Aiding rescues with robots

Disaster relief is suddenly in the news again. It’s an arduous and dangerous task, one that’s carried out mainly by humans and trained dogs, communicating face-to-face or by phones and walkie-talkies. Robots increasingly provide limited support for search and rescue activities, and are typically remotely operated by a separate team of humans, but can be difficult to control.

As part of a national effort to improve the use of robots in disaster relief, researchers from the School of Information Sciences and Carnegie Mellon University have participated for the last three years in the US Open robotic rescue competition. “This year in Atlanta we dominated until one bad run in the finals,” said Michael Lewis, an associate professor in the Dept. of Information Science and Telecommunications. “We finished first in mobility and first in autonomy, but ultimately placed third.” RoboCupRescue is an outgrowth of the RoboCup competition that seeks to produce a team of soccer-playing robots that can beat the human world champion soccer team by the year 2050.

Grant supports FastTrack program in the Virgin Islands

The School of Information Sciences will bring its FastTrack MLIS program to the University of the Virgin Islands – St. Thomas.

With a need for more librarians, the University of the Virgin Islands has received a grant of nearly $1 million for advanced degree training for 25 students, and has elected to bring the SIS FastTrack MLIS program to its campus.

Now entering its fifth year, the FastTrack program has already distinguished itself as one of the nation’s leading distance education programs serving students who seek an alternative route to an ALA-accredited master’s degree. “This $965,910 award to UVI from the Institute for Museum and Library Science is further recognition of the program’s excellence,” said Dean Ron Larsen. “It affords SIS faculty and students the opportunity to strengthen our already collegial relationship with colleagues at the University of the Virgin Islands.” Several SIS graduates work in the Virgin Islands, and they suggested the collaboration.

SIS faculty will travel to the Virgin Islands for face-to-face interaction with the cohort. The students — who will commit to working for at least two years in the Virgin Islands — will also receive academic and professional support through field experience, targeted mentoring, and exposure to national professional meetings.

Students in 26 states

FastTrack, the groundbreaking School of Information Sciences distance education MLIS program, has now enrolled students from more than one-half of the 50 U.S. states, as well as the Netherlands. “Our fifth cohort started in May,” said Sue Alman, director of distance education and outreach at SIS. “The number of applications continues to increase, and we expect to enroll another cohort of 50 students in 2006.”

Brusilovsky wins NSF award

See page 7

Corky, an experimental high mobility robot, climbs stairs

Personal Explorer Rover (PER) is a multipurpose experimental robot

Continued on page 11

Please let us know of the significant events in your life — Link@mail.sis.pitt.edu
Dialogue with the Dean

As we prepare for the next academic year, it is worth taking a moment to reflect on a few highlights of the past year.

A year ago, we introduced you to Dr. James Joshi, a new faculty member specializing in information assurance and network security. Dr. Joshi has since led the SIS team developing the Security Assured Information Systems curriculum, which has earned all five certifications from the National Security Agency (NSA) as a Center of Academic Excellence in Information Assurance Education. This places Pitt in rarefied company — only one other AAU institution holds all NSA certifications.

Many other faculty members have also distinguished themselves this year. I am particularly pleased to report that Dr. Peter Brusilovsky won a prestigious CAREER award from the National Science Foundation. This award recognizes his groundbreaking work on personalized information access and provides sustained support for his research for five years. Dr. Richard Thompson, the director of “the best graduate program in telecommunications” has received major support from TeleContinuity, a Rockville, Md. company, to develop telecommunications strategies that employ Voice-over-IP to provide back-up telephone service in times of catastrophic loss of regular phone service. This work builds on innovative research that Dr. Thompson and his students have conducted for several years.

Speaking of students, we all know how competitive and prestigious the Fulbright scholarships are. The Telecommunications program has attracted 11 Fulbright scholars in the past seven years — five of them this past year.

Our graduates continue to distinguish themselves, as well. This year, one of our MLIS FastTrack graduates, Clara Hudson, was named Pennsylvania New Librarian of the Year by the Pennsylvania Library Association. This award recognizes originality and inventiveness as reflected in new and improved library services on a local or state-wide level. Eligible candidates are those who have joined the profession within the past six years and who demonstrate promise for continued growth in librarianship.

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It’s easy to enthuse over the accomplishments of our faculty, students, and graduates, but I have only touched on their remarkable accomplishments, and I encourage you to visit the School’s website occasionally to pick up on the latest news. Meanwhile, I look forward to the coming year and the many more newsworthy events to follow.

Ronald L. Larsen, Dean and Professor

Telecommunications program to celebrate 20 years

Help us celebrate . . . and help us decide how to celebrate. The 2006/2007 year will mark the twentieth anniversary of the Telecommunications program at the School of Information Sciences, and we want to laud this two-decade milestone.

At this early time, we propose to hold a three-day weekend celebration, with a combination of social events, curriculum catch-up, technical seminars, and mentoring sessions during which we hope you will offer career advice to current students. What would you like to have as part of this celebration?

In the run-up to the celebration year, we want to publish in this newsletter articles written by Tele graduates on topics such as:

• What course/skill/insight from your days at SIS has played a guiding role in your career?
• Have you followed a career path that you never would have imagined while you were a SIS student?
• Is there a service/technology that the public uses in which you had a hand?
• Given the changes over the last 20 years, what predictions would you make for the next 20 years?

These are just a few ideas for your consideration, but it is certainly not a complete list. As you think about the best way to celebrate the twentieth anniversary of the Tele program, please communicate your ideas to Rich Thompson, director of the Telecommunications Program (rat@tele.pitt.edu), or Andy Falk, director of development (andrew.falk@ia.pitt.edu).

Faculty tenure and promotions

Peter Brusilovsky, Hassan Karimi, and Prashant Krishnamurthy were recently promoted to associate professor with tenure. All are faculty in the Department of Information Science and Telecommunications. In addition, Amanda Spink, a recently tenured associate professor in the Department of Library and Information Science, has accepted an endowed university professorship at the Queensland University of Technology in Brisbane, Australia.
SIS adds two new faculty members

Sherry Koshman

Sherry Koshman likes to visualize information. As one of the newest SIS faculty members, her research and teaching interests focus on visualization. “My current research concentrates on user interactions with information structures such as visualizations, clusters, and controlled vocabularies to retrieve information from the Web,” she said. Her teaching interests are similar — Web information retrieval, information visualization and architecture, digital library services, and user-focused system design. During the fall semester Koshman will teach Information Architecture and Introduction to Information Technologies. Links to current information visualization systems found primarily on the Web are available on her home page.

Following completion of her PhD at Pitt in 1997, Koshman worked as an information retrieval and software testing consultant for several years, mostly in quality assurance and large-scale product implementation in the telecom and health insurance industries.

One of Koshman’s current collaborative research projects is the revision and expansion of an existing peace and security studies thesaurus to retrieve and index documentation supporting international peacekeeping missions, public safety, peace resolution, and human rights. The thesaurus will be used by the U.S. Institute of Peace, the United Nations, the World Bank, and other affiliated organizations as a foundation to retrieve information through a new Web portal. The original thesaurus was constructed by SIS and Pitt’s University Center for International Studies.

Another collaborative project is a transaction log analysis of Vivisimo.com search engine logs. This is one of the first studies to look at the characteristics of Web searching using cluster-based technologies in an operational environment. The data set contains over 2 million queries.

Koshman has recently published “Testing User Interaction with a Prototype Visualization-based Information Retrieval System” in the Journal of the American Society for Information Science and Technology, and “A Usability Study Comparing a Prototype Visualization-based System with a Text-based System for Information Retrieval” in the Journal of Documentation. She will present papers at the upcoming Human Computer Interaction International and at the American Society for Information Science and Technology conferences. Her home page is http://www.sis.pitt.edu/~skoshman/

Judith Jablonski

With two degrees in English, it was a job at the American Psychological Association that caused Judith Jablonski to cross over into the information profession. “I had to write 200-character descriptions for entries in the PsycINFO database,” she said. “I learned how to create information that was remarkably brief and yet content-rich, and the experience changed me from an English major who liked to write to an information person dealing in precision.”

As a new faculty member, Jablonski’s research will focus on two areas — Web designers and their role in awareness of information organization, as well as continuing with the topic of her dissertation research, how faculty and practitioners of information science conceptualize the field. “I’ve found that there is a sense of team ownership,” Jablonski said. “They get the idea that faculty and practitioners create the field of Library and Information Science, but in terms of professional interaction, there is a breakdown. This is a behavioral divide, not one of attitude or belief. The breakdown is in actual behavior, in the day-to-day working together.”

In the fall and spring, Jablonski will teach Organizing Information, and next summer will teach Indexing and Abstracting. Before accepting her faculty position at the University of Pittsburgh, she taught at Marquette University, the University of Illinois, the Catholic University of America, and the University of Wisconsin at both Madison and Milwaukee. “I have 20 years of teaching experience,” she said, “and my bread and butter is information organization. That said, I intend to develop courses on adult reading, in particularly genre fiction and the graphic novel, and the technologies and cultures of writing.”

Jablonski views her role as a teacher to be a resource, a catalyst, and a mentor. “In my experience, students want to be challenged as learners and respected as professionals. My goals are to encourage students to learn content, develop critical and proactive learning skills, and master the tools and skills needed to be a successful information user and professional.”

She has undergraduate and master’s degrees in English, the former from Marquette University and the latter from the University of Illinois. Jablonski also has a master’s in library and information science from the Catholic University of America, and will receive her PhD from the University of Wisconsin-Madison in the fall.

SIS alumni host professional development days for LIS students

The SIS Alumni Society (SAS) recently hosted two professional development days for LIS students. The first event included workshops focusing on résumé development, interview skills, and job seeking. More than 30 students participated. Students also submitted their résumés for critique, and following the workshops were offered the opportunity to meet with the reviewing alumni. The following week, SAS hosted a second professional development day that included mock interviews conducted by alumni. Students participated in the interviews based on the type of library where they hope to work. Each student received a sample job description and then scheduled an interview. Nineteen students participated in the mock interview day.

In addition to SAS, the professional development days were supported by SIS, Beta Phi Mu, and Career Services. Based on the success of these events, SAS is preparing a professional development day targeted at Information Science and Telecommunication students for October 29, 2005. For more information, contact Andy Falk, director of development, at andrew.falk@ia.pitt.edu or 412-624-9473. Information is also available at www.i-fest.pitt.edu.
The state of our information facilities does not mesh with what we're trying to teach,” said Michael B. Spring. “We have too many bulletin boards and too much paper. We need something more forward looking.”

With a grant from Dean Ron Larsen’s Entrepreneurial Initiatives fund, Spring set out to slay the paper dragon with the RAPAI (Role-Assured Publicly Accessible Information) project by exploiting the technology that he introduces to his students.

“RAPAI is an information environment that has multiple input points and provides information of high relevance to people entering and leaving the IS building,” he said.

Spring is an associate professor in the Dept. of Information Science and Telecommunications.

The goal of the project is to provide information for a public environment that uses a variety of security mechanisms to control the flow of information to 10 flat panel displays mounted in the walls of the IS building lobby. Those displays are only a beginning, Spring said. He will consider RAPAI a success when people who use it can find the information they need in a convenient and seamless way. “I want it to be so convenient that paper posted on walls, doors, and in elevators will disappear.”

RAPAI provides just-in-time information to people as they pass through the lobby. The system uses role-based authentication via RFID (radio frequency identification) tags and readers to identify individuals and present information tailored to their interests and profiles. Information is posted on the system using simple input channels protected by audit trails and access controls to ensure security. RFID tags are available to SIS students who request them and agree to provide feedback about the system.

Interactive touch screens are used to access location information — classes, faculty offices, important events, and other announcements. RFID-activated screens provide access to information based on knowledge of the groups an individual belongs to — both by interest (a member of PRISM) and by position (a PhD student). Multi-panel displays are programmed to show important announcements, images, and advertising, and a projection system can show live video feeds of special events. The four-panel display uses RSS (really simple syndication) technology that updates every hour. At the current time, the four RSS feeds are the Yahoo technology feed, SIS news and updates, Pitt news, and the weather.

Spring views the lobby information displays as a test that can be expanded to include wireless connections to display panels in the building’s elevators, phone text messaging, and PDA connections for input and information display, and tracking RFID tags to provide up-to-date information on people and their locations.

Technologically, Spring said, a system such as RAPAI faces three key problems — ease of submissions, authorization of submissions, and timely presentation of information. “Culturally, such a system challenges our views about the nature of digital information and privacy. A simple metric for effectiveness of a site,” he said, “is whether or not it obviates the need for paper equivalents. It won’t replace the traditional environment if information is not available at a convenient time and place, if it is not easy to post information, or if the presentation is constrained. It can also fail if management of the information is too difficult.” Spring hypothesizes that a perfect system would dramatically reduce the need for posted paper. “The goal is to assess information needs in an organization and build a system that allows the information to be exchanged. The metrics for success will include user satisfaction, ease of use, and less paper.”
Using seed funding from the Dean’s Entrepreneurial Initiatives, the Dept. of Information Science and Telecommunications has established the Laboratory of Education and Research on Security Assured Information Systems (LERSAIS), under the direction of James Joshi, an assistant professor in the department.

Since the spring of 2004, LERSAIS has hosted 33 seminars on information security presented by leading experts from all over the country. “Providing information systems security and assurance has emerged as one of the most daunting technological and social challenges of recent times,” said Joshi. “These experts provide significant momentum to our program by offering a range of perspectives on information assurance issues and interacting with our faculty and students. LERSAIS fills a strong need for a research center to coordinate and exploit the synergy among diverse technical experts within both the School and the University.”

The long-term goals of LERSAIS, Joshi said, are to develop the capability to perform high impact research on both aspects of information assurance — security and availability — and to develop and support high quality education in security and information assurance.

LERSAIS was recently awarded an equipment grant from Cisco Systems’ Critical Infrastructure Assurance Group. The grant includes Cisco equipment worth $100,000 to upgrade the LERSAIS facility. In addition, LERSAIS was given the Dept. of Defense (DoD) Information Assurance Scholarship award for partnering with the National Defense University’s Information Resource Management College (NDU/IRMC). Under this program, a student who has taken certificate programs at NDU/IRMC can pursue the security assured information systems track in the Dept. of Information Sciences and Telecommunication with a DoD scholarship.

Security Assured Information Systems

Maria Harrington teaches her Human Computer Interaction course in two ways — in reality and virtually — in a classroom and by having another group of students anywhere in the world interact with their computers. “The two HCI courses are different,” she said, “even though all the hard variables are the same. I use the same text book, workbooks, lecture notes, and assign the same homework and group projects. The differences are subtle, fuzzy, and tactile.”

“The student profiles are different, as well as their social skills. In general, the classroom students are under 21 and are full-time students. Many of the students in the distance education class are working full time and are over 21. One student was on active duty in the Air Force and another was working two full-time jobs. There’s a danger to underestimate the amount of time a distance education class will require, and just because it offers flexibility, does not mean that it is easier.” Harrington said that both classes require the same amount of study time and commitment, but non-verbal cues are easily perceived in the classroom, while they are opaque online.

“I can spontaneously respond to a student’s question and personalize it in class with a diagram, an online case study, video, or perhaps an example from my professional experience. Other students benefit from one student’s question, and that can grow into a discussion. I can follow my notes, but also adjust to individual points of interest. Distance education,” Harrington said, “is a fantastic vision, and by making high-quality education available to everyone, everywhere, SIS can extend access to knowledge and support people in pursuit of their goals. But as with any technology, success or failure is in the execution.” Harrington is a SIS PhD student, and has taught the HCI course for five years.

Development of the HCI distance education class was supported by a grant from Dean Ron Larsen’s Entrepreneurial Initiatives to Robert Perkoski, director of the SIS undergraduate program. “Many students go home to work in the summer,” he said, “so this is a way to introduce distance education to the undergraduate program and see what works and what doesn’t.”

Harrington said distance education is closely related to the quality of ‘tools.’ “A Pitt professor can publish lecture notes online and via the software Courseweb. It allows someone not skilled in HTML to post their course material and grades in a login-protected environment,” she said. “In the future, this capability along with 10-minute video segments of lectures, asynchronous video conferencing, intelligent agents that can tutor individual students, and many other technologies and techniques would improve distance education.”

In addition, Harrington said, interpersonal dimensions are different for classroom and distance education. “How do we create a distance education program that approaches the success of classroom learning? Do we look at all the market segments and user profiles not served by the classroom option, and then seek to offer a very different educational service to people and offer it in a different way?” Through the distance HCI course and others, Harrington and Perkoski seek to exploit available technology, identify potential new technologies, and refine the distance education model to serve both students and the University.

SIS offers undergraduate distance ed course on human-computer interaction
Andrea Ketchum awarded MLA grant
A 2000 graduate of the MLIS program at the School of Information Sciences has received a Continuing Education Award from the Medical Library Association. Andrea Ketchum will participate in a series of online courses from the American Health Information Management Association that deal with clinical terminology systems. “This grant will allow me to develop a fundamental understanding of major coding systems and to better explore the relationships between them,” she said. “I want to investigate the implications for medical librarianship in the development of electronic medical records.”

Following completion of her traineeship, Ketchum joined Pitt’s Health Sciences Library System as a reference librarian, and currently serves as the HSLS liaison to Children’s Hospital.

Marsha Washington honored
Marsha Washington, manager of financial services for the School of Information Sciences, has been recognized by the University for her work with the Pitt Volunteer Pool as well as for her voluntary projects through St. James African Methodist Episcopal Church. Washington organized youth nights and food and clothing drives, as well as raising more than $30,000 to send young people to out-of-state retreats and conferences. She also tutors elementary school children in math and spelling, and serves as a volunteer instructor for the Centers for Healthy Hearts and Souls, a program designed to raise awareness of heart disease and diabetes in the African American community.

Washington was also recently honored by Alpha Kappa Alpha sorority with its Spirit of the Everyday Hero award for service to the black family. She has been with the University for 28 years and the School of Information Sciences since 1984. Earlier, she worked in the Office of Human Resources and the School of Engineering.

Westbrooks wins SUNY Chancellor’s Award
Elaine Westbrooks, a 1999 MLIS graduate, has won the SUNY Chancellor’s Award for Excellence in Librarianship. Candidates for this award are evaluated on “their skill in librarianship, their service to the college and to the profession and their scholarship and continuing professional growth.” As a metadata librarian at Cornell University, she analyzes new developments in metadata, organizes information for digital librarians, and facilitates access to digital research for library patrons.

Known at Cornell as a leader in metadata applications and the development of digital collections and services, she is a recognized expert in the field of geospatial metadata. Last year the American Library Association published her book *Metadata in Practice: Building the Diverse Digital Library* (with co-editor Diane Hillmann) and Scholarly Resources, Inc. will soon publish another of her books, *Black Studies and Culture on the WWW: A Guide to the Very Best Websites*.

While an undergraduate at Pitt, Westbrooks worked at the Carnegie Library of Pittsburgh and as a computer support specialist for a Pittsburgh elementary school. After receiving a BA in linguistics in 1998 and prior to joining Cornell, she was awarded a fellowship for the MLIS program and worked at Hillman Library as a digital research librarian and Latin American cataloger.

Evangeliste wins ACRL marketing award
A team headed by SIS FastTrack graduate and American University librarian Mary Evangeliste has won the Association of College and Research Libraries Best Practices in Marketing @Your Library award. The award recognizes academic and research libraries that demonstrate an outstanding best practices marketing program.

Evangeliste headed the seven-member marketing committee. “We were aware of student misconceptions about the library’s services and collections, particularly among undergraduates,” she said. “An aging interior was affecting student desire to study in the building, so we launched a campaign to improve understanding of how the library can support students and make them aware of recent improvements in the library environment.” The marketing plan used best practices for academic library marketing as described by ACRL.

Although the primary audience for the marketing campaign was undergraduate students, the effort targeted the entire university community. “We responded to undergraduate concerns about library facilities and collections by informing students and scholars about major building improvements, enhanced resources, and increased awareness of the AU library’s many outstanding offerings.”

One goal of the marketing plan was to increase participation in the instruction
program by 20 percent, Evangeliste said, but instead participation increased by 400 percent. “Hard to believe, but it did happen.”

Evangeliste, who received a BA in art history from Allegheny College, was in the first cohort to receive an MLIS through the SIS FastTrack program in 2003. At the time, she was head of the Interlibrary Loan Department at AU. She and the graphic designer who worked on the marketing plan have created a firm to work with non-profit organizations, called Fearless Future. Their website is www.fearless-future.net.

The AU marketing committee felt it was important to share their marketing plan with the entire community of librarians, hence it is posted on the Internet at: http://www.library.american.edu/about/marketing/AU Library ACRL.pdf

**Brusilovsky wins NSF early career award**

To make searching for information more effective, make it personal. That’s the message from SIS faculty member and new National Science Foundation (NSF) Faculty Early Career Development Award winner Peter Brusilovsky.

Brusilovsky won the prestigious five-year, $440,000 award to fund his work in personalized information access. The research by this associate professor will focus on helping students search the variety of information in online tutorials, electronic textbooks, and digital libraries to find resources that match their individual goals, interests, and current knowledge. “Access is not the issue,” said Brusilovsky. “Personalized access is.”

“What we are finding is that the classic paradigm of information retrieval is failing,” he said. In the past, information provided by professionals was searched for by professionals, and both used the same language. “Nowadays, everyday people searching for information have different experiences, skills, and vocabularies. Results that just match the keywords you’re searching for are not quite relevant.”

Brusilovsky aims to develop more interactive and expressive systems to retrieve and filter information. In the immediate future, the educational systems he develops will directly influence the way undergraduate computer programming courses are taught at SIS. Eventually, Brusilovsky’s work could be applied to searching the Internet at large.

The inspiration for Brusilovsky’s NSF proposal was his award-winning research on QuizGuide, an adaptive system that he and his colleagues developed to help students in a programming course to select the self-assessment quizzes most relevant to them. The system allowed students to explore more questions and work on them more persistently, and as a result, learn more. For that research, Brusilovsky won an Outstanding Paper Award at the E-Learn 2004 conference.

The NSF CAREER Award supports the early career-development activities of those teacher-scholars who most effectively integrate research and education within the context of the mission of their organization. Past winners from SIS have included associate professor Marek Druzdzel and adjunct associate professor Sujat Banerjee.

**Industry Advisory Council focuses on outsourcing**

The most recent meeting of the Industry Advisory Council to the School of Information Sciences focused on the hot topic of outsourcing jobs. “We discussed the nature of skills that can be outsourced,” said Bob Perkoski, director of the undergraduate program in information science. The Council was established in 2004.

“We value Council members’ perspective so that we can understand which skills are in demand, and we can then balance our teaching with the needs of the corporate community. They are an important sounding board so that we keep up with trends in the IT business community.”

Outsourced jobs tend to be low-level programmers, help desk workers, and accounting staff, Council members said. “Design requirements and analysis of design are staying in this country, but once requirements are specified, sometimes the project is shipped overseas for coding,” Perkoski said.

“The Council provides important feedback about our curriculum, such as using Java as a primary programming language. They agree with our approach that emphasizes a strong foundation and then offers specialization in clusters such as networking, security, and databases. They liked the strength of our undergraduate curriculum.”

Participants in the Advisory Council include representatives from IBM, Mellon Financial, Microsoft, AT&T, Alcoa, Cisco Systems, Marconi Corp., PPG Industries, and North Pittsburgh Telephone Co.
Challenging opportunities at the University of Guam

After two decades of working in university libraries in the United States, SIS graduate Chih Wang opted for a change of scenery — the University of Guam. “Beautiful white sand beaches surround the island,” he said, “and one warm season extends the whole year and suits and ties can be cast aside.” Wang was dean and professor of library science in Guam from 1989 to 1998 and remains on the faculty as a professor of library science. He received a DLS from Pitt in 1988.

“The UGuam library was once so inadequate that students had to use toilet stalls as reading carrels,” he said. “We also had to battle frequent tropical storms, typhoons, and unreliable power to keep the library open.” In 1993, the library moved from its original Quonset hut to a new 55,000-square-foot building. Until 1990, the library had only one Apple computer and one IBM PC. With the move to a new building, the library acquired the Dynix system, which laid the foundation for connecting to OCLC and other library networks, and was regarded as the key to opening the cyber world at UGuam. The library gained access to the Internet in 1996. Before it was dedicated, the new building was baptized by typhoon Omar in 1992 and christened by an earthquake of 8.2 on the Richter scale in 1993. The former caused the roof to leak and soaked the new carpet, while the latter knocked all the books off the shelves.

The Guam Library Association was revitalized when Wang arrived on the island, and the Pacific Islands Association of Libraries and Archives was created in 1990 to serve Micronesian libraries and connect library professionals in that vast region. “These may be normal activities in the United States,” Wang said, “but on a remote and isolated small island, they were unusual.”

“While major libraries have long been automated, it was perhaps the colonialist mind or lack of technological expertise on Guam that suggested a modern library would overwhelm and confuse island people,” Wang said. Many U.S. corporations often barred shipping new technology to Guam because they did not realize that it is a U.S. territory. Limited undersea cables were another challenging technical aspect for applying new library technology, he said.

Wang has recently published three books. Thirty-Years’ Practice in Libraries: Recollections and Ruminations (2005, Philadelphia: Xlibris) collects selected research articles and short papers during the years when he served as a library professional in several U.S. academic institutions. Guam and Micronesian Libraries: Historical Events, Information Sources, and Others (2005, Philadelphia: Xlibris) includes selected research articles and short papers primarily relating to libraries and information sources on Guam and the Micronesian islands. Patches of Light Clouds (2005, Paipei: Showwe) is a collection of his Chinese and English essays.

“And baby makes three . . .”

Josephine . . . youngest FastTrack student

Josephine is only 15 months old, yet has attended all but the first quarter of the FastTrack MLIS program. Her parents occasionally worry that all this exposure to information retrieval and metadata might have long-term effects on her cognitive development, but they are willing to take the risk. Kathryn James and Julian Aiken, Josephine’s parents, are the first married couple to enroll in the online program. Josephine was born at the end of their first quarter of FastTrack, a two-year, online MLIS program that has just enrolled its fifth cohort. FastTrack students travel to the Pitt campus for one long weekend each quarter.

The couple met in Oxford, England, where Julian was a police officer. Although the couple met in that storied university town, Julian hastened to clarify that it was not because he arrested Kathryn. Julian has a law degree from the University of Bristol in the southwest of England. They chose the FastTrack program at Pitt because the school has a great reputation, Julian said, and “we could complete our MLISs in two years whilst still working.” Kathryn has an undergraduate degree in history from Wellesley College, and master’s and PhD degrees in modern British history from St. Catherine’s College, Oxford.

Now living in Seattle, Kathryn is teaching in a new Gates Foundation program at Everett Community College and lecturing part time in history at the University of Washington. Julian is a library assistant with the King County Public Library. She intends to work in an academic library, while he would like to work with digital resources, also in an academic environment.

Julian said that they, like many FastTrack students, tend to do their course work on the weekends because weekdays are generally packed — walking three dogs, feeding everyone, and putting Josephine to bed. “It actually isn’t particularly difficult to get it all done,” he said. “I think we enjoy the course so much that it’s pretty easy to apply ourselves. And there’s always that element of fierce competition between us, of course, to keep the motivation high.”
SIS graduate broadens Amber Alert delivery

It's every parent's nightmare — send the kids out to play, and a few minutes later they're nowhere to be seen.

Amber Alert is a nationwide system created in 1997 to quickly notify law enforcement authorities about missing children. Until recently, distribution of these crucial messages was limited to law enforcement, the media, and transportation agencies that could post messages on their electronic signs. Now thanks to the work of a SIS graduate, the national Amber Alert system has been extended to text messaging on wireless phones. Phone users on any cellular network can register to receive free Amber Alerts.

In 2002, several high profile Amber Alerts in California caught the attention of Ed Sauer, a Nextel Communications engineer and father of a then 4-year-old son. In at least one of those situations, Sauer said that California law enforcement authorities were convinced that the Amber Alert saved the lives of two kidnapping victims.

“I wondered why we couldn’t send Amber Alerts on our wireless phones,” he said. “We see them on highways, TV, and radio, but with text messaging we could reach so much further, particularly to people on the road who might spot a fleeing vehicle. It was a perfect fit.” Sauer received an MSIS from the School of Information Sciences in 1987, joined Rockwell in Houston to support NASA robotics, moved to PacTel, and then joined Nextel Communications in 1994.

Other organizations were already sending wireless alerts, he said, but there was no nationally coordinated system, and those organizations’ alerts were billed to their customers as standard text messages. Sauer enlisted many colleagues, and six months after successfully demonstrating the concept to management, they rolled out a trial in cooperation with the National Center for Missing and Exploited Children (NCMEC), the Pennsylvania State Police, and the Dept. of Justice. After a successful 10-month trial, in May 2005 the program was extended nationwide under the coordination of The Wireless Foundation, a non-profit arm of the Cellular Telecommunications and Internet Association.

There are nine major wireless carriers in this country and 180 million customers, according to Bob Hoever, deputy director of special operations for NCMEC. The majority of sightings as a result of Amber Alerts are called in on cell phones, he said, so it’s a natural fit to send the alerts as text messages. Users must first register their phone numbers and specify no more than five ZIP codes that cover the areas where they spend the most time, likely the ZIPs at home, work, or a child’s school. After the program was announced on May 17, 50,000 people registered during the first week. More than 200 children have been recovered as a result of Amber Alerts since the program began in 1997.

Register your wireless phone to receive Amber Alert text messages at www.wirelessamberalerts.org.

On the website, enter your wireless phone number, click submit, and you will be linked to the Amber Alert registration page of your wireless provider. If you change providers, you must register again, even if you keep the same number. The service is free.

Arleen Girty retires after 29 years at Pitt

Pitt is a great place to work, and being around young people keeps you young, according to Arleen Girty. “The students are all terrific and I’ve become friends with many of them.” And after 29 years with the University of Pittsburgh, Girty has retired to spend more time with another set of young people — her four grandchildren.

Girty spent her first three years at Pitt with the School of Social Work and the balance of her career in a series of positions with the School of Information Sciences. She retired as an administrative secretary with the Dept. of Information Science and Telecommunications. A native of Millvale, Girty now lives in Reserve Township with her retired husband.

With three children and grandchildren of 12, 8, 4, and 2 years all in the area, Girty said she will spend more time with family, tackle house projects that have been put off for years, and perhaps return to long-ago hobbies of crafts and sewing. Other possible retirement activities include visiting family in Kansas City and taking a cruise.
Visualizing student information aids education decisions

If one picture is worth a thousand words, then visualizing data is worth millions of words. That's the conclusion of a team of researchers from the Pittsburgh Public Schools and the Visual Information Systems Center (VISC) at the School of Information Sciences. They have assembled what they believe is the most accurate Pittsburgh student, school, and locational database ever created.

The visual database includes a dot for the location where each student lives, but behind each dot lies information such as race, achievement, socioeconomic background, and the number of parents in the student's home.

The database, however, is a means to an end — analyzing information about the school system, individual schools, and neighborhoods using six categories: Total Enrollment, Functional Capacity (less Head Start spaces), Racial Distribution, School Lunch Program Distribution, Gender Distribution, and Grade Level Distribution (K–12).

The VIPER project — for Visualizing Information for Pittsburgh Public Schools Education and Research — maps all data to the individual child. By using individual records, not averages, all students are portrayed. The visual analysis is performed on full data sets, not just sample data, which makes visualization not only a powerful research tool, but also a tool for action. School officials can test student data to identify best practices and efficiently leverage limited resources.

A key technique is to devise archetypes (an ideal student, for example) based on observations of clustered student performance data, and then compare the archetypes to student records using further visual querying along those dimensions that management can control.

The researchers plotted the residence of each student using existing data, but it came as no surprise that many addresses were incorrect. In pursuit of accuracy, Bob Regan, visiting research professor and author of The Steps of Pittsburgh, biked 2,000 miles through all city streets and alleys while dictating notes about street names and address changes. School officials estimate that 10 to 15 percent of all student addresses had to be entered by hand.

While VIPER is used by school officials, at VISC, the project is also being used to develop, test, and validate a new generation of software for visualizing student data. VIPER applications allow end users to create dynamic visualizations of data including multi-dimensional spatial analyses and GIS-based representations. The visualizations are viewable at varying degrees of detail and are capable of creating robust pictures of student achievement.

The VIPER Project enables practitioners and researchers to map the relationships between the myriad variables affecting student learning. With instant access to accurate data on entire populations of students, along with numerous state-of-the-art visualization tools, stakeholders can examine broad trends, outliers, and anomalies in the data. Unlike standard statistical, tabular, and graphical techniques, VIPER maintains the integrity of, and accessibility to, individual student records. With such rich data and visualization techniques, VIPER makes possible informed decisionmaking on many levels, from prescriptive instruction to the effectiveness of multi-million dollar initiatives.

Officials receive Pittsburgh street data

The VIPER project has given the Pittsburgh Street Data Update to Pittsburgh and Allegheny County officials. These data were extracted from the VIPER project database, and provide much more accurate street-range addresses than were previously available. Officials believe these data will be helpful to emergency management, police, and fire personnel. No student data were included in the gift.
Students in the MLIS program now have access to online courses offered by ALA-accredited programs at 12 universities. “Through the Web-based Information Science Education consortium, students now have access to courses that are not normally offered at Pitt, as well as an opportunity to work with faculty whose research is of interest,” said Sue Alman, director of distance education and outreach at SIS. “The WISE program is an opportunity for a professional who is working on a degree to have great flexibility.”

The WISE program was created as a result of a grant to Syracuse University and the University of Illinois to begin collaboration in distance education in library and information science. There is no need for SIS students taking a WISE course to transfer credits because they enroll in a Special Topics course (LIS 2970) through Pitt.

The guidelines for Pitt students who are interested in a WISE consortium course are available at http://www.sis.pitt.edu/~dlis/spotlight/WISE.html

### WISE courses for MLIS students

**Institutions in the WISE consortium**

- Indiana University (Indianapolis)
- Rutgers University
- Simmons College
- Syracuse University
- University of British Columbia
- Illinois (Champaign Urbana)
- Maryland
- North Carolina (Chapel Hill)
- Pittsburgh
- Texas (Austin)
- Western Ontario
- Wisconsin (Milwaukee)
- Victoria University of Wellington

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**Dean, three alumni at Oxford meeting**

Dean Ron Larsen and three SIS alumni participated in Oxford University’s Round Table on Freedom of Speech and Freedom of the Press. The alumni at the March meeting included Theodore (Ted) Nesbitt (MLS, 1978), who is now responsible for instructional services at West Liberty State College; Dr. Sylverna Ford (PhD, 1995), dean of University Libraries at the University of Memphis; and Dr. Beth Jo (B.J.) Mullaney (MLS, 1980; PhD, 1995), now the university librarian at Cheyney University.

The Round Table, hosted by Pembroke College, attracted approximately 40 librarians and other scholars to a week-long exploration of some of the most challenging questions confronting information professionals since 9/11. The USA PATRIOT Act proved to be a centerpiece to foster interest and focus much of the debate. Following the meeting, Nesbitt set up and maintained an e-mail distribution list, and the conversation has continued long after departing Oxford.

**Researchers develop rescue robots**

Researchers develop rescue robots designed by the National Institute of Standards and Technology to replicate the hazards and difficulties encountered by robots in real disaster environments. The SIS/CMU work, funded by an NSF grant, is truly interdisciplinary — Lewis, a psychologist trained in human factors, focuses on human-robot interaction. Katia Sycara, an artificial intelligence researcher, investigates the use of multi-agent architectures for robot control, while Illah Nourbakhsh, a roboticist, oversees the design and instrumentation of the team’s robots. Sycara and Nourbakhsh are with the CMU Robotics Institute.

In addition to competition using actual robots, Lewis and graduate student Jijun Wang have developed a simulation that closely models the physics and kinematics of the robots, as well as the rubble and hazards of disaster environments and the noisy video feeds and sensor readings an operator must use to control the robots. The simulation was used in a six-team demonstration competition at the International RoboCup championships in Osaka in July and was later approved by the RoboCup Foundation to become a regular competition within the RoboCup Rescue League in future years.
Graduate shortage predicted

As hiring in the information science and telecommunications industries begins to pick up, employers are finding a shortage of qualified applicants. “This is a phenomenon shared by our peer schools,” said Martin Weiss, associate dean of the School and chairman of the Dept. of Information Science and Telecommunications.

“Industry is beginning to hire in larger numbers,” he said, “but that message has not yet reached parents and students. Enrollments in our programs are not keeping pace with what employers predict will be the demand.” The number of female applicants and students is particularly low, Weiss said.

“In the immediate future, we plan to focus on both the SIS strategic plan as well as our marketing plan. The relationship between these two plans is critical, and we expect there will be a synergy as we implement both of them.” The marketing plan, created by the faculty with help from MBS Associates, provides a prioritized, systematic approach to communicate with external partners as well as inside the University in support of the School’s goals.

University establishes new Career Network

The Pitt Career Network is a way for students and alumni to interact and make connections to further their career interests. It’s a free service for alumni and students seeking career-related contacts, insight, and advice. It’s not an employment service or a job board, but rather the PCN offers an opportunity to reach beyond an immediate circle of connections and network with the University of Pittsburgh’s diverse and talented alumni. Young alumni can interact with more experienced alumni, and for those considering a change in career path, the PCN can provide helpful connections. Even well-established alumni can benefit by using the network to engage peers, whether looking for partners, investors, or recruiting.

The PCN is an online directory of Pitt alumni and details about their careers and professional experience. Pitt alumni volunteer to be contacts by entering professional information in an online profile using their Alumni Online Services ID and password. Students and alumni can then customize searches of the profiles based on any or all of nearly 20 fields. Once prospective networking contacts are identified, the networker can send a blind e-mail to the alumni volunteer’s account, at which time the networking begins.

All registered students can access PCN using their Pitt user name. All graduates who register with Alumni Online Services can also register and create profiles. Once a critical mass of alumni has accumulated in the database, in early fall the search engine capability will be launched. Access the Career Network at www.alumni.pitt.edu/networking.

The Pitt Career Network is a partnership between Career Services and the Pitt Alumni Association designed to enhance career services for alumni and students.

The Pitt Crew, the Book Cart Drill Team of the School of Information Sciences, took fifth place at the first World Championships during the American Library Association’s annual conference in June. Fifteen teams from around the country participated in the event, which featured 4-minute choreographed routines set to music using book carts. The participants included Elizabeth ‘Acropush’ Eynon, Emily ‘Fast & Furious’ Forwood, Sarah ‘Joyride’ Joynt, Jessica ‘Lightnin’ Speed’ Laganosky, Amanda ‘Spark Plug’ Lindsay, Emily ‘Motion Commotion’ Moellman (choreographer), Kara ‘Kart Kommando’ Robertson, Sharon ‘Speedwagon’ Stillwagon, Lori Prince (costume designer), and ‘Sizzlin’ Sue’ Alman (advisor).