Georgia Tech, Emory partner on nanotech cancer center

Federal government to provide $20 million in support

The National Cancer Institute (NCI) of the National Institutes of Health (NIH) has selected Emory University and Georgia Tech as one of seven National Centers of Cancer Nanotechnology Excellence (CCNE). The new center will be named the "Emory-Georgia Tech Nanotechnology Center for Personalized and Predictive Oncology," and will function as a "discovery accelerator" to integrate nanotechnology into personalized cancer treatments and early detection. The awarded amount is $5.66 million for the first year, and is expected to reach $19 to 20 million over a five-year period.

The NCI established seven such centers at research universities across the country as part of its five-year initiative for nanotechnology in cancer research. Each will focus on integrating nanotechnology into basic and applied cancer research to provide new solutions in diagnosis and treatment of the disease.

With the CCNE designation, Emory and Georgia Tech now possess one of the largest federally funded programs in the United States for biomedical nanotechnology, biomolecular and cellular engineering, cancer bioinformatics and biocomputing.

"This grant is yet another recognition of the strength created through the innovative partnership between Emory University and Georgia Tech," said President Wayne Clough. "By combining our talent, resources and creativity, a team has been created that can tackle some of the most difficult and resistant problems facing mankind."

Coupled with the new genomic understanding of human cancers, nanotechnology offers promise for much earlier cancer detection, personalized diagnostics for targeted treatment and the creation of new nanoscale drugs for metastatic cancers.

Scientists involved in this grant will accelerate the development of "bio-conjugated nanoparticles" for cancer molecular imaging, molecular profiling and personalized therapy. Emory and Georgia Tech scientists already have productive research collaborations using major grants from the NIH to develop several kinds of nanoparticle probes that can act as markers for specific proteins and cells and can be used to study protein-protein interactions in live cells or to detect diseased cells.

The CCNE's director and principal investigator is Shuming Nie, the Wallace H. Coulter distinguished chair and professor in the Department of Biomedical Engineering (BME). He is also associate director for nanotechnology bioengineering at Emory's Winship Cancer Institute and a Georgia Cancer Coalition Scholar. Jonathan Simon, director of the Winship Cancer Institute and professor of Materials Science and Engineering, is the project's co-principal investigator.

"The College of Engineering has long been committed to working with the Winship Cancer Institute and the Georgia Cancer Coalition to employ technology to advance research in the battle against cancer," said Don Giddens, dean of the College of Engineering. "This award gives national acknowledgment to the tremendous strengths in nanomedicine that Tech and Emory have, and it is symbolic of the great potential inherent in the Emory-Georgia Tech partnership."

The CCNE application received broad support not only from Emory and Georgia Tech but also from the State of Georgia. Georgia has devoted a significant portion of its tobacco settlement dollars to statewide cancer research.

State of the Institute to focus on preparations for change

President Wayne Clough will deliver the annual State of the Institute Address to faculty and staff on Oct. 11 at 3 p.m. in room 236 of the Global Learning and Conference Center during the fall combined meeting of the General Faculty Assembly and Academic Senate.

Each fall, President Clough offers his State of the Institute Address as a way to recap Georgia Tech's achievements of the past year and to map out a plan for the Institute's continued success.

The presentation offers the campus community a chance to hear about student accomplishments and faculty success while evaluating the direction of the Institute initiatives for the upcoming year.

The theme of this year's address — creative disruption — is a variation of the term coined by Austrian economist Joseph Schumpeter, who used it to describe what happened when a new generation of technology displaced an older one. As the pace of technological change occurs with increasing rapidity, Clough will explore the ways Tech is preparing to compete with the economic and technological forces that are emerging in a global marketplace.

Financial Aid offers Web resource, guidance to students affected by recent hurricanes

The financial implications of the recent natural disasters are being felt by a significant number of Georgia Tech students who come from the affected area or have immediate family displaced by the storms. As families begin to recover and assess the financial impact of the storms, the Office of Student Financial Planning and Services (OSFPS) is prepared to provide guidance and support concerning the sources and types of financial aid for which students may qualify.

A new Web page lists general information for Tech students from the areas affected by Hurricanes Katrina and Rita. The site also contains contact information to financial aid advisors and an overview of the application procedures that are available.

"We wanted students to know how to contact us and to let families know that we are here to assist in seeking financial assistance for the current term and to discuss how to plan for future semesters," said Marie Mons, director of OSFPS. "For some students, the change in circumstances may require that they apply for assistance for the first time, and for others, it may necessitate the need to seek additional aid."

Advisors are available to discuss individual situations and provide guidance through the application process. Mons advised those who have been impacted and are facing immediate financial difficulties to contact OSFPS now. Students seeking assistance for spring semester should begin the process no later than Oct. 31.

For more information...

Financial Aid: Hurricane Relief
www.finaid.gatech.edu/katrina-rita-relief
Disaster relief effort tops $45,000

In less than four weeks, a coalition of student organizations managed to raise $45,000 to aid victims of two hurricanes that hit the Gulf Coast region this summer. While short of the $50,000 goal, the total is the highest relief effort to date.

Assistant Dean of Students Danielle McDonald said that individuals may still contribute to the fund, either in person at the Office of Community Service in the Student Services Building, or through its Web site at www.service.gatech.edu though October.

Meanwhile, a large number of Tech students and staff will head to the affected region later this month to assist in the rebuilding effort. For more on the trip, visit www.geauxtothegulf.com.

Tech wins award in Regents’ Best Practices competition

F or the third year in a row, Georgia Tech has won in the Board of Regents’ Best Practices competition. This year it was the Bursar’s Office that took first place in the Finance and Business Operations category for its “Low-Cost Online Payment Strategy.” Tech is one of only three schools in the University System that has been selected for an award each year since the best practices program began.

“It is nice for our folks to be recognized as innovative people,” says Joel Hercik, associate vice president of Financial Services. “In fact, some other schools in the University System are following suit.”

According to Hercik, it was the statewide budget cuts that precipitated the need to find cost savings on the financial operations side in order to minimize impact on academic programming. The low-cost online payment strategy was developed after much consideration of where to get the biggest savings and still provide service and security to students paying tuition and fees online.

Tech first began offering the convenience of paying over the Web by credit card in 1999, and quickly became the preferred method of payment. This convenience came at a high cost: during the 2004 fiscal year, Tech paid $890,000 in merchant fees to credit card companies.

“Our previous process was not broken; it was just expensive,” says Bursar Carol Payne. “We were able to implement a process change that could produce such a substantial savings without impacting customer satisfaction, secure administrative systems or compromise existing streamlined processes.”

Financial Services implemented the payment changes in two phases.

In Fall 2004, Tech added WebCheck as a payment option. WebCheck, which uses the Automated Clearing House network, cost only a few cents per transaction, compared to the per- centage fee charged by credit card companies. WebCheck reduced processing costs while still providing round-the-clock service to students.

Credit card fees were not only expensive, but the different credit card companies had different rules regarding what kinds of fees could be charged. For phase two, Tech contracted with a third party to accept credit card payments on Tech’s behalf. Touchnet PayPath provides this service for those students choosing to pay by credit card and charges them a service fee directly. As a result, credit card payments declined 56 percent, and credit card fees were eliminated.

Payne will give a presentation about the cost-saving strategy at the Board of Regents meeting in October.

CCNE, cont’d from page 1

initiatives through the Georgia Cancer Coalition (GCC). Through its program called “Extraordinary Opportunities in Cancer Research,” the GCC committed $1.1 million in matching funds for the CCNE grant. These funds will be in the form of two additional faculty positions for the project and seed grants available to faculty.

“Tnanotechnology will eventually apply to all cancers; however, this grant is focusing on breast and prostate cancers because they represent a number of compelling challenges and opportunities in cancer research,” said Bill Todd, president and CEO of the GCC. “These cancers are among the most common and have high mortality rates, yet there is evidence that with targeted therapies we can improve survival.”

The Georgia Research Alliance will commit an additional $2.5 million in support of the CCNE application.

Emory University will provide institutional support of $1 million to develop a cancer nanotechnology fellowship program. Georgia Tech also will provide $1 million for purchase of nanotechnology equipment and facilities. Significant in-kind support will also be provided by the Centers for Disease Control and Prevention and the American Cancer Society.

Architecture program chooses second endowed chair

Jane Sanders
Research News

I n U.S. cities and suburbs, high-speed wireless Internet connections are becoming more commonplace, making "anytime, anywhere learning" for students a more viable concept. But that kind of access and the opportunities it provides are not yet available in most rural areas.

However, a solution is in sight, and two recent demonstrations at educational technology conferences in Missoula, Mont., with the appetite of educators and information specialists who want to use it to level the playing field for students. Atop a remote mountain near Missoula, engineers at the Georgia Tech Research Institute (GTRI) awed conference attendees with the video streaming, Web surfing and email capabilities of new wireless technology standards called 802.16 or WiMax.

WiMax (an acronym for Worldwide Interoperability for Microwave Access) is a set of standards for delivering point-to-point, as well as point-to-multi-point wireless broadband connectivity. Point-to-point transmission is a direct transmission from one location to another central-office-type location up to 30 miles away. From the central office location, point-to-multi-point connectivity extends up to five miles.

"WiMax is important because it's potentially the most cost-effective approach for broadband data service in rural areas," says Jeff Evans, a GTRI senior research engineer who led the demo team. In rural areas, the cost to lay fiber for wired broadband service is about $200,000 or more per mile, an investment that communications companies typically don't want to make because they cannot recoup their money within several years.

"But with WiMax, an Internet service provider that wants to reach a small community up to 30 miles away can set up a wireless link for thousands of dollars rather than hundreds of thousands," Evans notes. "You can quickly provide a long-haul link of 70 megabits per second and then deploy a local WiMax radio to provide up to several megabits per second to each home in the area — giving you DSL speeds at a reasonable cost."

Such access may soon be available in Georgia and elsewhere. WiMax-capable equipment for fixed-location connections is expected to be readily available on the market by the end of this year, the leading design firms in the country. I'm thrilled that Professor Tehrani and our students will be able to make use of Tech's Advanced Wood Products Lab and materials science research to further advance work on digitally manufactured architectural components."

Professor Tehrani has earned several prestigious honors, including the Architectural League of New York's Young Architects Award in 1997 followed by Its Emerging Voices award for 2003. In 2002, he received the American Academy of Arts and Letters' Award in Architecture, one of its youngest recipients ever.

Tehrani received a Bachelor of Fine Arts in 1985 and a Bachelor of Architecture in 1986 both from the Rhode Island School of Design, participated in the post-graduate program in history and theory at the Architectural Association in London in 1987, and received a Master of Architecture and Urban Design with distinction from Harvard University in 1991.
CAMA PUS E V E N T S

Art & Culture

Oct. 26
The annual Bourne Poetry Reading, featuring Doreen Gildroy, Michael Ryan and Thomas Lux, will be at 7 p.m. in the Clary Theater.

Brown Bags/Conferences/Lectures

Oct. 18
The Women in Chemistry Committee in the School of Chemistry and Biochemistry will sponsor a day-long symposium in Student Success Center, bringing students, faculty and staff together with experts on the subject of women in science and technology. For more information or to register, visit web.chemistry.gatech.edu/~wic.

Oct. 19
The Innovations in Developmental Forum welcomes Robert Atkinson, vice president and director of the Technology and New Economy Project at the Progressive Policy Institute, on “The Past and Future of America’s Economy: Long Waves of Innovation that Drive Cycles of Growth,” at noon in room 305, D. N. Smith Building.

Oct. 20
The 2005 Karolitz Lecture, “Mathematical Modeling for Environment, Medicine and Sport,” will be given by Alfio Quarteroni, professor and chair of Modeling and Scientific Computing at the Swiss Federal Institute of Technology, at 5 p.m. in the Weber Building. For more information, call 894-9202.

Oct. 27
Regents’ Professor of Physics Ronald Fox will deliver a “Centenary Commemoration of Einstein’s Annus Mirabilis, 1905,” at 7:30 p.m. in the College of Management’s LeCraw Auditorium. For more information, call 894-7088.

Faculty/Staff Development

Oct. 19
The Georgia Tech Research on Accessible Distance Education (GRADE) project hosts a luncheon presentation on Accessibility and Course Management Systems. There is no charge to attend, but registration is required. To register, e-mail barbara.christopher@coa.gatech.edu. A confirmation notice will contain location and directions.

Oct. 20
The Center for the Enhancement of Teaching and Learning’s faculty development seminar series continues with “Promoting Classroom Civility,” from 11 a.m. - 1 p.m. in the Library’s Wilby Room. Lunch will be provided for those who register at www.ceti.gatech.edu or by e-mail to clint.lyle@tech.gatech.edu.

Nov. 9
The Office of Sponsored Programs hosts a workshop on “Intellectual Property and Tech Transfer,” from 10 a.m. - noon. To register, call 894-6944.

Miscellaneous

Oct. 11
The fall meeting of the General Faculty, combined with the Academic Senate and General Faculty Assembly, will be at 5 p.m. in room 236 of the Global Learning and Conference Center. For more information, visit www.facultysenate.gatech.edu or e-mail said.abdelkhalik@me.gatech.edu.

Oct. 12
The 2005 vendor showcase will be held from 10 a.m. - 2 p.m. in the Petit Institute for Bioengineering and Bioscience building.

Oct. 19
The School of Applied Physiology is hosting an open house for its master’s program in Prosthetics and Orthotics from 2 - 5 p.m. in the Clary Theater. Facilities tours begin at 2:50 p.m. in the Weber Building, bottom floor. For more information, call 894-7658 or visit www.ap.gatech.edu/mspo.

Oct. 19
A town hall meeting on the Financials 8.8 upgrade will be held from 9 - 11 a.m. in room 117 of the Student Services Building. For more information, e-mail kara.tillman@orgdev.gatech.edu.

Oct. 19
The annual Open Enrollment Benefit Fair will be held from 10 a.m. - 2 p.m. in the Student Center Ballroom. Retirement representatives, benefit providers and financial counselors will be on hand.

Oct. 20-21
A TIAA-CREF consultant will be on campus conducting individual counseling sessions and answering questions about financial matters. To schedule an appointment, call Michael Odson at 800-842-2003 or visit www.tiaa-cref.org/moc.

C L A S S I F I E D S

APPLIANCES
GF Spacemaker ‘Over the Range’ black microwave oven. $50. E-mail belinda.harding@dev.gatech.edu or call 894-1622.

AUTOMOBILES

Dining room set. Traditional light cherry wood. 6 chairs, table with leaf to expand, custom table pads, sideboard cabinet w/glass china cabinet. $500. E-mail tim.carroll@mgt.gatech.edu.

REAL ESTATE/ROOMMATES
1914 Craftsman bungalow with 4BR, 2.5BA, hardwood floors, updated eat-in kitchen, deck, 2 blocks from Agnes Scott College & a short walk to Decatur &Oakhurst restaurants. $399,900. Call 404-327-4871.

1BR/1BA Brookhaven condo in quiet neighborhood. Gas fireplace, spacious closets, remodeled kitchen/bath, W/D, off-street parking, 2nd floor balcony with lake view, $120,000 or $900/month starting January. E-mail annie.pearce@gtri.gatech.edu.

PETS
10 a.m. - 2 p.m. in the Petit Institute for Bioengineering and Bioscience building.

Miscellaneous

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E-mail calendar events to editor@cpa.gatech.edu.