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THE WHISTLE

FACULTY/STAFF NEWSPAPER

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THE GEORGIA INSTITUTE OF TECHNOLOGY

New academic partnership opens Singapore to undergraduates

David Terraso
Institute Communications
and Public Affairs

The road to Singapore will soon be getting shorter. Beginning next fall, Georgia Tech undergraduates will be able to spend a semester abroad at one of two universities in Singapore, the National University of Singapore (NUS) and Nanyang Technological University (NTU) as part of a new bilateral student exchange program. Singapore Management University (SMU) will be added to the roster in spring 2006.

The Singapore exchange program is one of a series of steps Tech is taking to expand its international offerings to help students differentiate themselves from competition in the job market.

"We're trying to get students to have a more culturally rich experience overseas," explained Howard Rollins, director of the Office of International Education. "Rather than going for a few weeks, where they're seeing the country as a tourist, we

want them to have the deeper experience that a semester abroad can offer."

In addition to Tech students going overseas, the program calls for students from the universities in Singapore to take classes at Tech each spring. Currently there are 27 students at Tech from NTU taking classes in a range of disciplines.

The new program will be available to students from all six of Tech's colleges and marks the first time undergraduates will be able to earn credits while spending a semester in Singapore. Tech's current presence in the country, The Logistics Institute — Asia Pacific at NUS, offers courses for graduate students only.

"Singapore is a terrific entry point into Southeast Asia," said Merrick Furst, associate dean in the College of Computing. "There are a lot of natural interests that we have in common. Singapore is one of the world's largest shipping ports, and the problems they have with robotics are some of the things we're interested in working on from a technical point of view."

Furst recently returned from Singapore as part of a scouting trip that included faculty from each of Tech's colleges. Rollins and Associate Provost for Institutional Development Jack Lohmann accompanied the group.

"We were there to get a sense of the match between their curricula and what we do at Tech," said Charles Parsons, professor in the College of Management. "We wanted to see the types of electives they offered to broaden the cultural experience of our students and what it would be like for students to live there."

One aspect of Singapore that makes it particularly attractive for a semester abroad program is the fact that, as one of the country's official languages, English is spoken everywhere, including the classroom.

It's also a good place for students to be introduced to Asia, said Doug Williams, associate chair in the School of Electrical and Computer Engineering. "They advertise themselves as 'Asia 101,' an easy transition for students who want to study

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Students learn about the science in the small



About 300 eighth graders from Henry County toured the Microelectronics Research Center last week as part of the Institute's first NanoInfusion Workshop, an educational outreach component of Tech's affiliation with the National Nanotechnology Infrastructure Network. Above, graduate student Rajesh Luharuka gives a tour of Mechanical Engineering Professor Peter Hesketh's lab.

A "systems engineering" approach to protect public spaces

John Toon
Research News

In protecting public spaces such as buildings and aircraft from potential chemical or biological terror attacks, an ounce of prevention may be worth a pound of sensing.

Since the 2001 anthrax attacks, research has focused on developing improved sensors to detect potential chemical or biological terror agents. But these devices themselves cannot head off terrorist attacks, and while they should be part of an overall protection strategy, reliance on such technology can create a false sense of security, warns a Georgia Tech researcher.

Protection for closed public spaces such as airport terminals and shopping malls therefore needs a new paradigm: a "systems engineering" approach, argues Jiri (Art) Janata, a professor of chemistry and a Georgia Research Alliance Eminent Scholar

who specializes in sensing and analytical instrumentation. That systems approach would include central command centers, response strategies tailored to the facility, protection of water and air circulation systems — and neutralizing and sterilizing chambers built into air-circulation systems to limit the spread of terror agents.

"Correctly applied technology can improve security, but incorrectly applied technology — such as reliance on sensors that may or may not detect the actual agent being used — could create a false sense of security," Janata said. "We need to think about everything in terms of a systems engineering approach. Very little has been done to integrate comprehensive systems."

Sensor development has so far focused mostly on a "short list" of toxic agents originally developed for military battlefield use. But Janata

Janata continued, page 3



Despite being a small island country of 4.5 million people, Singapore is one of the world's most prosperous countries and has the largest international shipping port.

QUOTE UNQUOTE

"While the West Coast may boast more activity, Atlanta is poised for watershed growth in innovation. The metro area already boasts a significant presence in the industry ... While there is still much work to do, Atlanta will create the next generation of video gaming, with Georgia Tech leading the way."

—*Ian Bogost, an assistant professor in the School of Literature, Communication and Culture, in an op-ed assessing the city's prospects as a center for video game research, theory and design. (Atlanta Journal-Constitution)*

"Jarrett [Jack] is a hard worker, and I think we can all look at him and realize how much he's improved from his freshman year to now."

—*Men's basketball coach Paul Hewitt, on the junior guard being named to the all-conference second team. (Associated Press)*

Faculty/Staff SPOTLIGHT

Marcia Chandler & Marie Little

Marcia Chandler is a well-traveled former New York City resident who works in the School of Systems and Industrial Engineering. Marie Little is a former clarinet player who loves the rock band Queen and works at the Georgia Tech Research Institute. But when these two dedicated songbirds sing with the acclaimed Atlanta Symphony Orchestra (ASO) Chorus, they share a common goal: to bring down the opera house and possibly bring home a Grammy. Recently, their effort reaped rewards when the ASO Chorus won the Grammy in Best Choral Performance for a recording of "Requiem," by 19th-century French composer Hector Berlioz.

Without the ASO Chorus, though, Little and Chandler might not have become acquainted. They have both worked at Tech for several years, but only got to know each other during an ASO Chorus trip to Berlin last year. Seven-year ASO Chorus alto Chandler served as the leader of a group that included Little, who joined the Chorus as a soprano during its 2002-2003 season.

In addition to singing with the 200-voice ASO Chorus, both women are part of the invitation-only, 60-voice ASO Chamber Chorus, whose members are chosen from the larger group. Little



and Chandler are proud to be part of the volunteer choruses, despite the long hours – up to 10 hours of practice a week before performances – and yearly re-auditioning.

"Things like winning the Grammy make it all worthwhile," says Little.

Full name: Marcia Chandler

Occupation: Program manager for Tech's Executive Master's in International Logistics

What I find most rewarding about my job: Working with the executives. My job is to enhance their experience of Georgia Tech. I get to be the face of Georgia Tech.

What I find most challenging about my job: The travel, just because the days are long and I have to make sure that things move smoothly. The thing that is the most exciting about my job is also the thing that is the most challenging.

Years at Tech: almost four years

Education: Bachelor's degree in journalism from Florida A&M University

Hobbies: Working out at the Campus Recreation Center, where I am a group fitness instructor; taking care of my dog, Storm; going to the theater and participating in my church's music ministry.

How I found out about the ASO Chorus winning a Grammy: I was watching the (broadcast), flipping between channels, and I just happened to see the words scroll across the screen. I was like, "Yes! It was the Berlioz!" My dog looked at me like I was crazy.

Another occupation I'd like to try: I'd like to be a talent agent, a person representing an artist.

One place I'd always wanted to visit: I want to go to the South Pacific, one, because I love the beach, and two, because one of my favorite musicals is "South Pacific."

The best advice I ever received: From "Hamlet:" "This above all: to thine own self be true/And it must follow, as the night the day/Thou canst not then be false to any man." It was something I had to learn while I was a freshman in college. It's stuck with me.

What I most value in my friends: My true friends love me for who I am and who I am not. My true friends are like family to me.

Full name: Marie Lyon Little

Occupation: Assistant to Steve Cross, vice president and director of GTRI

What I find most rewarding about my job: Steve's dynamic leadership, the vision that he has. We're constantly being challenged.

What I find most challenging about my job: Meeting the demands of the office, trying to accommodate all the requests and the demands on Steve's time.

Years at Tech: 12 years, including 6 1/2 years at GTRI

Education: Bachelor of Arts in instrumental music and a Master of Music Education, both from Mississippi State University

Hobbies: They all lean toward singing. My first love is opera. I really love to perform; I have a passion for it. I also perform with the local Capitol City Opera.

How I found out about the ASO Chorus winning a Grammy: I actually didn't know we had won until I came into the office and Dr. Scott asked me about it.

The CD in my stereo right now: There's a bunch of CDs, including one of Mozart's "Cosi Fan Tutti" – I just learned a role from it.

Another occupation I'd like to try: I would like to be a living history character, particularly from our founding fathers' era.

One place I'd always wanted to visit: I would love to go to London, especially Covent Garden.

The best advice I ever received: Remember that correcting mistakes is like getting on buses: if you miss one opportunity, the next one is coming along soon.

My pet peeve is: Clutter – you wouldn't know it, but I like things to be organized. It's a challenge.

My most treasured possession: Family heirloom crystal that came to me through my mother.



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Computer usage policy to be shortened and simplified

The Office of Information Technology (OIT) is working with Internal Auditing on a third version of the Georgia Tech Computer Network Usage Policy (CNUP). The revised policy will address new technology issues and new regulations, and eliminate the need for most unit-level information security policies.

Tech wrote its first CNUP in 1994. The policy was broadened to cover Internet technology in 2001. Now there is a need for a policy that covers the use of new and emerging computing resources and services, addresses information security threats, and supports compliance with new governmental and contractual regulations for protecting sensitive data.

To compensate for deficiencies in the CNUP, OIT has for the past two years helped campus units develop their own unit-level information security policies. The project team revising the CNUP hopes to eliminate the need for almost all unit-level policies by integrating the content from

officially approved unit-level policies into the Institute's policy.

"About 95 percent of the content in the unit-level policies is common to all units," said Greg Hale, OIT's information security program manager and project manager for the revision. "We will take the common content and put it in the new CNUP."

Campus units will not need separate information security policies, according to Hale. "If the CNUP does not address a unit's technical requirements, the unit can write its own procedures, with the assistance of OIT and Legal Affairs to ensure that the procedures are in the correct format and framework."

Since the revision of the Data Access Policy is closely related to this project, Georgia Tech will create a committee to evaluate feedback on the revision of both the CNUP and the Data Access Policy. The target date for implementing the revised CNUP is September 1.

Janata, cont'd from page 1

warned there are hundreds of other non-military gases that could be just as deadly in civilian spaces — and for which no sensors are available or no sensors have been deployed.

Based on that realization, agencies such as the Defense Advanced Research Projects Agency (DARPA) have been promoting the concept of "immune buildings" that actively protect its occupants. This protection would come both from making buildings less attractive targets and from automated systems that would remove toxic agents from the indoor air.

"Almost every public building in the United States has a heating and air conditioning system that circulates the air," Janata noted. "Not only does that refresh the air, but it also provides a vehicle for introducing both chemical and biological agents. The concept would be to insert into that HVAC system a sterilization chamber that would disable the biological agents and decompose the chemical agents."

Janata compares this protective approach to the treatment systems cities have used for decades to ensure clean drinking water. It's also similar to the approach taken in hospitals, which sterilize instruments because surgical infections are easier to prevent than to treat.

Once a threat has been detected — either by sensors or by observing the distress of building occupants — the next step will be to choose the most appropriate response, such as evacuating a

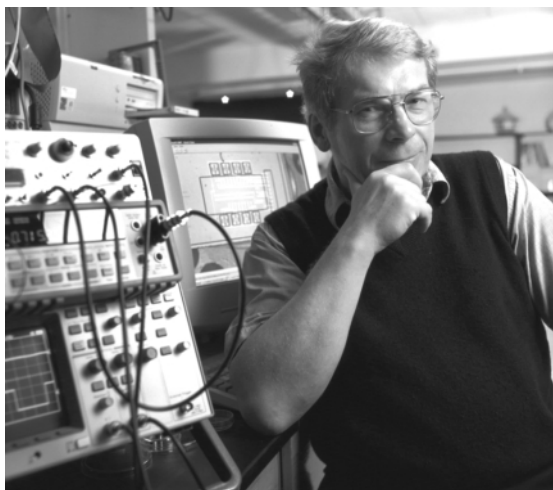


Photo by Billy Howard

Protecting public spaces such as airport terminals and shopping malls from chemical or biological terror agents requires a new paradigm that relies on a systems approach, argues Professor Art Janata.

building or closing an airport. Deciding how to respond to a chemical or biological attack may take considerably more time than would be required to detect the attack itself.

"These events should be monitored from a central control room which would develop the proper level of response," Janata explained. "You need to avoid overreactions because they actually cause more economic damage than the actual attack. That gives the terrorists what they want."

Singapore, cont'd from page 1

abroad without the language barrier."

Given the cultural diversity of the country — its population is nearly 80 percent Chinese with a good mixture of Malays and Indians — Singapore is also a good place for students who want to dig deeper into some of the cultures of Asia.

"One thing that impressed me is that there are a lot of places very close to Singapore, like Sri Lanka and Indonesia that are easy to visit on a long weekend," said Williams.

These kinds of international partnerships are key to Tech's Quality Enhancement Plan, a requirement for institutional reaccreditation that outlines future academic programs and curriculum. Developing international competence through international coursework, second

language proficiency and residential international experience is one of two focus areas. Currently 34 percent of undergraduates are involved in some form of international study, a figure that Tech hopes will rise to 50 percent over the next decade.

"We now have exchange agreements with about 40 countries," said Rollins. Earlier this year another faculty group visited India to investigate how Tech could establish a presence in that country. Tech is also exploring the possibility of having a program in China that would be very similar to the Singapore exchange, added Rollins.

For more information...

Office of International Education
www.oie.gatech.edu

IN BRIEF:

Spectrum quota to increase

In response to suggestions for improving the Georgia Tech's Spectrum e-mail service, the Office of Information Technology will increase the quota for e-mail storage twice in the next six months. By April 1, the quota will be increased from 100 megabytes per user to 200 megabytes. In August, it will be increased to 400 megabytes. The quota increase may lead to greater use of the service.

"People have told us they would use their Spectrum e-mail account if they had more space," said John Bryson, department manager for Information Technology Services. For more information, e-mail john.bryson@oit.gatech.edu.

CRC wins national awards

The national accolades are coming in for the new Campus Recreation Center (CRC). The industry publication "Recreation Management" has named CRC the winner of its 2005 Innovative Architecture and Design Award and will feature the Center in its May issue. In addition, the National Intramural-Recreational Sports Association (NIRSA) is giving the CRC its Outstanding Sports Facilities Award, which will be presented at its annual conference next month in Orlando, Florida.

AWARDS & HONORS

Electrical and Computer Engineering Associate Professor **Oliver Brand** and his colleagues were presented with the Institute of Electrical and Electronics Engineers (IEEE) Donald G. Fink Prize Paper Award at the 18th IEEE International Conference on Microelectrical Mechanical Systems (MEMS), for the paper entitled "Microfabrication Techniques for Chemical/Biosensors."

Electrical and Computer Engineering Associate Professor **Robert Butera Jr.** has been selected to chair the Education Committee for the IEEE Engineering in Medicine and Biology Society for 2005.

Electrical and Computer Engineering Associate Professor **David Citrin** received the Friedrich Wilhelm Bessel Research Award from the Alexander von Humboldt Foundation in November 2004.

Aerospace Engineering Professor **Dewey Hodges** was recently elected as a fellow of the American Academy of Mechanics.

Regents' Professor and Vice Provost **Charles Liotta** has been selected to receive the Mac Pruitt Award, the highest award given by the Council for Chemical Research.

Nancy Nersessian, professor and director of the Cognitive Science Program in the College of Computing, has been awarded a yearlong fellowship by the National Endowment for the Humanities for academic year 2005-06.

Electrical and Computer Engineering Professor and Associate Chair **Andrew Peterson** has been elected vice president/president-elect of the IEEE Antennas and Propagation Society for 2005 and will serve as the Society's president in 2006.

CAMPUS EVENTS

Brown Bags/Conferences/Lectures

Mar. 15

The 2005 Innovations in Economic Development Speaker Series features Monica Oliver of CARE, on “Making Markets Work for the Poor,” at 4 p.m. in the Dublin Room, EDI Building.

Mar. 16

Associate Professor Elizabeth Dowling will give a lecture on “Personal Journeys to New Classicism,” at 5 p.m. in the College of Architecture auditorium.

Mar. 16

The College of Management’s IMPACT Speaker Series welcomes Ed Baker, publisher of The Atlanta Business Chronicle, at 4:30 p.m. in the LeCraw Auditorium.

Mar. 29

The Library and Information Center’s Tuesday Talks Lecture features College of Computing Associate Professor Irfan Essa, on “Aware Home: Sensing, Interpretation and Recognition of Everyday Activities,” at 2:30 p.m. in the Wilby Room. Students, faculty and staff are welcome.

Mar. 29

The Materials Council’s Institute-wide seminar series welcomes Martin Harmer, director of the Center for Advanced Materials and Nanotechnology at Lehigh University, on “Mechanisms of Single Crystal Conversion of Alumina Ceramics,” at 3 p.m. in room 183, Love Building.

Mar. 30

The School of Psychology’s spring colloquium series welcomes Nancy Cooke, professor of applied psychology at Arizona State University, on “Emergent Team Cognition (or What Was Wrong with the U.S. Olympic Basketball Team?)” at 3 p.m. in the J.S. Coon Building.

Mar. 30

The College of Management’s IMPACT Speaker Series welcomes Gary Betty, president and CEO of Earthlink, at 4:30 p.m. in the LeCraw Auditorium.

Faculty/Staff Development

Mar. 16

The Office of Sponsored Programs offers a brown bag session on “Are Service Centers Right for You?” at noon in the seminar room of the Research Administration Building. To reserve a seat, call 894-6944. For more information, visit www.osp.gatech.edu/education/workshops.shtml.

Mar. 17

The Office of Sponsored Programs offers a brown bag session on “Effort Reporting” at noon in the seminar room of the Research Administration Building. To reserve a seat, call 894-6944. For more information, visit www.osp.gatech.edu/education/workshops.shtml.

Mar. 17

The Office of Information Technology sponsors a class on “Information Security: What Every Business Manager, Faculty and Researcher Should

Know,” from 9-11 a.m. in room 242, Rich Building. To register, visit www.trainsweb.gatech.edu.

Mar. 18

The Center for the Enhancement of Teaching and Learning’s faculty development seminar series presents “Mindmapping the Classroom,” from 11 a.m. - 1 p.m. in the Library’s Wilby Room. For more information, visit www.cetl.gatech.edu.

Mar. 19

Georgia Tech Professional Education offers a six-hour, classroom-based National Safety Council course on defensive driving, providing instruction on how to recognize and act appropriately and in time to avoid potential driving hazards. Employees receive a 10 percent discount. To register, visit www.pe.gatech.edu.

Mar. 22

The Office of Sponsored Programs offers a brown bag session on “Intellectual Property and Technology Transfer” at noon in the seminar room of the Research Administration Building. To reserve a seat, call 894-6944. For more information, visit www.osp.gatech.edu/education/workshops.shtml.

Miscellaneous

Mar. 21-25

Spring break.

E-mail events to editor@icpa.gatech.edu.

C L A S S I F I E D S

AUTOMOBILES

1991 Honda Prelude Si. 5-speed, sunroof, red, AM/FM/CD, 142K miles, good condition. \$2,900 OBO. Call 404-295-3008 or e-mail shella.keilholz@bme.gatech.edu.

1995 Mazda MX-6. White with tan interior, 158K miles, 5-speed. Never had problems with engine at all, runs well. \$1,000 OBO. Call 894-4875.

1999 Dodge Dakota RT regular cab. Belltech suspension, tonneau bed cover. Fully loaded, Infinity stereo system, CD, cassette, amethyst color, 91,450 miles. Asking \$14,500. Call 678-432-8199, after 5 p.m.

2000 Toyota Corolla VE sedan 4D. Teal, good condition, regular maintenance, 60K miles. E-mail ccosgrove@eas.gatech.edu or call 385-4566.

2001 Toyota Sienna LE minivan. Champagne, seven-passenger, captain’s chairs, tape/CD player, dual climate, remote entry, 71K miles. \$12,500. Extended warranty through Sept. 2005. Call 770-365-6445 or e-mail hope4u2@bellsouth.net.

2002 Chevrolet S-10 extended cab. One owner, white with dark gray interior, ABS, V6 4300 Vortec, sport suspension, tinted windows, tow

package, Rhino bed liner, 15K miles, \$11,500. Call 770-241-3151.

2003 Jeep Liberty Sport, silver, sunroof, CD player, power windows and locks, tinted windows, 40K miles, \$17,500. Call 678-725-6093 or e-mail tina.crouch@ece.gatech.edu.

FURNITURE

3-piece entertainment center, white-washed pine finish, lighted glass shelves, holds up to 32-inch TV and other components. \$400 OBO. Pictures available. E-mail debbie.winn@etri.gatech.edu.

Wooden captain bunk bed. Has two beds with built-in chest of drawers and built-in desk. Ladder to top unit. Less than one year old. Paid over \$900, sell for \$300. Call 894-5675.

Four bar stools. High back, padded seat and lumbar. Full swivel. Mint condition. \$80 each OBO. Call Phyllis at 385-1109.

REAL ESTATE/ROOMMATES

3BR/2BA brick ranch on 1/2 acre, deck, wood floors, garage. Located in Smyrna, \$149,000. Call John at 404-771-2067 or e-mail john.doane@etri.gatech.edu.

4BR/2.5 BA house for rent. Inside I-285, three miles from Lenox Square.

\$2,000/month. Call Tanya at 404-816-6113.

Roommate wanted for 1BR/1BA in Midtown, next to Fox Theater, \$410/month and 1/2 utilities. Call 404-275-3897.

2BR/2.5BA townhome for sale in Cross Creek, 12 min from GT. New appliances, plantation shutters, built-in bookshelves, patio. Swim/tennis/golf community. \$169,800. Call 404-210-8038.

Approx. one-acre lot at Lake Jackson in Turtle Cove (Eagle Lot 10). Direct common property access to the lake, underground utilities. 2005 taxes and fees paid. \$15,500. E-mail dennis.kelly@edi.gatech.edu or call 478-825-5504.

Two-year old 2BR/2BA townhome. Great location in Riverdale, 5 minutes from the airport. Oversized bedrooms and closets. Swim/tennis and yard maintained by homeowners association. \$1,050/month. Call 678-556-9262.

2BR/1.5 BA brick townhouse. Complete renovation in 2000, including new appliances. 2 blocks to Smyrna Village Green, 30 minutes to GT. Asking \$132,000. E-mail eileen-gram@juno.com or call 894-0065.

1BR/1BA condo at Peachtree St. and North Ave. Large balcony, hardwoods, floor-to-ceiling windows. Gym, pool, billiards, parking, 24-hour concierge. \$139,900 Call Randy at 404-271-1378 or e-mail randybrazee@kw.com.

SPORTS/FITNESS/RECREATION

Tuff Stuff Muscle 3 all-in-one gym. Top of the line. Like new, kept in finished basement. Paid \$1,200, reduced to \$250 OBO. Call 894-8392 or e-mail bob.lang@police.gatech.edu.

MISCELLANEOUS

1999 Play-mor Deluxe camper. 38-foot fifth wheel model, self-contained with water and waste tanks. \$29,500 OBO. E-mail t.banks@mse.gatech.edu or call 894-6763.

XM SkyFi receiver, car kit and boom box. Cost new \$220 + tax, sell for \$95. Call 894-8728 or e-mail gary.phillips@facilities.gatech.edu.

To submit an ad, e-mail the text to editor@icpa.gatech.edu. Due to the volume of submissions, it may take several weeks for ads to appear in print.