more consumer-centric approach to the industry."

The center, he said, has received more than \$650,000 since July 2004 for a wide range of projects, "the common theme of which is to integrate technological advances in forestry, wood science, and forest products with innovative business models to make companies competitive in a global marketplace."

The center, officially launched in November 2004 with funding from the Sloan Foundation, forest industry organizations, the state of Virginia, and Virginia Tech, seeks to promote the global competitiveness and sustainable growth of America's forest industries.

The center's faculty, drawn from Pamplin and the College of Natural Resources, examine industry issues, conduct executive and continuing education programs, and prepare graduate and undergraduate students for careers in forest industries, the largest agricultural as well as industrial sector in the state. The industry employs, directly and indirectly, about 250,000 people in Virginia.

For more information: [www.forestindustries.vt.edu](http://www.forestindustries.vt.edu)



David Brinberg, marketing professor and director of Tech's Sloan Foundation Forest Industries Center, is helping American Woodmark with customer satisfaction research.



American Woodmark is working with Pamplin researchers to cut after-sale costs and boost customer satisfaction.

by a reorder of the same product.

"We are using two approaches to understand customer returns and evaluate different areas of dissatisfaction. The first phase comprises in-depth interviews with 16 customers each from Home Depot and Lowe's that will examine the entire remodeling process, the decision to return, and the overall buying experience." The information, he said, will be used to identify sources of error, such as miscommunication or

# THE INTUITIVE ARBITRAGE

**A**rbitrage is the common thread weaving through much of financial thought, says Randy Billingsley, but it is as misunderstood as it is important.

Billingsley, an associate professor of finance, says arbitrage — buying assets in one market and selling them in another to profit from price differences — is “often presented in financial arguments that are long on technical detail but short on economic intuition.”

Furthermore, casual references in the media linking arbitrage with financier George Soros or former Treasury Secretary Robert Rubin, who was also head of arbitrage at Goldman Sachs, shed little light on the “pervasive importance and usefulness of arbitrage in the world economy and financial analysis.”

Billingsley’s new book, *Understanding Arbitrage: An Intuitive Approach to Financial Analysis* (Wharton School Publishing, 2006), emphasizes the instinctive nature of arbitrage activities and explains how it functions through concrete examples. True arbitrage, he says, is both riskless and self-financing — the investor uses someone else’s money — but the term has now expanded to include risky variations.

An award-winning teacher of both undergraduate and graduate students and a Chartered Financial Analyst, Billingsley has taught courses for investment professionals across the nation and abroad. He has served as a consultant and an expert witness on valuation and investment related litigation.

He has sought to convey the intuition of arbitrage, he says, through exploring it across the major areas of finance. “When you compare it in different applications, the common elements stand out in clearer relief and an integrated picture emerges.” Understanding arbitrage, he said, is important for pricing various financial products, including new products for which no market prices yet exist and illiquid assets in a portfolio for which there have been no recent trades.

“Arbitrage-free prices”— in situations where arbitrage opportunities are absent and prices are “at rest”— can also serve as benchmarks against which market prices can be compared for investors seeking misvalued assets, Billingsley says.

His book discusses core concepts, including the Law of One Price, cash flow replication, and hedging, and the cost-of-carry approach to arbitrage. It shows how relative prices are established among stocks, puts, calls, and riskless securities and how arbitrage influences currency exchange rates. It describes how arbitrage is the basis of modern option pricing and examines its role in valuing capital structure. Readers are shown how to identify and exploit arbitrage opportunities in securities, commodities, currencies, interest rates, and other markets.

Billingsley had in mind risk and portfolio managers, investment analysts, and other “sophisticated investors” as the book’s primary audience. But included with the high-finance discussions on the Modigliani-Miller theory and the backward induction technique are many everyday examples and analogies.

Option pricing, for instance, is applied when deciding whether to expand a new business line or renew a magazine

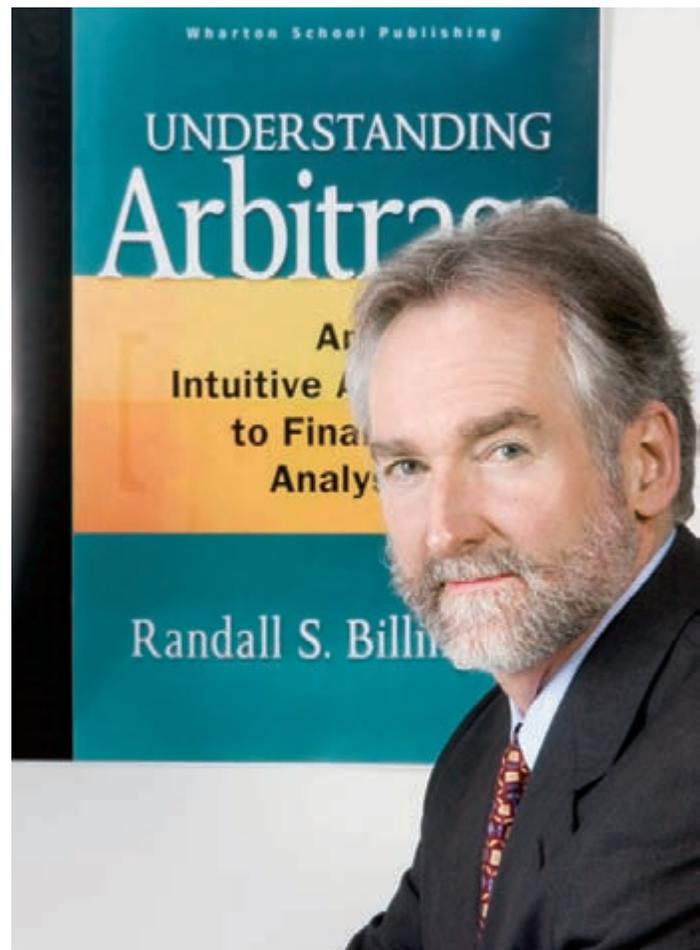
subscription early, he says. Hedging — used in arbitrage strategies to establish secondary positions to counter the risk of the primary investment position — is at work in such quotidian decisions as leaving early for an appointment to ensure finding a parking space or, for college students, choosing to pursue a double major because they do not know what jobs will be available when they graduate.

“Perhaps you may now occasionally think of option prices when you see fruit salad,” he tells readers at the end of a discussion on binomial option pricing models. And, just as slicing a pizza eight ways rather than six will not increase the amount of pizza one can eat, he says, capital structure decisions are largely irrelevant to the firm’s valuation. “No matter how you cut up the financial claims to the firm sold in the capital markets, the underlying real assets that determine the firm’s value remain the same.”

Side discussions include the Long Term Capital Management debacle, 3Comm’s spin-off of Palm, and George Soros’s notable “attack” on the British pound.

“One of the great lessons of the book,” Billingsley says, “is that arbitrage allows the creation of distinct new assets by artfully combining more basic building-block assets.” He hopes his book will help readers improve their understanding of the underlying economic principles of arbitrage and their skills in using arbitrage in corporate finance and investment analysis.

Randy Billingsley’s new book compares arbitrage strategies to commonplace decisions



# Emotional intelligence may be good predictor of success in computing studies

The emotional intelligence of students may indirectly contribute to academic success in information technology studies, according to preliminary results from a study led by Virginia Tech researchers.

The research team, led by Pamplin College of Business faculty members, measured how well students in computer science and information systems coped with stressful situations and their levels of emotional intelligence, defined as “the ability to perceive, assess, and positively influence personal and others’ emotions.” The researchers then examined the effects of these intrapersonal factors on grades. More than 600 undergraduates at more than 20 institutions in the United States participated in the study, based on a series of questionnaires designed to measure coping strategies and emotional intelligence.

“One of the study’s premises was that meeting the challenges of demanding curricula often requires more than innate intelligence,” said France Belanger, an associate professor of accounting and information systems and a member of the research team. “To explore this assumption, we measured coping strategies and emotional intelligence — two intrapersonal variables that are rarely studied in computing .”

The researchers found that though students’ emotional intelligence was not directly linked to academic success, students with higher levels of emotional intelligence had more self-efficacy (self-confidence and knowledge that one can handle any problems or challenges effectively) — and that having more self-efficacy in turn

enhanced their academic performance.

Belanger said further research is needed, but emotional intelligence may be a good predictor of success or failure in computing studies and careers. In recruiting computing students, she said, companies are increasingly emphasizing the need for “soft” skills, such as effective interpersonal communication, in addition to technical abilities.

“One of the implications of these findings is that computing curricula might need to be redesigned to include emotional intelligence training. For example, students could be trained on the development of important relationships with other students, which could help them function better in groups.”

The preliminary results are part of a larger, longitudinal study on student recruitment and retention of minorities in information technology being conducted by the researchers with funding from the National Science Foundation. The project focuses on the impact of rarely studied intrapersonal factors, including learning style, visual-spatial intelligence, and “resilient” personality, as well as interpersonal factors such as mentoring and internships.

The data for this first part of the study, Belanger said, included both minorities and non-minorities.

“It’s becoming more of a challenge to recruit students for and retain them in information technology studies,” said Wanda Smith, associate professor of management, who is directing the three-year study. Enrollments have declined substantially in the past four years, she said, plus “evidence suggests that students are increasingly

migrating out of IT programs after enrolling.”

The reasons may include unfounded perceptions of decreased job opportunities, Belanger said, but “we need to learn more about the factors driving recruitment and retention, especially for underrepresented groups.”

The team’s initial report won the Best Paper Award at a recent professional meeting. Besides



Wanda Smith (left) and France Belanger are studying emotional intelligence and IT student performance.

Belanger and Smith, the other co-authors are Lemuria Carter, a Ph.D. student in accounting and information systems, Vernard K. Harrington, of Radford University, and George Kasper, a Virginia Commonwealth University professor.

## Finance and HTM among leading research programs

Two Pamplin departments, Finance and Hospitality and Tourism Management, are among the leading research programs in their fields, based on faculty publications in top-ranked journals.

Hospitality and Tourism Management has been ranked third among HTM programs worldwide. The ranking appeared in the August 2005 *Journal of Hospitality and Tourism Research*, in a study by four researchers (including Ken McCleary, a Pamplin professor of hospitality and tourism management) that examined article

contributions to 11 leading journals over a 10-year period, 1992-2001. The study listed institutions with 45 or more journal appearances.

Virginia Tech follows Cornell and Michigan State, with 46 authors and 194 author appearances (number of times an author contributed to articles, partially or wholly, and is based on a simple count of articles published).

Finance department head Vijay Singal said the department may be considered among the nation’s top 25 finance programs, based on the number of articles published in *The Journal of Finance* between December 2003 and October

2004. The editor’s annual report in the journal’s August 2005 issue listed 89 institutions that were represented by the articles published during that period and the number of author affiliations. (Most articles had multiple authors per article, and each institution received equal, partial credit for its author.)

JSTOR, an independent, non-profit electronic archive of scholarly journals, calls *The Journal of Finance* “the most widely cited academic journal on finance and one of the most widely cited journals in economics.”

# KIDS' ONLINE

## Virginia Tech team developing easy-to-use protection technology



MICHAEL KIERNAN

After discovering that parents did not know how to protect their children's online privacy, a Virginia Tech team sought to develop technology that parents can use to safeguard their children's information.

**M**illions of children use the Internet every day, but what parents don't know about protecting their children's online privacy surprised Pamplin business law professor Janine Hiller. Hiller helped organize and run a small focus group of parents more than a year ago to get preliminary feedback on new technology that she and other Virginia Tech researchers are developing to safeguard children's online privacy. The team of business and engineering faculty members won a \$450,000 award this past fall from the National Science Foundation's Cyber Trust program to help fund their work.

Hiller, the team's spokesperson, said the focus group discussions revealed that none of the parents were aware of any laws protecting children's personal information online. "None had ever been asked for permission by a Web site to obtain their children's information or knew if merchants do anything to protect this information. And no one knew exactly where to report fraudulent activity on the Web."

Furthermore, while these parents said they have warned their children not to give out information online, she said, "they're not sure the kids respect that." Parents sought to control what their children viewed online, she said, by such means as "placing monitors in common rooms where they were in plain view and telling their kids that

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whatever sites they visited could be tracked — but some parents admitted to us they didn't know how to do this.”

Hiller, who has a law degree, does research on legal and policy issues concerning the Internet and e-commerce, including privacy, security, and trust, and is co-author of *Internet Law and Privacy*, one of the first text books in this field. She grew more interested in children's online privacy when she discovered that the subject had received scant scholarly attention.

Studies have shown that Internet use is widespread among children and adolescents. According to one report, 24 percent of 3-5-year-olds use the Internet when available at home, and 77 percent of children between 10 and 14 do so. The number of children who are Internet users is projected to have increased to 77 million in 2005, compared with 45 million in 2002.

Children use the Internet for casual Web surfing, Hiller said, as well as for games, schoolwork, e-mail, interactive learning, and other applications that often ask them to submit personal information such as name, street and e-mail address, and phone number. “While kids today are adept at using computer technology, most are still very naïve about privacy protection. The promise of a small prize can easily convince them to share personal information.”

Because children aren't sophisticated enough to protect themselves, she said, the key to protecting their privacy lies in parental consent to solicitation of information from a child. The Children's Online Privacy Protection Act prohibits Web sites from collecting, using, or disclosing information from children under 13 without first obtaining “verifiable parental consent.”

Though the law has been in effect since 2000, and though many different privacy-enhancing technologies have been developed, a widely acceptable technical solution to the problem of obtaining and ensuring parental consent has yet to emerge, she said. “How do we know that parents have really given their consent?”

Hiller began discussing ideas for a research project to address the shortcomings of current technologies with various colleagues on campus. The conversations led to the formation of a team with expertise in technical, legal, social, and behavioral aspects of the issue. Besides Hiller, the other faculty members are Michael Hsiao, an associate professor of electrical and computer engineering who serves as the project's principal investigator; France Belanger, associate professor of accounting and information systems; and Jung-Min Park, assistant professor of electrical and computer engineering.

The team, Hiller said, has developed a concept for technology to obtain verifiable parental consent that is reliable, easy to use, and cost effective and would serve the needs of children, parents, and Web site operators. The concept is called POCKET — Parental Online Consent for Kids' Electronic Transactions.

POCKET is designed to enable the parent to protect the child's personal information during an online transaction without the parent's direct supervision. The concept is based on a “modularized architecture,” said Park, “which is very effective in protecting the information exchanged online while minimizing the user's burden.” In addition to the parent and the Web operator or merchant, POCKET uses the services of a trusted third party server (continued on page 9).

While kids today are adept at using computer technology, most are still very naïve about privacy protection.

## Privacy technology: What's out there

Privacy enhancing technologies, explained business law professor Janine Hiller, include “anonymizers,” “seals of approval,” and P3P technology (the Platform for Privacy Preferences Project).

### Anonymizers

Anonymizers are Web-based services that offer anonymous Web surfing by acting as an intermediary between the user and the Web site. Most anonymizers prevent the Web site from tracing the viewer's IP address or placing cookies in the viewer's computer. They are better for casual Web surfing than for interactive applications, Hiller said.

“Games and interactive learning tools, for example, require that the progress of a viewer or information related to individual choices be maintained in the context of the application.” Many Web sites require users to accept cookies to gain access to interactive and knowledge-oriented applications, but the prevalence of cookies “has raised legitimate concerns among Internet users about their privacy rights.” The Virginia Tech team's proposed solution, she said, “will allow the user maximum control and flexibility in allowing or denying cookie usage.”

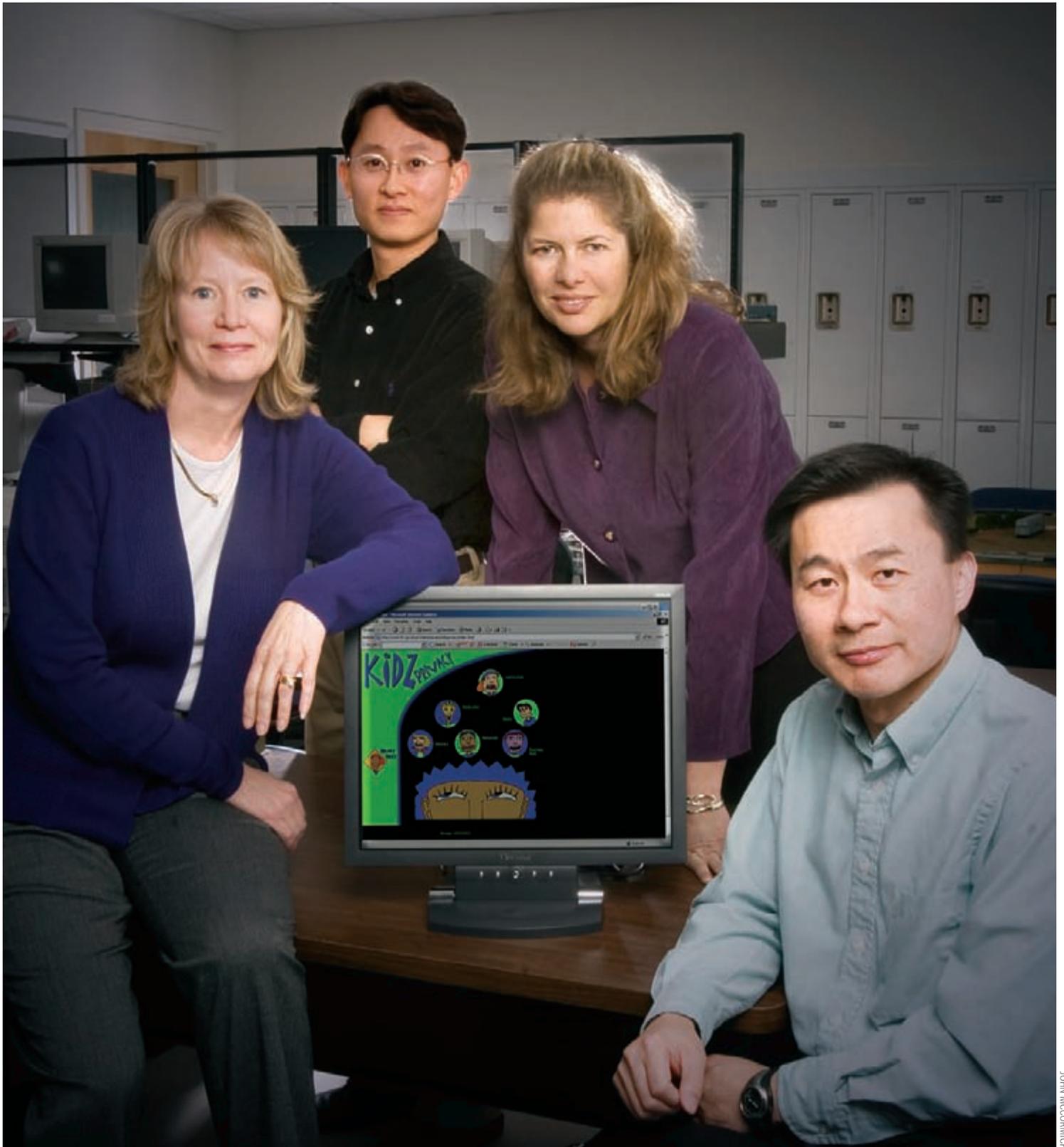
### Seals of Approval

Self-regulatory “seals of approval” have been designed to impart trustworthiness to sites. They generally comprise a standard agreement by a Web site to protect children's privacy, the payment of a fee, routine audits, and an online dispute resolution process. The Web site is allowed to post a children's privacy seal to indicate that the site is compliant and certified. “In theory, seals are designed to induce brand-like recognition and stimulate trust in the Web site,” she said. “But research, including our own preliminary work, has found that consumers do not view seals as effective or important.”

### P3P

P3P allows users to set privacy preferences for automatic implementation. It uses a machine readable, common vocabulary to identify privacy practices. Though P3P has some good attributes, it has been criticized for its failure to address many privacy problems, Hiller said.

She cited a recent study for the Federal Trade Commission that found an “unacceptably high” error rate for P3P implementation and out-of-date policies. Of the children's sites the report examined, only three percent used P3P, she said, and their privacy policies were no better than a non-child-oriented site.



JOHN MCCORMACK

The POCKET research team (from left): business law professor Janine Hiller; Jung-Min Park, assistant professor of electrical and computer engineering; France Belanger, associate professor of accounting and information systems; and Michael Hsiao, associate professor of electrical and computer engineering.

Describing the idea in simplified terms, Hiller said the parent first registers with the trusted third party server to establish an account and downloads an installation package for creating machine readable files and a digital signature. Next, the parent creates a list of merchants that may engage in transactions with the child and a set of privacy preferences.

A privacy preference is a set of rules specifying how a merchant should handle the child's information. The parent can design the privacy preference to allow information to be used for analysis, for example, or for marketing, or for sharing with other merchants. Merchant-specific privacy preferences can be created, in addition to a master privacy preference that applies to any merchant.

The parent then fills out a questionnaire with the child's information that the software will convert into a machine readable file.

When the child accesses a merchant's Web site that asks for personal data, POCKET prompts the merchant to send its privacy policy and a digitally signed compliance statement. The system checks whether the merchant is included in the parent's pre-approved list and compares the merchant's privacy policy with the preferences set by the parent.

The transaction is then authorized or denied, depending on the privacy preferences preset by the parent. If it is authorized, POCKET generates a signed contract and the child's personal information file, which are both forwarded to the merchant. If the transaction is denied, a notice is sent to the merchant stating the reason for the denial.

The NSF grant, Hiller said, will enable the researchers to build a prototype and test and verify its effectiveness. The team's work will include an investigation of adoption barriers to privacy enhancing technologies, plus a further study about what parents know and how they feel about children sharing information online. In addition to parents, the researchers will seek input from Web site owners through surveys and focus groups.

The team has drawn up a three-year timetable and divided up the work. Legal and behavioral aspects will be investigated by Hiller and Belanger, whose research focuses on the use of telecommunication technologies in organizations, in particular for distributed work, e-business, and security management. The computer engineers will examine the technical aspects: Hsiao is an expert in the design, testing, and verification of complex, high-performance systems; Park specializes in network and computer security, applied cryptography, and e-commerce protocols.

Designing and validating a system with the capabilities of POCKET, Hsiao said, "presents tremendous technical challenges — we need to balance technical soundness, security, and user-friendliness with adoptability. It's a task that requires significant research."

In parallel with the design process, Hsiao added, there is the "enormous task" of testing the design. "We have to conduct further analyses to ensure that the design is correct and that the child's information is protected and not released or shared when the parent has refused consent."

Team members believe that POCKET offers three major advantages over current technologies. For starters, a parent can establish a customized, "fine-grained" disclosure policy to protect the child's information — "flexibility that exceeds what is currently available in other technologies," Hiller said.

The system also enforces the accountability of the merchant

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## Parental Online Consent for Kids' Electronic Transactions

POCKET

After parents set the privacy preferences, only their minimal involvement is needed.

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in handling the child's information through the contract and log files that are generated during the transaction. "While the law requiring parental consent applies whether or not there is a contract," she said, "a contract is an additional reassurance."

Lastly, the system is user friendly, which enhances its potential for wide adoption. "Our data from recent focus groups suggest that a technical solution by itself would not be used unless it is ubiquitous or easy to use," said Belanger.

Hiller pointed out that though POCKET is complex in its technical underpinnings, the technology is simple to use — a trusted third party does the tedious work of collecting, managing, and updating the merchant's privacy policy files. "After the parent has created the privacy preferences, only minimal participation from him or her is required, while no involvement of the child is needed." Privacy enhancing technology must be adoptable, she said, noting that other technologies have failed as a result of a burdensome process for the user.

The Virginia Tech team's multidisciplinary expertise, she added, underscores the multifaceted nature of the challenge of protecting children's online privacy. "For a solution to be truly successful, all its elements — including social, legal, and technological — must be addressed."

For more information on the legal and behavioral issues of POCKET, contact Janine Hiller ([jhiller@vt.edu](mailto:jhiller@vt.edu)); on the technical issues, contact Michael Hsiao ([mhsiao@vt.edu](mailto:mhsiao@vt.edu)).

While long lines of tourists traipsed through the solar houses on the National Mall last fall, Pamplin's Caitlin Murphy gained hands-on experience as the cook responsible for preparing meals in Virginia Tech's house.



## Solar house cooking is not easy as pie

Whipping up multi-course meals in a solar powered house is no piece of cake when the skies are all cloudy and gray, as Caitlin Murphy found.



Murphy, a senior in hospitality and tourism management (HTM), was the lone Pamplin member of a Virginia Tech student team that placed fourth overall in Solar Decathlon 2005, an international competition held last fall on the National Mall in Washington, D.C. The rest of the team comprised architecture and engineering students.

A total of 18 teams vied to create attractive, practical, and efficient solar homes in the competition, sponsored by the Department of Energy to encourage innovation in solar applications while educating the public about alternative energy technologies.

The competition included a cooking task. With each successfully completed meal being worth 2.5 points, teams can receive up to 10 points for preparing dinner on all four days of the event. Murphy and HTM instructor Jim Sexton developed the team's menus, heeding the contest's strict rules on food preparation, service, safety, and timeliness.

Teams had to prepare and cook all the meals in their solar houses, using the stovetop, oven (any kind), refrigerator, and freezer. Each meal had to comprise four items: a main course, side dish, dessert, and beverage. One component had to be served hot or heated, using the stovetop; one served hot or heated, using the oven; one served chilled, using the refrigerator; and one served frozen, using the freezer.

"I had between 5:30 and 7 p.m. to get something on the table for six people, including the observer who monitored everything we did. If a recipe called for water to be boiled, for example, I had to use a thermometer and show the observer the water had reached 212 degrees before I could continue," said Murphy, who cooked for only two of the four days. "To conserve solar energy," she said, "the

team decided to cut back on activities that weren't worth many points." The first day she made tuna salad, couscous, baked apples, and a raspberry milkshake. The second day's menu was stir-fried chicken, rice pilaf, mango sorbet, and iced tea.

"D.C. didn't see any sun for seven days straight. The other team members were watching me continuously to make sure I did not use up too much energy. It was very difficult to prepare food under those conditions, as some of the recipes called for items to be baked at least 15 minutes," Murphy recalled. "I ended up swapping my baked apples for a store-bought apple pie and cooking refrigerated biscuits for the rice pilaf." (Pre-cooked or pre-packaged food was allowed.) And yes, the food was consumed — by five solar house team members and the observer.

Murphy, who is from the D.C. suburb of Vienna, got help from her mother with transporting groceries to the site, while the solar team van helped move her cooking equipment there.

The whole experience was an eye-opener for Murphy, who had known little about solar homes. "I learned how they work and about the materials used to build them, and how to prepare meals

Virginia Tech's solar house project, led by architecture students, placed first in the dwelling and architecture contests.



JOHN MCCORMICK

Kimberly Bryan, president of Virginia Tech's Hospitality Management Association.

Kirschman Hall at the University of New Orleans houses the HTM program.



DONN YOUNG, COURTESY OF UNO

RICK GRIFFITHS



## HTM students raise funds for students at U of New Orleans

using the least amount of energy possible, while still following the guidelines of the competition.”

She also found out that she had no desire to live in a solar home. “It’s great that it benefits the environment, but it would be very difficult to raise a family in a house like that. Especially under the conditions we saw in D.C.”

Murphy, who is minoring in business leadership and plays varsity softball, is interested in a career in event planning and would like to gain more experience in that field, particularly for entertainment and sports.

A “huge fan” of the Food Network, she considers “30-Minute Meals” host and cookbook author Rachael Ray a role model. “I love how she does elegant yet simple cuisine that anyone can do.” She may hone her culinary skills as an intern this summer at the celebrated Inn at Little Washington, although she harbors no dreams of becoming a professional chef. Cooking as a hobby is one thing, the relentless pressure-cooker environment of a professional kitchen quite another.

Her softball teammates, she said, always give her a “hard time” over her attachment to the Food Network, but, she added, “they don’t seem to complain when I bring homemade treats to team functions.”

**S**tudents in the Hospitality Management Association raised \$900 to help fellow hospitality and tourism management students at the University of New Orleans who were affected by Hurricane Katrina last fall. The student club’s 52 members raised the funds through personal donations from students, faculty and staff members, alumni, family, and friends.

Club president, Kimberly Bryan, a senior from Basking Ridge, N.J., said she and another member were discussing how they could help Katrina victims when the head of Pamplin’s hospitality and tourism management department, Rick Perdue, asked her if the club would be interested in helping to raise money for the students of the program at the University of New Orleans.

“The hospitality and tourism academic community across the country is relatively small,” Bryan said, “and several members of the HTM faculty at Virginia Tech, including Dr. Perdue, have friends on the faculty at UNO. Dr. Perdue felt that coming together and assisting the students of the HTM program was an important way in which we could show our care and support.”

Bryan sent the funds to the director of the Lester E. Kabacoff School of Hotel, Restaurant, and Tourism Administration.

The club will continue to collect donations for the New Orleans students, she added. Donations can be sent to: Hospitality Management Association, 362 Wallace Hall, Virginia Tech, Blacksburg, VA 24061.

The Hospitality and Management Association is a professional organization that gives students practical experience in food production and presentations, hotel/motel operations, sales and marketing, and association management.

STORY  
SERVING

# NO BORDERS

Students take IT courses online from across the country and around the world

**W**hen Tarun Sen picked up the phone in Mumbai, India, a few years ago to dial someone he had not spoken to in 30 years, the last thing he expected was the creation of a Virginia Tech master's program there that would graduate its first class of 26 students this spring.

"It was purely a social call," recalls Sen, associate dean of graduate and international programs at Pamplin, of his conversation with family friend Syamal Gupta, now chairman of several companies in the Tata Group, one of India's largest business conglomerates. As they said goodbye, the Tata executive mentioned the possibility of establishing a graduate program in information technology in India.

The suggestion seemed like a grace note, and Sen thought no more about it when he returned to Blacksburg. Gupta, however, did ponder the subject further and called Sen six months later.

More discussions and visits followed. The result is a partnership with the S.P. Jain Institute of Management and Research in Mumbai that will award students a Virginia Tech master's degree in information technology and a postgraduate diploma in systems management from the S.P. Jain Institute, ranked among the top ten business schools in India.

Sunil Rai, a professor and chair of the program at S.P. Jain, says the inaugural class, all full-time students who pay their own tuition, has received job offers with salaries above the industry average in India.

The India program is an extension of Tech's Master of Information Technology (VTMIT) program, developed as part-time education for full-time professionals. The original goals for the VTMIT included making it available internationally, says Sen — for it to be "broadcast without boundaries, so to speak."

"Broadcasting" education without boundaries, he says, may be particularly appropriate in information technology — a global business. A globally trained workforce, he says, helps U.S.

technology companies, most of which are looking overseas to enhance their revenues and profits. "The IT industry needs people with the skills and knowledge to perform effectively in many parts of the world. By offering our IT programs abroad, we are helping to increase the number of people who are educated and trained in information technology and U.S. business and management concepts, and who also understand the cultural aspects of doing business in their home countries."

Virginia Tech also benefits, Sen says. "Offering a degree program abroad enhances our visibility and may bring more foreign students to our campus to earn other degrees."

The VTMIT Program Office in Falls Church administers both programs, which comprise 10 business and engineering courses. Students also take any three of six modules in communications systems, networking, computer engineering, software development, business information systems, and decision support systems.

VTMIT students never have to physically meet on a Virginia Tech campus. Lectures are streamed directly to their desktops at any time; students can watch them whenever and as often as they like. Course lectures usually include an audio and visual PowerPoint presentation that allows the instructor to explain, slide by slide, details that are not illustrated by text or pictures alone. Online demos and tutorials showcase techniques and software usually taught in a computer lab.

Synchronous sessions are held in real-time using Internet meeting software that connects students with their instructor and classmates at a preset time — usually one evening a week per course. "Students can sit at their computers with head-sets



COURTESY OF S.P. JAIN INSTITUTE OF MANAGEMENT AND RESEARCH

## What Students Say

David Wiedl, a systems analyst at AT&T Government Solutions in Vienna, enrolled in the VTMIT program in the fall of 2004 to further his knowledge of information technologies. New to online learning, Wiedl agrees that "it's very convenient to watch recorded classes and keep up to date with material." However, he adds, "you can have a tendency to not pay attention to class on the computer and do other things if the material is dry, or the professor is difficult to understand."

Communicating with the faculty has been easy. "They are all very good at answering e-mails and watching the [on-

line] message threads."

Wiedl, who has a bachelor's degree in information systems from Carnegie Mellon, hopes to pursue an MBA after completing the VTMIT this spring. "I don't want to always be in a niche technical role," he says. "I'm more interested in overall business practices and finance."

Ambiga Karthikeyan earned a bachelor's in computer science in India 10 years ago. Currently a senior software developer at Amedia Networks in Eatontown, N.J., Karthikeyan was seeking an online master's program in computer science and telecommunica-

tions when she discovered the VTMIT.

Also new to online education, Karthikeyan says she loves its convenience and flexibility. But not meeting in person with classmates can make coordinate group projects difficult, she says, and group forums can take more time to do online than face-to-face.

Still, she would rather do an online master's program than a traditional one: "I would hesitate to talk in the class, but I'm comfortable typing a message online." She says she doubts she would have been able to find the hours, as a full-time professional, to earn a master's degree in a conven-

and talk to their professor and classmates just as if they were meeting around a seminar table,” says program director Tom Sheehan. “The professor can import PowerPoint files and discuss them just like in a traditional classroom setting, stopping to answer questions along the way. Groups can break off to brainstorm and return to the larger group to present.”

The VTMIT program, now about five years old, won the 2002 Higher Education Virtual Learning/Collaboration Award



© USA TANNENBAUM



as the nation’s most innovative online education program.

VTMIT students rave about the quality and relevance of instruction, its positive impact on their work performance and career, and the sheer convenience of being able to listen to lectures or participate in discussions without having to fight rush-hour traffic after work to get to class.

Lindsay Miko, for example, says, “It seems wrong to be sitting here in my pajamas drinking a cup of coffee and giving a presentation for class.” But she adds: “It’s great, I love it!”

The program’s students work mostly in consulting, software development, Web development, and network support with such organizations as IBM, Accenture, NASA, AOL, Northrop Grumman, and PricewaterhouseCoopers. Despite their relaxed “classrooms,” students are expected to allocate at least 10 hours a week for each class, outside of “class” time, to study and complete assignments that include group projects. They are expected to have a back-up plan for a second computer should technical problems arise.

While the U.S. program is typically completed entirely through Web-based courses, the India program combines online instruction with face-to-face classroom teaching. “Pamplin and engineering faculty members travel to India to spend about a week in class with the students,” Sen says.

The VTMIT-India program, he says, is unusual. Several U.S. schools have helped foreign universities launch their own programs, but most have not introduced their degree programs abroad. Such an initiative, he says, extends and builds on an institution’s engagement in international programs.

“Our own students have been participating for many years in study-abroad programs led by our faculty. Foreign students have long been coming to Virginia Tech to study. And some of our faculty members have done teaching stints at universities abroad,” he says. “It is natural and perhaps necessary, given the state of technology today, that we also reach out and offer our degree programs in other countries.”

Top: The S.P Jain Institute in Mumbai, India.

Bottom row: Students take VTMIT courses online in places as far-flung as Mesa, Arizona (far left), Toronto, Canada (left), and San Diego (right).

For more information: [www.vtmit.vt.edu](http://www.vtmit.vt.edu)



tional classroom. Interested in research, she hopes to pursue a Ph.D.

Both she and Wiedl have suggestions for improving the program. “Offer more live classes at the Northern Virginia Center,” says Wiedl, who took one such class. Karthikeyan would have preferred more choices in course selection. She also thinks it would be a good idea for the program’s administrators to create a Web page where photos of students and faculty can be posted. “It would help me to put a face to the voice,” she says. “Also, if we can have some get-together — say, once a year — to meet people and see the campus, we would feel more attached to the college.”

As for the students in India, Arnab Ray,

whose undergraduate degree is in engineering, says the dual degree allows him to “make myself an ideal techno-manager.” The online program, he says, is both innovative and convenient. Ray is seeking a business analyst position and hopes to pursue an MBA.

“We get the best of both worlds,” says Jaideep Jha of the combination of classroom learning and online learning. He would like, however, more courses that address “the linkages between IT and business and how IT acts as an enabler and driver of business.” Jha has accepted a job with a network security company and hopes to set up a consulting business in a few years.

Rahul Menon worked briefly as a systems

analyst after earning an undergraduate degree in information technology. “There’s a tremendous demand for IT professionals who have business domain knowledge besides mundane technical skills,” he says, and that’s mostly why he enrolled in the VTMIT program. It was also hard to pass up “the opportunity to get a coveted U.S. degree in our own country at a reasonable cost and no visa hassles!”

Menon finds the program innovative and challenging and appreciates his professors’ prompt responses to questions, but he misses the “touch-and-feel” of a traditional classroom. In addition, he says, he would like more international aspects of IT in the curriculum.

PAMPLIN ALUMNA  
BUSINESS PROFESSOR VIRGINIA GERDE

# A YEAR

**A**fter several bombings in Iraq's Green Zone, Virginia Gerde (Ph.D./MGT '98) discovered comfort in purchases that she normally considered unethical. Sent to Iraq with her Army Reserve unit in January 2004, Gerde served nearly a year there as a medical plans and operations officer, helping to coordinate U.S. military and coalition forces' access to medical services and supplies.

She worked much of the year at Camp Victory, near the Baghdad airport, with the Surgeon's Office of the 3rd Corps from Fort Hood, Texas, but spent her last months with the California-based 2nd Medical Brigade in what was then

very difficult, violent, and uncertain. I started buying DVDs. I would buy one or two a day." She and others in the service would browse the few shelves. "During the day, we could compare notes about what movies were in the racks and bins — and at night, I could put my new purchase in a box. It was a busy day when Sam got a new shipment in. It was as close to the American experience as we could get."

When she returned to the United States, Gerde discovered that several of the DVDs did not work, or were very grainy from being copied from VCR tapes, or had obviously been recorded by someone holding a camera in the theater.

Having served with the Virginia National Guard for seven years before

dispatched information to subordinate units and to headquarters at Central Command in Kuwait and Qatar and in the United States, and served as a liaison for some units to headquarters at Camp Victory.

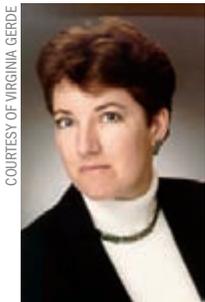
Daily life posed challenges and, sometimes, crises. "There were always changes in operations, planning, and responses to incidents and problems. With the troop rotations, you also had to constantly get to know new people, reestablish yourself, and try to maintain continuity of medical coverage."

Her most fearful moments were experienced in a traffic jam on the road north to Balad. "We could not go anywhere, and we were not in friendly territory. Luckily, I was with competent people, and Army helicopters arrived shortly to provide protection. It was difficult too, because I did not tell my family about it until I returned home."

She also encountered the bizarre. Located in the Green Zone, for example, was a palatial building that housed, in turn, the headquarters of the Coalition Provisional Authority, the U.S. embassy, and Iraq's transitional government. "The building was a focal point for contractors, Iraqi civilians, and coalition military personnel. People who were off duty, primarily contractors, would be relaxing at the pool in the back." The first time she walked by the pool en route to a meeting, several dozen people in swimsuits were sunbathing or reading or playing in the pool. "Right then, two Army Medevac helicopters flew low overhead on their way to the hospital. It was just surreal."

Gerde ran into several Virginia Tech graduates and students serving in Iraq or on their way there. She recalled, in particular, her surprise and delight, while

"Because you have virtually nothing when you go over there, little things matter."



Virginia Gerde

called the Green Zone (now known as the International Zone, the heavily fortified area in central Baghdad that served as the U.S.-led coalition's administrative base).

That October, explosions in the area severely restricted daily movement. "The last two months I was there, my world was limited to two buildings," Gerde said. "Our only outlet for any 'normalcy' was a small DVD store called Sam's that was in between the two buildings."

For months, she had resisted buying the DVDs she believed were pirated or illegally copied. "Not only did I not have time to watch them — but what would I say to my students when I got back?" said Gerde, who teaches ethics as an assistant professor in the business school at Duquesne University.

"But those last two months were

joining the Army Reserve, Gerde said she was prepared for her deployment in terms of her skills and her knowledge of the medical system and how U.S. military services work together. But she was not prepared for being away from family and friends for so long or for the mental and physical toll. "We worked every day for 10-14 hours," said Gerde, who typically rose at 6 a.m. and was at work by 7. "I had four half-days off, but almost every moment was working or preparing for work."

She particularly enjoyed helping to plan medical support for upcoming operations, "because you are working with people from all over the military — infantry, Marines, logistics, communication — to figure out how to achieve a certain objective." She also compiled and



Virginia Tech alumni reading the November 13, 2005 *Washington Post Magazine* were probably unaware that the army major next to Donald Rumsfeld in this photo is Pamplin alumna Virginia Gerde. Gerde, who received her undergraduate degree from Princeton in 1989, had presented a Princeton cap to the secretary of defense, a 1954 graduate of Princeton, after a town hall meeting with the troops at Saddam Hussein's former Al Faw Palace in Baghdad.

waiting for a military flight at seeing a Virginia Tech T-shirt on an alumnus who was working for a private contractor. “Small world.”

Assessing her circumstances often, she felt grateful for her colleagues’ skill and dedication, her living conditions — better than those in remote bases — her family’s good health, and that “I was alive and able to contribute to the mission.”

She found satisfaction in small pleasures — “going the extra distance to help people get what they needed, talking to my husband when I could make a call, a cold soda, a warm shower” — and greatly enjoyed care packages from family and friends.

A care package was wonderful for several reasons. “It was like Christmas. Just seeing someone else get one put a smile on your face. And when it was for you, there was an immediate bond to home and a great feeling because you knew people had put time and effort into assembling and sending it.

“You also got to share your package with other people — many smiles from one box! Lastly, because you have virtually nothing when you go over

there, little things matter.” Gerde still has the teddy bears sent by management associate professor Wanda Smith and the Pamplin T-shirt from management department head Rich Wokutch.

What most sustained her was the thought of coming home. “I wanted to help, to do what I could to make things work for our military and the Iraqis, but at the end of the day, I thought about home.”

She has a renewed appreciation for what many Americans take for granted: “physical safety of the marketplace, reliability of and access to the banking system, freedom to start a business and to associate with others, stable monetary policies, security to make investments and take risks, and government regulation of food safety.”

Readjusting to academic and civilian life has not been entirely easy, but she feels that her experiences have informed her teaching.

For example, she teaches online courses for a Duquesne program that provides PDAs for learning purposes to military students, some of whom are in various stages of deployment to Iraq or

Afghanistan. “I think I am able to better support these students, knowing the environment and pressures they face.”

In her teaching, she said, “I can discuss, at the organizational level, the impact of decision making and leadership within an organization, military or corporate. At the societal level, I can discuss the role of business in the recovery of Iraq. While in the Green Zone, I became much more aware of how local businessmen operated, what they needed to be successful, and how they influenced those around them.”

The concepts taught in business schools here, she said, are relevant for the economic and social environment there: “leadership, trust and communication, product quality, marketing, and the role of private investors.” Real progress in Iraq will be made in conjunction with economic development, she believes.

Finally, at the individual level, she said, “I can tell students that most Iraqis also want peace, that they just want to work and raise their families — and that there are universal values and ethics, even if the culture appears different on the outside looking in.”

# IN BAGHDAD

# GRASS IS HIS TURF



Chris Scott

COURTESY OF CHRIS SCOTT

The story of Chris Scott's company is about innovation, struggle, persistence, and drive to stay underfoot with live turf.



Above: Installing the turf in 2001.



RICK GRIFFITHS

Virginia Tech was the first U.S. school to use GreenTech's natural turf system. Hokie fans have fondly recalled the turf's role in the 2003 Texas A&M game, which was played in the remnants of Hurricane Isabel.

Wimbledon, the Olympic stadium in Athens, and Virginia Tech's own Lane Stadium all use the product of a small company founded by Chris Scott (FIN '77): an innovative portable, natural grass turf. The company, GreenTech, is now busy with new projects that include a major roof garden in New York City and stadiums for the 2008 Olympics in Beijing, the New England Patriots, and the University of Maryland.

The Athens Olympics led to more opportunities for his 14-year-old company, says Scott, who was president and CEO for 12 years and now serves as a member of its board of directors. But his is not yet a tale of great financial success, he contends. Instead, it is about "innovation, struggle, persistence, and a drive among the employees and investors."

The company moved from its original base of Richmond to Roswell, Ga., in 2003. "We have had to seemingly climb out of hole after hole, but we are still alive," he says. "We've reorganized the business to minimize fixed costs and cash flow pressures."

Scott joined former furniture retailer Heilig-Meyers right out of college and worked for 12 years in its corporate expansion and acquisition department. There, he recalls, he gained an understanding of his particular abilities for entrepreneurship. "I recognized that I had a skill of getting from one point to another effectively, overcoming obstacles, and ending up with a positive result." He was also driven, he says, by the need to "do something with my life that would make my family and me satisfied and proud."

With a former roommate who was a sports agent, Scott launched a business to manage the personal business affairs of professional athletes. A sports-related business was interesting to Scott, a football fan and Hokies season ticket holder.

In the early 1990s, Scott learned that a portable natural grass soccer field was specified for a stadium that would host World Cup games in the United States. He grew more interested after seeing installations at the Pontiac SilverDome in Michigan and a U.S. Open golf tournament in New Jersey. "I felt there was potential here but had no way to gauge it." The technology then, he says, was still more of a work in progress — an interesting experiment — than a sure-fire business opportunity.

"I had no turf background, no manufacturing background, no contacts, and no real obvious direction." But he plunged in anyway. With a broad patent giving him wide-ranging rights to the original invention, \$400,000 in seed money from his athlete-client investors, and a four-member board of directors, GreenTech was launched.

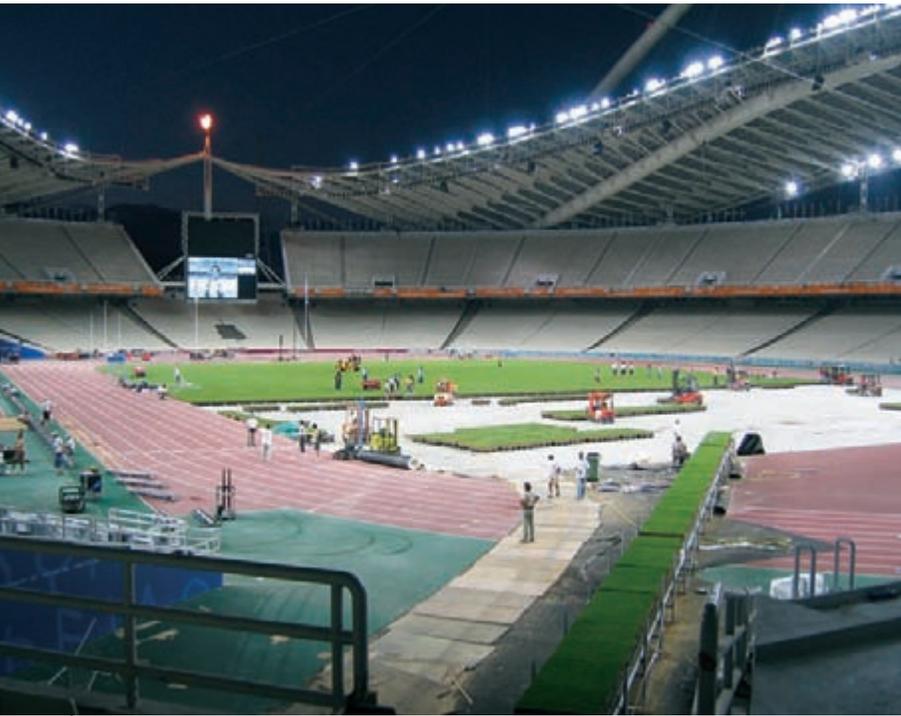
Product development took a year and more. The eventual result was an approximately 4 feet by 4 feet connectable module that Scott says is best understood by the layman as a series of "big plastic flower pots for grass that connect like a tile floor." The trays are positioned above asphalt, and, along with channels, drain holes, and air vents, provide a drainable, movable field. GreenTech improved the original technology, replacing the heavy hexagonal steel trays with lighter and smaller square modules made of high-density polyethylene.

Scott began cultivating relationships in the world of turf and athletic field design. "My problem was: how do I convince someone to build their high-profile athletic field by pouring a concrete floor in their stadium and building the field out of plastic boxes?" As the technology was unconventional, expensive, and unproven, it was a very risky decision.

At a trade show, he met a businessman from England who agreed to finance the construction of a \$250,000 injection mould (for creating the plastic

COURTESY OF GREENTECH

**"How do I convince someone to build their high-profile athletic field by pouring a concrete floor in their stadium and building the field out of plastic boxes?"**



Installation of GreenTech turf at the Olympic stadium in Athens.

modules) in Liverpool in exchange for a license to sell the product in Europe. "GreenTech was out of money," he recalls. Their first customer was Giants Stadium. Scott wryly recalls his reaction to the phone call from the stadium's representatives. "After working on this for three years with no revenue and no paycheck, this was a shock. I couldn't believe someone was actually interested in buying my product."

The installation was a success (although the stadium was later converted back to artificial turf), and Scott went on to jobs that included Wimbledon's courts 2 and 11 and Cardiff's Millennium Stadium. His triumphs along the way also came with some formidable tribulations.

He got into a legal dispute with his former English distributor, who, he says, "tried to take advantage of the company's weak cash position and wrestle away the technology." Two high-profile installations were mired in maintenance budget problems and received bad publicity.

Raising cash for growing a turf-grass venture, he found, was not easy in an era when dot-coms were the darlings of investors, but eventual fundraising success also came with significant conditions from the new investors. The board was required to include new shareholder members, and their opinions, objectives, and personalities were often at odds with the old members, Scott says. The politics,

he recalls, was "by far the most difficult and disturbing aspect of my growing business."

The new investors sought control of operations but also wanted his continued involvement in return for funding. Scott stepped down from the firm's daily management in 2003. From his office in Richmond, he serves the company as a consultant and board member and also spends time speaking at stadium and turf conferences around the world.

GreenTech's main challenge, he says, is the cost of its signature product and the relatively limited market prospects for it. "But our reputation is larger than the company. Our brand is highly recognized and associated with quality." The firm has posted glowing testimonials from satisfied customers, including Virginia Tech football coach Frank Beamer, on its Web site, [www.greentechitm.com](http://www.greentechitm.com).

And the company is diversifying away from being a one-product operation and investing in "green build" design. The business of developing resource-efficient environmentally conscious buildings is still in its infancy, Scott says, but offers a bright future.

GreenTech, he says, will keep going. Recalling his driving motivation to become an entrepreneur years ago, he says: "I do not like to lose and I do not give up. Struggle and perseverance are part and parcel of any business."

## Touch the future

**A**lumni can help create tomorrow's Pamplin experience and add value to every Pamplin degree by directing future support to the college with a few simple sentences in their wills, says Pamplin development director O.T. Crowther. Sample language and definitions of different types of bequests can be found at [www.givingto.vt.edu](http://www.givingto.vt.edu), along with information about estate gifts and the tax advantages often associated with charitable giving.

"Business people and parents in their 30s and 40s really need to think about the future and their legacy," says Michael W. Clarke (FIN '83), who pledged a \$1 million gift last year to establish a professorship in finance in the college. "Naturally, it is important to provide for your family and other loved ones, first and foremost. But after that, why not invest in our collective future?" says Clarke, president, CEO, and director of Access National Bank in Reston. "There isn't a better place to make that investment than at Virginia Tech. Tech has been fostering the development of business and civic leaders for generations, and, with a little help from each of us, it will do so for generations to come."

His pledge was "an easy commitment" to make, he says. "Estate planning is essential for anyone accumulating wealth in today's environment. Adding Virginia Tech to your estate plan doesn't cost a thing today, and it provides a great deal of personal satisfaction to know that you have helped secure the future for a valuable public institution."

To learn more, contact Crowther at (540) 231-5662 or (800) 533-1144, [crowth04@vt.edu](mailto:crowth04@vt.edu).

## Steven Dishner named outstanding alumnus

**S**teven G. Dishner (MBA '97) has been selected as Pamplin's 2005-06 Outstanding Young Alumnus. Dishner, of Richmond, is a first vice president at SunTrust Banks, with responsibility for performance management in consumer lending. He has nine years of consulting and management experience, primarily in financial services. Among his recent accomplishments is the planning and managing of a multimillion-dollar offshore initiative at SunTrust to increase efficiency and reduce operating cost for the bank.

Dishner's career has focused on process and strategic consulting. He previously worked at Accenture in Washington, D.C., and at GE, where he planned and managed the design of a long-term care product at GEFA (now Genworth Financial). He serves on Pamplin's MBA Alumni Advisory as vice-chairman of programs and networking.

The Alumni Association award honors a graduate within the past 10 years from each college who is professionally accomplished or has served the university since graduating.



Steven Dishner

COURTESY OF STEVEN DISHNER

Know of someone who would be a particularly interesting Alumni feature? Contact the editor at [sookhan@vt.edu](mailto:sookhan@vt.edu).

# FACULTY AWARDS



Terry Cobb



Eloise Coupey



Weiguo Fan



Philip Huang



Steven Markham



Michael Olsen



Rodney Thompson



Muzzo Uysal

formal and informal advisor to Ph.D. students, he has helped prepare them to teach undergraduates. Markham's research is aimed at improving organizational effectiveness: visual information displays, absenteeism, productivity gainsharing, team building, and leadership.

**The Warren Holtzman Outstanding Educator Award** was awarded to the following faculty members: Weiguo (Patrick) Fan, assistant professor of accounting and information systems; Philip Y. Huang, professor of business information technology; G. Rodney Thompson, professor of finance; Michael D. Olsen, professor of hospitality and tourism management; Terry Cobb, associate professor of management; and Eloise J. Coupey, associate professor of marketing.

The awards are sponsored by retired businessman Warren L. Holtzman, former director of the Small Business Institute and friend of the college. The Holtzman Awards are given to the same faculty members selected for college teaching excellence awards.

Criteria include outstanding effectiveness in the classroom as indicated by strong teaching evaluations for the past several (3-5) years, effective pedagogical approaches, supervision of independent studies, course development, curriculum development, involvement/supervision of student organizations, teaching or curriculum-related committee work, and teaching or curriculum-related research.

**Muzzo (Muzaffer) Uysal**, professor of hospitality and tourism management, has been selected to receive the college's 2006 Research Excellence Award. The award is given for outstanding research contributions, as exemplified by publications in top-tier journals, conference presentations, grants, and citations. Preference is given to sustained research over a 3-to-10-year period. Uysal's research interests center on tourism demand-supply interaction, tourism marketing, and international tourism. Uysal is a Fellow of the International Academy for the Study of Tourism and a Fellow of the Academy of Leisure Sciences. He is co-editor-in-chief of *Tourism Analysis* and serves on the editorial boards of eight

other journals, including *Journal of Travel Research* and *Annals of Tourism Research*.

**Steven E. Markham**, the Digges Professor of Entrepreneurship, is the 2006 recipient of the college's Outstanding Faculty in Doctoral Education Award. His contributions include course development, teaching, service on doctoral committees, integrating teaching and research, and mentoring.

Markham, who has taught doctoral seminars in organizational behavior, has consistently received student evaluations of 4.5 or higher out of 5.0. Markham has chaired or co-chaired five dissertation committees and served on 35 others. A

**Frank M. Smith** has been appointed director of Management and Professional Development. The office provides educational and consulting services to businesses, government agencies, and other organizations. Smith has more than 25 years of industry and academic experience leading management and professional development organizations. He was previously the director of the Executive MBA programs at Oklahoma State University and the University of Arkansas at Little Rock. He also worked at IBM, where he managed applications development programming education in Dallas, Texas; finance and business planning education in Brussels, Belgium; and the worldwide course development for several company functions. He owned and managed Master Training Services, a Texas-based management consulting firm. Smith received a bachelor of science in industrial management

from Fairfield University in 1968 and a master of business administration from the University of Maine in 1970.

**Janet E. Keith**, associate professor of marketing, was conferred the title, associate professor emerita, by the Virginia Tech Board of Visitors during the board's quarterly meeting last November. A member of the faculty since 1984, Keith has made significant contributions in teaching and research on relational exchange in marketing, professional selling, distribution channels, and business-to-business marketing. She has authored more than 20 academic publications and has organized several academic conferences. She has also assisted local businesses and community organizations. Keith received a doctor of business administration from Arizona State University in 1984.



Frank Smith



Janet Keith

On the Move

# STUDENT AWARDS

**Raheel Khan**, of Springfield, has been selected to receive the Outstanding Senior Award. Khan, an accounting and information systems major, has an overall grade point average of 3.9 out of a possible 4.0 and has made the Dean's List each semester since his freshman year. He has taken on many leadership roles in extra-curricular activities, including managing a \$650,000 budget as the business manager of Virginia Tech's student paper, *Collegiate Times*, and serving as treasurer and co-chair of the Executive Planning Committee, which organizes career-related events for Pamplin students. He has been treasurer and president of Business Horizons, which organizes the annual career fair for Pamplin students, and helped direct the implementation of an accounting system for the group. As a Pamplin Ambassador for two years, Khan has represented the college at student-recruitment events and assisted incoming freshmen at orientation. He plans to earn a master of accountancy at Virginia Tech.

**Fang Meng**, a fourth-year doctoral student in hospitality and tourism management, has been selected to receive the Outstanding Graduate Student Award. Meng's dissertation topic, "Examining Destination Competitiveness from the Tourists' Perspective," aims to investigate the relationship between the quality of the tourism experience and tourists' perception of "destination competitiveness" — how a

location compares with its alternatives in overall performance to visitors. Meng has taught introductory and sophomore-level courses in the department and has been a teaching assistant. A native of China, she received bachelor's and master's degrees in hospitality and tourism management at Beijing International Studies University. She was an instructor there and worked extensively with the hospitality and tourism industry as a consultant in employee training and marketing planning and development.

**Chiharu Ishida**, a doctoral candidate in marketing, has been selected to receive the Graduate Student Teaching Award. Ishida has taught Relationship Marketing and Marketing Research, senior-level courses required of marketing majors. Her primary research interests focus on the development and management of business-to-business relationships, such as those of strategic alliances and marketing channels. Ishida is completing her dissertation about the conditions that foster or restrain opportunistic behavior in channels of marketing. She received the Doctoral Dissertation Award last May from the Academy of Marketing Science in recognition of the quality of her dissertation proposal abstract. A native of Niigata, Japan, Ishida worked for five years at a U.S. engineering firm, managing and developing business-to-business relationships in Japan as well as in France, Germany, and Britain.

## 2006 Who's Who Among Students

Nine Pamplin seniors have been included in the 2006 edition of *Who's Who Among Students in American Universities and Colleges*. They are: Sharyn Ferran, of Midlothian, marketing; Caroline Hill, of Serverna Park, Ga., finance; Pooja Khanna, of Great Falls, marketing; Adam Lilienthal, of Alexandria, accounting and information systems; Kristen Lindsay, of Poquoson, accounting and information systems; William Lovely, of Sterling, accounting and information systems; Chanel Mohr, of Burke, marketing; Jonathan Park, of Ashburn, accounting and information systems; and Zachary Salmon, of Danville, finance.

They are among 71 outstanding students selected from Virginia Tech for



Chiharu Ishida



Raheel Khan



Fang Meng

their academic achievements, honors, and experiential activities. They will be honored at the annual Student Recognition Banquet in April. The 2005-06 selection committee comprised nine representatives from student groups, colleges, and other university offices.

**Don Autore and Tunde Kovacs**, the two doctoral students in the finance department who were on the job market this year, have accepted tenure-track positions as assistant professors at Florida State University and Northeastern University, respectively.

Autore, whose advisors are finance professors Raman Kumar and Dilip Shome, is doing research in corporate finance, specifically on shelf equity offerings. When corporations have no immediate intent to sell additional stock to raise funds but can predict the possibility of doing so in the near future, he and Kumar explain, they can register such a sale with the Securities Exchange Commission under a "shelf registration" — putting the sale "on the shelf" by not issuing the stocks immediately. Later, when funds are needed, all or part of the stocks registered earlier can be issued, an event called a shelf equity offering. In his dissertation,

Autore documents the increased use of shelf filings by corporations to make equity offerings and provides several related explanations for the revival of shelf equity offerings.

Kovacs, whose advisor is finance professor Greg Kadlec, is doing research in investments, specifically on information assimilation in security markets. In her dissertation on intraindustry information transfers around earnings announcements, she has found that much of the well documented post-earnings announcement drift — the tendency for stocks with positive earnings to continue to rise over the next several days while stocks with negative earnings continue to fall over the next several days — can be explained by the gradual release of similar or confirming earnings news for firms in the same industry.

Kovacs and Autore expect to graduate this spring.



Don Autore



Tunde Kovacs

On the Move

# Studying tourism's push and pull

**L**eisure travel — why and where people go — has long fascinated Muzzo (Muzaffer) Uysal. The hospitality and tourism management professor's research focuses on tourism demand and supply interaction and its consequences for those in the tourism industry. "The major goal is to understand and shed some light on the travel behavior of individuals and groups so that appropriate delivery of tourism goods and services can be provided by different types of suppliers, says Uysal, the recipient of the college's 2006 Research Excellence Award."

Tourism, Uysal says, is driven by many different "push," or demand, and "pull," or supply, forces, which in turn influence tourist satisfaction and loyalty. Destination promoters should pay close attention to issues of tourism motivation, he says, to ensure continued business.

Push motivations, he explains, are related to internal or emotional aspects — the desire for rest and relaxation, health and fitness, knowledge or education, adventure, social interaction, family togetherness, and even, prestige and

a sense of achievement ("going where friends have not been," for example). Tourists may also travel to escape routine, he says — "going away from rather than going toward something — and to search for authentic experiences."

Pull motivations, on the other hand, are connected to external or situational aspects — those inspired by a destination's attractiveness, such as beaches, recreation facilities, cultural attractions, entertainment, natural scenery, shopping, and parks. Destination attributes also may stimulate and reinforce push motivations.

Uysal's study of tourism in northern Cyprus showed that tourists there had eight push motivations — of which safety and fun, escape, achievement and knowledge and education, were particularly important — and 10 pull motivations — the main ones being cleanliness and shopping, reliable weather and safety, different culture, and water activities.

The study, published in *Tourism Management*, confirmed the "critical relationship" between push/pull motivations and destination loyalty, he says. The findings on pull motivations suggest that destination managers should enhance their location's attributes to improve tourist satisfaction. "The findings on push motivations suggest managers should also consider tourists' emotional feelings, as their internal sources of motivation affect their loyalty to a destination.

Lastly, his study provided empirical evidence of a long-assumed relationship between satisfaction and loyalty — that if tourists are satisfied, they will revisit and recommend the destination to others. Tourism research, Uysal says, can provide communities and businesses very useful information.

Muzzo Uysal loves to travel and has roamed the world. In Beijing last summer, he visited the Great Wall of China. His own push/pull motivations have to do with "understanding local cultures, observing the ways of life of indigenous peoples, hiking and skiing, and spending time at local cafés."

PHOTO COURTESY OF MUZZO UYSAL

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