Study: university quality key to saving corporate R&D offshoring

Ease of collaboration helps keep ‘new science’ research in U.S.

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A lthough corporate research and development operations are increasingly moving to emerging countries like India and China, companies continue to keep the majority of their cutting-edge research and development (R&D) in developed nations, according to a new study published in the Dec. 8 issue of the journal Science.

To maintain this competitive advantage in the new science arena, developed countries must have government and educational policies that preserve the excellence and accessibility of their research universities, note researchers Marie Thursby, a professor of strategic management in the College of Management; and Jerry Thursby, a professor of economics at Emory University. That’s because high-tech companies frequently seek collaborative relationships with research universities.

The researchers surveyed 249 R&D-intensive companies headquartered in the United States and Western Europe, finding that one-half of the R&D effort in developed nations is for new science while the proportion in emerging countries is 22 percent. The researchers distinguish “new science” R&D from the application of “familiar” sciences already in use by a company and/or its competitors.

“The new science at sites identified by our respondents is largely conducted in developed countries, and this is significantly related to university factors,” write the Thursbys in the article, titled “Where is the New Science in Corporate R&D?” They note that the most striking result of their survey was finding that the type of science conducted at a particular location is most influenced by the ease of collaboration with nearby universities and the presence of faculty with special expertise. Survey respondents perceived universities in developed economies to have the greatest collaborative strengths.

Respondents also indicated that they expect their overall R&D to grow in emerging countries and decline in developed economies. While conventional wisdom suggests that lower cost would be the chief consideration driving this trend, the Thursbys’ research shows that often more important factors include the quality of R&D personnel available and market issues, in addition to opportunities for university collaboration.

When it comes to new science, the edge held by developed countries

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Campus procedures for hazardous weather in effect

In order to respond to inclement weather situations as they arise, the Hazardous Weather and Emergency Conditions Plan — which sets forth policies, procedures, lines of responsibility, authority and communications necessary to effect a rapid and orderly process for canceling classes, delaying campus openings, or closing the campus — will incorporate all available technologies to disseminate information about any changes in status.

Weather or other emergency situations may make it necessary for Tech to declare either “classes cancelled” or “campus closed” conditions. Other declarations may include “classes canceled until time” or “classes canceled, but staff report to work.” The declaration made will determine which employees are required to come to work.

When a “classes cancelled” condition is in effect, all classes and instructional laboratories are affected; students and instructional faculty are not to report to campus.

Administrative and research activities not directly tied to the instructional function will generally continue as normal, unless otherwise instructed by a supervisor. Other support employees may also be instructed not to report to work at the discretion of the administrator responsible for each major division.

When a “campus closed” condition is in effect, no employees are to report to work, except those previously designated as “emergency essential” by their department, or otherwise instructed by a supervisor.

The Georgia Tech Police Department will notify senior administrators. Each administrator will then notify appropriate people in their own departments. Every attempt will be made to make decisions and notifications by 5:30 a.m. on the day the condition is to be in effect.

For more information...

Hazardous weather procedures
www.gatech.edu/emergency/weather
In remembrance: DramaTech’s Greg Abbott

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n Dec. 1, long-time artistic director of DramaTech Theater and instructor in the School of Literature, Communication and Culture, Gregory (Greg) B. Abbott, 54, died of a heart attack while driving near his Atlanta residence. The funeral was held last week at Christ the King Cathedral in Atlanta. A special celebration of Abbott’s life will be held at DramaTech in the coming semester. Information regarding the event will be shared as soon as plans are finalized.

Abbott was born Sept. 9, 1952, and grew up on his family’s farm north of Agra, Kansas. He majored in speech and English at Fort Hays State University, where he graduated in 1974. In 1976, he earned a Master of Fine Arts degree from the University of Georgia. He was named artistic director of DramaTech in 1984 and taught theater courses in the School of Literature, Communication and Culture.

“DramaTech was far more than a black-box theater for Greg,” said Ken Knoxepel, chair of the School of Literature, Communication and Culture. “It was a community — an extended family — in which everyone could share their creativity and desire to do things together. His profound goodwill lives on in all of us who worked with him. How can we help but remember his smile?”

Although Abbott resided in Georgia, he and his family returned each summer to Phillips County, Kansas, where he and his brother continued to manage and operate the family farm. When he was not directing, teaching theater or farming, Abbott’s love of sports led him into coaching his children’s basketball teams.

Abbott is survived by his wife, June Miller, of Clifton, Kansas, as well as children, Lauren and Michael. Gifts in his memory may be made to DramaTech Theater through the Georgia Tech Foundation, 760 Spring Street, Suite 400, Atlanta, Georgia, 30308 or to the Greg Abbott Memorial Scholarship Fund at St. Pius X Catholic High School, 2674 Johnson Road NE, Atlanta, Georgia, 30345.

“We did not stumble, because he balanced us”

In a post to DramaTech members entitled “Our Big Right Toe,” Jeff Rick, a computer science doctoral student and active DramaTech member since 1993, wrote: “During Greg’s tenure, DramaTech has become a stronger institution. We moved from the old church to the Center for the Arts Complex. The quality of the shows has improved; we now take ourselves seriously enough to have an awards banquet every year. Let’s try Thud! and Variety Tech were formed. These milestones did not happen because of bold leadership on Greg’s part. They happened because the members of the theater made them happen. Greg just provided the right environment to let that happen. We moved forward, because he supported us. We did not stumble, because he balanced us. He was the last to let go of a step and the first to feel out the ground ahead. We may not have noticed him that much, as he let us take center stage. But we miss him terribly now that he’s gone. Our balance is off. We are all stumbling now. But we are a strong institution that will recover and keep going forward. Greg made sure of that with the small things he did, making sure that people had opportunities and could do their best.”

Commencement to feature speakers with deep ties to Tech

A
lden F. West Jr., founder, chairman and CEO of SEI Investments and Georgia Tech alumnus, will deliver the address to undergraduates at Georgia Tech’s 226th commencement ceremonies on Saturday, Dec. 16. Catherine Bréchignac, president of the Centre National de la Recherche Scientifique (CNRS) in France, will address master’s and Ph.D. graduates at the graduation ceremony on Friday, Dec. 15. About 1,350 students are expected to participate in the ceremonies.

West currently serves as chairman and CEO of SEI, which was ranked fourth on the Wall Street Journal’s Wall Street Honor Roll in 2001. In 2002 the American Banker magazine called West “the most successful financial services chief executive over the last ten years.”

In addition to his success in the business world, West has been a tireless advocate for Georgia Tech. He is chairman of the steering committee for the Institute’s forthcoming comprehensive campaign and a member of the Georgia Tech Foundation Board of Trustees. He has served as chairman of the Georgia Tech Advisory Board and as a member of the National Campaign Steering Committee for the Campaign for Georgia Tech (1995-2000).

A native of Florida, West holds a bachelor’s degree in aerospace engineering from Georgia Tech (1964) and an MBA from The Wharton School of the University of Pennsylvania.

Bréchignac, a renowned scientist and scholar in the area of nanophysics, presides over the largest and most influential scientific organization in Europe. Since the early 1990s, she has been a research collaborator with Georgia Tech faculty and recently has been instrumental in the establishment of a formal partnership between CNRS and Georgia Tech to engage in research of mutual interest.

Two to receive honorary degrees

Bréchignac and Cecil J. “Pete” Silas will receive honorary doctoral degrees at the fall Commencement ceremonies. Silas received his undergraduate degree in chemical engineering from Georgia Tech and had a distinguished business career at Phillips Petroleum. This honorary degree recognizes his outstanding career in the energy field, his lifelong commitment to community service and his dedication and service to his alma mater.

Ah, cont’d from page 1 could dull, warn the researchers. “Although respondents claim it is easier to collaborate with universities in developed countries, there is mounting evidence of changing corporate sentiment,” write the Thunbergs, citing corporate frustration at the increasing aggressiveness of U.S. and European universities when negotiating business/university research agreements. “This dynamic will only be accentuated as the quality of universities in emerging economies improves.”
Grant aims to stimulate interest in science, math

Blank Foundation aids CEISMC mentor program for K-12 students

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Georgia Tech’s leadership is well aware that investing in young students during their grade-school years yields a handsome pay-off in the form of enthusiastic, well-equipped college students. Early investment during the K-12 years is especially critical for female and minority students, who are more likely to lose interest in or become intimidated by science and mathematics as they progress in school. The underrepresentation of these groups among college students graduating with scientific and technological degrees is a continuing concern since the most rapid job growth in the coming decade will be in various areas of science, engineering, health care and technical blue-collar trades.

In an effort to promote interest in the sciences, Georgia Tech has formed a partnership with The New Schools at Carver, an innovative cluster of five small high schools created by Atlanta Public Schools in 2005. Each school offers a distinct curriculum: Early College, Technology, Health Sciences and Research, Arts and Entrepreneurship.

Georgia Tech’s Center for Education Integrating Science, Mathematics, and Computing (CEISMC) was awarded a $500,000, two-year grant through the Arthur M. Blank Family Foundation’s Pathways to Success initiative to work with The New Schools at Carver, providing in-school and out-of-school programming to more than 300 high school students. The students will be supported and encouraged in the development of science and mathematics skills, exposed to cutting-edge research and made aware of postsecondary opportunities. College students from Georgia Tech and the Atlanta University Center will serve as mentors.

The Blank Family Foundation’s Pathways to Success initiative was created in 2004 to expand educational opportunities by providing high school students the support they need to pursue postsecondary education. It consists of collaborative partnerships that include high schools, community organizations and higher education institutions in Atlanta, Phoenix, and Bluffton, South Carolina — three communities in which the Blank family has roots.

“ar number of factors are critical for student success in science,” said Paul Ohme, director of CEISMC. “These include knowledge and skills, motivation and support, monitoring and advising, and academic and social integration. Our program is designed to provide all of these crucial elements to help talented students attain a 21st-century education.”

CEISMC will provide Carver students with a unique and invaluable experience, according to Rodney Ray, principal of The New Schools at Carver’s School of Technology.

“The interactions our students have with Georgia Tech students will go far beyond the basics of academic tutoring,” said Ray. “This program opens up a whole new world of possibilities. They can see for themselves what kind of future they can have if they are determined to work hard and master the science and technology curriculum. Pathways to Success is an excellent vehicle for helping us encourage the success of desperately needed future scientists and engineers, and we are very grateful to the Blank Family Foundation for their support of this vital program.”

Georgia Tech students are serving as tutors and mentors to high school students at The New Schools of Carver as part of a new grant awarded to Tech’s Center for Education Integrating Science, Mathematics, and Computing (CEISMC).

Awards & Honors

The Georgia chapter of the Public Relations Society of America has cited the GTRI Communications Office as a 2006 Phoenix Award Winner for its GTRIInsider newsletter. Together with the Georgia Tech Research News and Publications Office, they also received a certificate of excellence honor for the media relations effort promoting the ULTRA Armored Patrol military concept vehicle.

Cited “for advancing the science of human cognition and applying it to engineer important aerospace applications,” the American Institute of Aeronautics and Astronautics (AIAA) has announced that Assistant Professor Amy Prickett (Aerospace Engineering) will receive the 2007 AIAA Lawrence Sperry Award.

Assistant Professor Charles Isbell (Computing) recently received a Faculty Early Career Development (CAREER) Award from the National Science Foundation to fund to his project, titled “Activity Discovery for Programmable and Adaptive Personalized Environments.”

Assistant Professor Bruce Walker (Psychology and Computing) has received an NSF CAREER Award for his proposal on “Fundamental Research, Design and Evaluation of Auditory and Multimodal Graphs.”

Associate Professor Robert Braun (Aerospace Engineering) has been named a fellow by the American Institute of Aeronautics and Astronautics (AIAA).

IN BRIEF:

Clough sits on Innovation Task Force

Georgia Governor Sonny Perdue has announced that President Wayne Clough will join the National Governors’ Association’s Innovation America Task Force Rotatable.

Clough is one of four university presidents to participate on the task force, which includes three representatives from industry and six governors. Delegations from 52 states were present to help the task force kick off the NGA’s innovation initiative in Phoenix last week.

The NGA has taken on this task because the creation of “hot spots” of innovation is a regional phenomenon in which state governments can play a critical role. The process will provide governors with ideas and examples of how to help their colleges and universities realize their potential as resources for regional innovation.

Football team returning to Jacksonville

Georgia Tech will make its 10th-straight bowl appearance by facing 12th-ranked West Virginia of the Big East Conference in the Toyota Gator Bowl on Jan. 1, 2007, at 1 p.m. at Alltel Stadium in Jacksonville, Fla.

Tech, ranked 25th, is 9-4 overall, while the Mountaineers are 10-2.

Tech returns to the Gator Bowl for the seventh time, making it the Jackets’ most frequent bowl destination. The Rambling Wreck is 3-5 in six previous Gator Bowls.

GTRI hosts Junior Achievement

GTRI’s Food Processing Technology Division recently hosted a Junior Achievement of Georgia-sponsored Job Shadow for 18 students from Banneker High School in College Park.

During the event, small groups of students — some of whom are participants in the school’s pre-engineering program — shadowed GTRI researchers to experience what it is like to work in a research environment. The students were exposed to food processing research projects covering the areas of robotics, computer vision, environmental management, food safety and information technology.

“We were thrilled to have this chance to expose these students to career opportunities both in engineering and science research and in the food industry,” said Division Chief J. Craig Wyliss. “The JA Job Shadow is the latest effort in our division’s ongoing outreach tradition that includes making school kids more aware of the growing role of technology in producing the many food products we all enjoy.”

Tech’s first female student dies

Anna Elizabeth Herndon, 84, died Dec. 6 from a long battle with pancreatic cancer. She was the first woman to attend Georgia Tech. Herndon majored in industrial engineering, and was a founding member of the Georgia Tech Chapter of Alpha Xi Delta sorority.

In 2002, the Institute marked its 50th anniversary of women at Tech and Herndon was honored at the Homecoming game. She had a successful teaching career, teaching math and physics at The Westminster and the Lovett Schools, and later a successful real estate career.