Tech forms dual-degree program with Chinese university

Nate Pagel
Institute Communications and Public Affairs

Georgia Tech has announced a new partner as it continues to expand its global vision for educating its students. An agreement between Shanghai Jiao Tong University (SJTU) and Georgia Tech will allow students of SJTU to receive dual master’s degrees from both institutions. Students can simultaneously receive a non-thesis master’s degree from the School of Electrical and Computer Engineering at Georgia Tech and a thesis master’s degree from the School of Electronic, Information and Electrical Engineering at SJTU.

Earlier this month, a delegation of Tech professors and administrators traveled to China to formalize the agreement. President Wayne Clough received an honorary Doctorate of Science degree — only the third individual in SJTU’s 109-year history to receive such an honor.

“We are very pleased with the relationship we are developing with Shanghai Jiao Tong University, which includes aspects of research, student exchange and joint programs of study,” Clough said. “Shanghai is a dynamic city of 18 million people that serves as a key economic engine for China. Shanghai Jiao Tong University is a high-quality institution with strong leadership and plans for the future. The timing is right for the development of this partnership between Georgia Tech and SJTU, and we expect it to grow in the future. I want to express my appreciation to my colleagues at Georgia Tech who have worked very hard to build the bridges necessary to allow us to establish this partnership.”

China continued, page 3

Tech students spend break working for hurricane relief

David Terraso
Institute Communications and Public Affairs

As many Americans take pains to complete their last-minute holiday shopping, a group of Georgia Tech students will be helping people whose homes were destroyed by hurricane Katrina rebuild their lives. It’s the latest in a series of efforts by the students, faculty and staff of Georgia Tech to help those who were displaced by this season’s storms.

On Sunday morning, Dec. 18, 46 Georgia Tech students and three staff members will head to Mobile, Ala. for a five-day trip to help residents clean up their flood-damaged homes.

“We will be working in an area that was flooded by creeks as a result of the storm surge,” said Sarah Brackmann, assistant director of student involvement for the Office of Community Service (OCS). “We’ll be tearing sheetrock out of houses and cleaning up mold.”

Civil engineering student and president of the Tech chapter of Engineering Students Without Borders Angharad Pagonn said that her group and the OCS began contacting government agencies and non-profit organizations just after Katrina hit to find the best way to provide aid. They were told there was a need on the outskirts of the damaged areas.

“This was an area that has been overlooked, so far,” said Brackmann. “These are people who received funds from FEMA, but the funds didn’t cover everything.”

Brackmann said students will be matched with their jobs based on their skill level. “A lot of the work we do will be flexible, as needed,” she said.

To help prepare students for the experience, the Georgia Tech Research Institute held an orientation for student volunteers. They showed Service trip continued, page 3

Renowned systems biologist to join College of Sciences

Jeffrey Skolnick
Institute Communications and Public Affairs

Jeffrey Skolnick, a renowned computational systems biologist and former director of the Buffalo Center of Excellence in Bioinformatics at SUNY-Buffalo, will join the Georgia Tech faculty this spring as the Georgia Research Alliance Eminent Scholar in Computational Systems Biology.

“Computational systems biology is a foundation for the next revolution in biomedicine,” said Provost Jean-Lou Chameau. “Dr. Skolnick’s work is a perfect fit with the outstanding research already being conducted in nanotechnology and bioengineering here at Georgia Tech. The addition of Dr. Skolnick and his team of researchers will help position Georgia Tech and the state as leaders in this important field.”

Skolnick will bring with him 19 research scientists and technicians and more than $1.5 million in federal funding, primarily from the National Institutes of Health. “Georgia Tech and its School of Biology are doing some incredible work in cancer research,” he said. “The Institute has built a collaborative, interdisciplinary research environment in the areas of science, computing and engineering. The environment cuts across schools and research centers and offers opportunities to take new ideas, scientific breakthroughs and business applications ideas from theory to practice.”

According to GRA President Michael Cassidy, systems biology is the foundation for the next wave of advances in biomedicine. “Dr. Skolnick is an entrepreneurial scholar whose research is critical to the future health of Georgians and

Skolnick continued, page 3
Tech researchers decipher a paradox of evolution

David Terras
Institute Communications and Public Affairs

Biologists at Georgia Tech have provided scientific support for a controversial hypothesis that has divided the fields of evolutionary genomics and evolutionary developmental biology, popularly known as evo devo, for two years. In the December issue of Trends in Genetics, researchers found that the size and complexity of a species’ genome is not an evolutionary adaptation per se, but can result as simply a consequence of a reduction in a species’ effective population size.

“As a general rule, more complex organisms, like humans, have larger genomes than less complex ones,” said J. Todd Streelman, assistant professor in the School of Biology and co-author of the study. “You might think this means that animals with the largest genomes are the most complex — and for the most part that would be right. But it’s not always true. There are some species of frogs and some amoeba that have much larger genomes than humans.”

To help explain this paradox, a pair of scientists from Indiana University and the University of Oregon published the hotly-contested hypothesis in 2003. It said that most of the mutations that arise in organisms are not advantageous and that the smaller a species effective population size (the number of individuals who contribute genes to the next generation), the larger the genome will be.

“We agreed with some of the criticisms of the hypothesis — that one had to remove the effects of confounding factors like body size and developmental rate,” said Streelman. “We were able to remove the effects of these confounding factors and test whether genome size is adaptive.”

Their test consisted of analyzing data from 1,043 species of fresh and saltwater fish. Previous data on genetic variability had established that freshwater species have a smaller effective population size than their marine counterparts. If the hypothesis was correct, the genome size of these freshwater fish should be larger than that of the saltwater dwellers. It was.

Then they matched the data with estimates of heterozygosity, a measure of the genetic variation of a population. Once again, they found that species with a smaller effective population had larger genomes.

“We see a very strong negative linear relationship between genome size and the effective population size,” said Soojin Yi, assistant professor in the School of Biology and lead author of the study. “This observation tells us that the mutations that increase the genome tend to be slightly deleterious, because population genetic theories predict such a relationship.”

“The interesting thing here is that biological complexity may passively evolve,” said Yi. “We show that at the origins, it’s not adaptive mutations, but slightly bad ones that make the genome larger. But if you have a large genome, there is more genetic material to play with to make something useful. At first, maybe these mutations aren’t so good for your genome, but as they accumulate and conditions change, through evolution, they could become more complex and more beneficial.”

Study: Real-time business feedback can lead to rash decisions

Bradt Dixon
College of Management

While technological advances are enabling managers to track the flow of goods in the supply chain minute by minute, such close monitoring might not provide the benefits that many businesses expect, according to a new study.

By allowing faster response to new developments, real-time tracking should theoretically help managers make better business decisions. But the opposite is sometimes true, find Nicholas Lurie, an assistant professor of marketing in Tech’s College of Management, and Jayashankar Swaminathan, a professor at the University of North Carolina at Chapel Hill.

The frequent feedback provided by supply-chain monitoring tools like Radio Frequency Identification Technology — small chips attached to pallets, cases or individual products for remote tracking — might cause managers to overreact to random fluctuations in demand, responding to the most recent data received instead of examining the bigger picture. The researchers explain their findings in their working paper, “Is Timely Information Always Better? The Effect of Feedback Frequency on Performance and Knowledge Acquisition.”

“Frequency on Performance and Knowledge Acquisition.”

“If retailers could choose to receive a monthly, weekly or daily recap of Campbell’s tomato soup sales, which recap frequency would they choose? Many would select the daily recap, thinking it would give them a competitive edge,” Lurie says. “However, our study finds that when a manager is given more frequent information on product demand, decision-making performance actually decreases, particularly in environments characterized by a high degree of variability.”

Real-time feedback affects many types of business activities beyond supply-chain management. For example, online stock traders’ performance seems to suffer from too much information. Previous research suggests that they tend to trade more frequently in response to price movements that might simply be random, Lurie notes.

He and Swaminathan studied the effect of feedback frequency on performance using two computer-based experiments, in which subjects acted as newsvendors dealing with inventory orders, and a “virtual factory” management simulation giving participants an opportunity to apply concepts such as inventory management, lot sizing and process control in a realistic environment.

Based on their results, the researchers advise managers using technologies that provide frequent feedback to temper their reactions to the most recent data received.

Correction: An article in the Dec. 12 issue incorrectly stated that the College of Management was the second college with an endowed dean’s chair. In fact, it is the third, after the College of Computing and Ivan Allen College.
New scholarships assist students affected by disaster

Dan Treadaway  
Institute Communications  
and Public Affairs

While the plight of college students driven from their New Orleans area campuses by Hurricane Katrina made national headlines, Georgia Tech students and their families hailing from the crescent city are also facing substantial hardships.

Marie Mons, director of the Office of Student Financial Planning and Services, says that a number of Tech students from the New Orleans area have faced formidable financial difficulties due to their parents losing jobs, homes, or both since Katrina came ashore on August 29. Mons says that while students paid most fall semester expenses before Katrina struck the Gulf Coast, spring semester costs are looming for families who have suffered massive losses.

“This really is an unprecedented situation for these families and for Georgia Tech,” says Mons.

“Students can take advantage of the program by studying in Shanghai during the summer. They benefit from the program as well. Marie Mons, director of the Office of Student Financial Planning and Services, says that a number of Tech students from the New Orleans area have faced formidable financial difficulties due to their parents losing jobs, homes, or both since Katrina came ashore on August 29. Mons says that while students paid most fall semester expenses before Katrina struck the Gulf Coast, spring semester costs are looming for families who have suffered massive losses.

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Those students to consider following up with an internship with multinational companies in China for the fall semester. SJTU will offer assistance to those who take a semester of courses at Shanghai to obtain internship positions in China.

Students can begin enrolling in the new dual master’s degree program in the summer of 2006.

Gary Nay, chair of the School of Electrical and Computer Engineering, credits Professor Tong Zhou for putting the program together. Zhou believes that Georgia Tech students in Atlanta will benefit from the program as well.

“Students can take advantage of the program by studying in Shanghai during a summer. They may find that some graduate courses are offered in Shanghai during the summer that are not available in Atlanta,” said Zhou. “We also encourage them photographs of the area and taught them about the potential health and safety hazards they may encounter on the site.

In addition to raising more than $50,000 for relief efforts, students and the Institute have responded to the needs of the Gulf Coast in myriad ways. Shortly after Katrina, Tech provided food and shelter to 275 student evacuees from Tulane University. Volunteers from Tech helped many of them get to their hometowns and assisted others who needed help finding housing in Atlanta.

Georgia Tech also opened the Coliseum for the Red Cross to use as a temporary shelter. Several volunteers from campus coordinated activities for the children at the shelter, while trained case-workers volunteered their time to help evacuees obtain needed resources. Members of the Campus Christian Fellowship (CCF) helped.

For more information...

Office of International Education
www.oie.gatech.edu

Skolnick, cont’d from page 1

Americans,” he said. “It has relationships with pharmaceutical and technology companies, holds three patents, has developed and licensed software to biotech companies, and has founded an early stage structural proteomics company. This is the mix of entrepreneurship and scholarly acumen we seek in our scholars.”

Systems biology is the integration of mathematics, physics, chemistry and biology with advanced, high performance computing and engineering and is focused on exploiting the vast information growing out of the sequencing of the human genome. One practical example is that as a systems biologist, Skolnick brings a different scientific approach to creating new drugs.

Utilizing bioinformatics and systems biology, his method allows drug developers to reduce the number of compounds they must screen by a factor of 10. This creates cost savings and can significantly shorten the time to market for new drugs.

Skolnick and his team will be housed in several locations at Tech through the School of Biology. As a part of his hiring, the Georgia Research Alliance will provide support for new technology and lab facilities.
**Art & Culture**

**Jan. 14**
The Peri Center for the Arts welcomes the Helenion Opera for an 8 p.m. performance of “Die Fledermaus.” For tickets and information, call 894-9600 or visit www.pericenter.org.

**Jan. 21**
The American Museum of Papermaking hosts a workshop on “Basics of Japanese Papermaking” from noon - 3 p.m. For more information, visit www.ipst.gatech.edu/amp. To register, call 894-5726.

**Brown Bags/Conferences/Lectures**

**Jan. 9**
The College of Management welcomes Peter Georgescu, chairman emeritus of Young & Rubicam, as part of its IMPACT Speaker Series, at 4 p.m. in the LeCraw Auditorium.

**Jan. 12**
The Office of Organizational Development hosts a brown bag featuring Georgia Tech Living History Program Director Marilyn Somers for “More Colorful Tales of Tech’s Legends, Heroes and Reprobates.” To register, visit www.trainsweb.gatech.edu.

**Jan. 18**
The School of Chemical and Biomolecular Engineering welcomes Julia Higgins, director of the Graduate School of Engineering and Physical Sciences at Imperial College, London, as guest for the 21st Annual Ashton Cary Lecture, at 4 p.m. in room L1255, ESB7 Building. Her topic will be “The Responsibility of Being a Scientist.”

**Faculty/Staff Development**

**Jan. 10**
The Office of Organizational Development offers a 10-week course in “Workplace Spanish I,” meeting once per week from 11:30 a.m. - 1 p.m. in room 208, Savant Building. To register, visit www.trainsweb.gatech.edu.

**Jan. 11**
The Office of Organizational Development offers a course titled “Promote Yourself.” From 8:30 a.m. - 12:30 p.m. in room 308, Savant Building. To register, visit www.trainsweb.gatech.edu.

**Jan. 18**
The Language Institute offers three, six-week classes in “Grammar and Writing Skills for Non-Native Speakers of English.” “Preparation for the Test of Spoken English (TSE),” and “English Conversation: Popular Culture in America,” at the Global Learning and Conference Center. To register, call 385-3500 or visit www.esclclasses.net.

**Miscellaneous**

**Dec. 19**
Deadline to submit applications to the annual Georgia Tech Best Practices Challenge. For information on criteria, awards and entry forms, call 894-1065 or visit www.chemistry.gatech.edu/bp.

**Dec. 20**
A representative from Fidelity Investments will be on campus conducting one-on-one financial counseling sessions. To schedule an appointment, call 800-592-4677, ext. 303 or e-mail jeff.juda@fmr.com.

**Dec. 26-30**
Campus closed for winter break.

**Jan. 9**
Spring semester classes begin.

**Jan. 11**
Registration for Options classes, sponsored by the Student Center Programs Office, begins. Non-credit enrichment courses include dance, music, language, finance and more. For information, visit www.fun.gatech.edu.

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**Autoplates**

1995 Porsche 928S. Black, excellent condition. 280HP 32-valve, 8-cylinder engine, automatic with sunroof, leather interior. Picture available. Asking price $10,000. E-mail delores.nogradi@gtri.gatech.edu or call 770-528-7775.


1998 Honda Accord EX with only 69K miles. Automatic, silver, excellent condition, premium package, leather, moon roof, dual air bags, ABS brakes, $8,000 (Kelley Blue Book $8,400). E-mail anping@belisouth.net.

1999 Acura 3.2 TL. Champagne exterior, leather interior, 4-door, CD player, sunroof, 125K miles, fully loaded, $8,300 OBO. E-mail susana.walker@modlangs.gatech.edu.

2000 Ford Explorer, Eddie Bauer, fully loaded w/leather seats, privacy glass, CD, sun roof, a/c, dual front air bags, excellent condition. 55K miles, $9,500. Call 706-754-5287 or e-mail cngna@att.net.

2005 Chevrolet Cavalier, excellent condition, black exterior/tan interior, four-door, CD player, 26K miles, $14,000. Call 404-202-4435.

**Furniture**

Oval, solid cherry Queen Anne table dining table with two leaves and six upholstered chairs, hardy ever used set, all in great condition for $500. Available immediately. E-mail angela.dallevacche@ccc.gatech.edu.

Brophy sofa, wingback style, reclines both ends. Blue, cream, green, grey, plaid. Approx. three years old. Excellent condition. $250. E-mail susan.longuepeel@biology.gatech.edu.

Rectangular pine wood dining table w/6 upholstered chairs. Very good condition. $400 OBO; contemporary style sofa and loveseat, khaki with loose pillows, good condition, $250 E-mail lucja.iwanska@gtri.gatech.edu for pictures.

Moving sale: Sofa, chair and ottoman set, desk, coffee table, bedroom suite, lots of patio furniture. All in great condition. E-mail vvood@gatech.edu for pictures.

Four dining chair covers, burgundy cotton velvet, cover legs to floor, tie on back. $80 OBO. Call 894-0065 or e-mail elizabethgrant@uno.com.

**Real Estate/Roommates**

2BR/1BA duplex in Grant Park, hard-wood floors, ceiling fans, central heat/air, laundry room, off-street parking and large back yard. $750/month. Call 894-5788 or e-mail karen.sharpe@oit.gatech.edu.

For Rent: 3BR/1.5BA house in Sandy Springs. 10 min. to MARTA, 20 min to Tech. Extra clean, fenced yard. $850/month. E-mail fbcusa@bellsouth.net.

2BR/1BA updated duplex in Grant Park. $975/month (includes water). Central heat & air, security system, washer/dryer, modern kitchen w/ dishwasher & built-in microwave, fenced back yard. Pets OK. Call 404-806-6096.

1BR/1BA in College Park/airport area. Separate study room, 1 garage parking space, kitchen access, $500/month includes utilities. Call 770-818-4586.

1BR/1BA condo in gated Dunwoody community, upgraded to the max. Large walk-in closet, and large covered balcony. Assigned covered parking, pool and workout facility. Top floor unit. Priced below appraised value at $138,500. Call 770-605-3619.

3BR/2.5 BA home for sale in Flowery Branch, Master on main and upstairs loft. Professionally landscaped and partially wooded 0.75 acre lot. Pool, tennis, and lake clubhouse. Asking $294,900. Visit www.6421deepwood.com for pictures and contact info.

Room to rent for $500/month with no lease. 1BR/1BA, private entrance. Located in Cobb County in upscale community w/ amenities. No smoking. Utilities included. Female renter preferred. E-mail ishallfree@hotmail.com or call 404-771-8073.

Fabulous 1/acre home in tranquil cul-de-sac, spacious 2BR/2.5BA, many features, upgrades, fantastic Smyrna, Cobb county location. $289,900, agents protected. E-Mail Lucja.beauskalig@gatech.edu for more info.

**Miscellaneous**

Brand new, retractable CR-V cargo cover, $175 OBO; Taslimo drink machine, never used, $150 OBO; Knight in shining armor. 6-foot, free-standing gold breast plate. $250 OBO. Call 404-271-4266 or e-mail lindsay.prater@oit.gatech.edu.

Light brown mink jacket, medium. Super buy at $595, originally $2,800. Great gift! Call 404-520-0279.