Tech remains among top producers of African-American engineers

Megan McRainey
Institute Communications and Public Affairs

Georgia Tech was the number one producer of African-American engineers at the master’s degree level during the 2002-2003 academic year, according to Black Issues in Higher Education magazine’s annual college rankings report.

Overall, Georgia Tech also graduated the most African-American engineers at the bachelor’s and master’s level, with a combined total of 172 degrees awarded.

Considered by Tech to be an important tool to measure the success of campus diversity endeavors, the Black Issues rankings underscore Tech’s efforts to create a diverse campus through strong recruitment and retention practices, rather than relying on quotas to boost minority enrollment.

“We are pleased that the Institute has maintained a high level of quality while still achieving consistent success with minority recruitment. But more importantly, we are very proud of the achievement of our minority graduates,” said Provost Jean-Lou Chameau.

Tech awarded 31 master’s degrees in engineering to African-Americans, which accounted for 4 percent of the total number of master’s degrees in engineering awarded at Tech during the 2002-2005 academic year.

Despite an overall increase in bachelor’s degrees awarded to African-American students, Tech ranked second at the bachelor’s degree level, behind North Carolina A&T State University. Tech awarded 141 degrees during the 2002-2003 school year, up 13 percent from the previous school year and representing 11 percent of engineering degrees awarded. Ironically, Tech was No. 1 for the previous school year, when it awarded 125 bachelor’s degrees to African-American students.

One of Tech’s most successful recruitment projects is FOCUS, an annual event designed to attract the country’s finest minority undergraduates to its graduate programs. Each year, approximately 300 African-American students from more than 80 colleges and universities across the nation attend the three-day series of lectures, tours, panel discussions and social events. The program, held annually during the Martin Luther King Jr. holiday, is now in its thirteenth year.

“Georgia Tech has worked hard to aggressively recruit minority students as early as elementary school and up through graduate school,” said Robert

Research grant aims to make electromagnetic propulsion viable

Megan McRainey
Institute Communications and Public Affairs

When electromagnetic propulsion was first demonstrated more than a century ago, it inspired science fiction dreams of rocket-less space launches, magnetic levitation (maglev) vehicles and super guns.

Many years later, electromagnetic propulsion, powered by electricity and magnetism rather than fiery chemical reaction, is a reality, though not yet ready for government or commercial production. However, with a $5 million grant from the U.S. Department of Defense, scientists at Georgia Tech and several partnering institutions are helping to bring the technology from research to practical use.

Electromagnetic propulsion, which can send an aircraft, satellite, shuttle, bullet or train zooming through the air or along a track, produces extreme temperatures and wear. In other words, electromagnetic propulsion is so intense that it severely damages the guns and launchers that use it. This is the challenge for researchers, to make devices that can be used consistently without becoming seriously damaged.

The heat and friction caused by electromagnetic propulsion is much different from traditional chemical acceleration (such as the explosion that propels a bullet from a gun) and is not yet fully understood. In fact, electromagnetic propulsion produces certain effects that currently defy scientific explanation.

To help solve this problem, researchers at Georgia Tech, Cornell University, North Carolina State University and Rensselaer Polytechnic Institute will collaborate on a joint research program, based at Tech, dedicated to studying the effects that very high electromagnetic stress can have on electromagnetic launchers. The diverse research group comes from the disciplines of tribology.

WebCheck comes to campus

With the advent of Fall 2004 semester, Tech students now have the option to pay tuition and fees by personal check over the Web. The service, known as WebCheck, offers another payment option at no additional cost, however, as of July 16, all credit card transactions through the Web include a $25 convenience charge.

The new approach to tuition and fees payments is due to increasing credit card company expenses and for maintaining a safe and secure Web payment environment. During the previous academic year, Tech incurred more than $1 million in credit card fees to process tuition, fees, room and board payments in addition to network security expenses. These expenses, paid out of student tuition and fee revenues, result in fewer tuition dollars available for academic programs and services.

According to Joel Hercik, associate vice president for Financial Services, “With increasingly restricted budgets, the Institute needed to look for ways to minimize expenses and still provide students with a secure and convenient way for paying their fees.

WebCheck is a no-cost alternative.”

Research continued, page 3
GTRI selects new head of research security

Lea McLees
Georgia Tech Research Institute

The Georgia Tech Research Institute has named a new director of Research Security. Stephen E. “Steve” Woodall, a GTRI senior research associate assigned to the U.S. Air Force Research Laboratory Sensors Directorate at Wright-Patterson Air Force Base in Ohio, was selected from a field of 27 candidates. He has been employed at Wright-Patterson through the Intergovernmental Personnel Act, which allows state and non-profit organizations to loan employees to the federal government. “It is time for another challenge in my life,” said Woodall, who began work Aug. 1 and will manage security for classified programs not only at GTRI, but also across Georgia Tech. “Applying new technology to managing the GTRI security will be a top goal for me, as will offering the latest training and education for our research security staff.”

Woodall previously spent 11 years as a program security manager for various classified programs at the U.S. Air Force Office of Special Investigations. He also has experience as an Army counterintelligence agent at Redstone Arsenal and as a special agent for the North Carolina State Bureau of Investigation and Naval Investigative Service.

Woodall holds a bachelor’s degree in labor relations from Pennsylvania State University and has completed additional studies at the U.S. Army Counterintelligence School, the North Carolina State Bureau of Investigation Academy and the Naval Investigative Service Basic Academy. He is a distinguished graduate of the U.S. Army Polygraph School and has additional training in counterintelligence and counterespionage activities.

Woodall succeeds Enoch Gamble, who served as interim director of research security after the previous director, Bob Lang, accepted another position. Gamble will continue work in the Research Security Department.

Input from both security officers and their customers will be valuable to Woodall as he takes on his new role.

“I believe in an open door policy for both members of the security staff and all other faculty and staff at Georgia Tech,” Woodall said. “Security is a team effort. Innovation will be a key to the success of the research security program. Feedback and ideas from faculty and staff will be critical to our success.”

President names executive director for Affiliated Organizations

Lea McLees
Georgia Tech Research Institute

Last week, President Wayne Clough announced the appointment of Patrick McKenna as the Institute’s executive director for Affiliated Organizations. McKenna will report to the president and the senior vice president for Administration and Finance. His appointment became effective Aug. 1.

Initially, McKenna will work directly with Georgia Tech Facilities and Georgia Advanced Technology Ventures. Over time, he will work closely with other organizations such as the Georgia Tech Research Corporation, Georgia Tech Athletic Association, the Georgia Tech Alumni Association, and the Georgia Tech Foundation. Each of those organizations (see complete list, right) enjoys important affiliated organizations to the Institute so that they may execute their unique responsibilities in support of the Institute mission.

“This appointment will help the Office of the President coordinate the strategic activities of increasingly important affiliated organizations to help us assure that their activities are aligned with the strategic goals and priorities of the Institute,” Clough said. “In this role, Pat will also ensure that GTRI activities of these organizations are consistent with Institute and Board of Regents policies for cooperative organizations.”

McKenna most recently served as an assistant vice president of Development and also served part time as executive director of Georgia Tech Facilities Inc. Prior to that, he was assistant vice president for External Affairs and secretary to the Georgia Tech Foundation. McKenna graduated from Tech in 1974 with a degree in industrial engineering and holds two law degrees from Emory.

“We are fortunate to have a person with Pat’s experience and skills to perform this important function. These operations are crucial to the success of the Institute and carefully scrutinized by both internal and external audiences,” said Clough. “Pat will provide the leadership and coordination necessary to ensure continued excellent results from these affiliated organizations.”

For more information...

Georgia Tech Research Institute
www.gtri.gatech.edu

GT’s Affiliated Organizations

Georgia Tech Facilities Inc.
Georgia Advanced Technology Ventures
EmTech Biotechnology Development
Southern Light Rail
Georgia Tech Research Corporation
Georgia Tech Applied Research Corporation
Georgia Tech Athletic Association
Alexander-Tharpe Fund
Georgia Tech Alumni Association
Georgia Tech Foundation

Haley, director of special projects in the College of Engineering and creator and coordinator of FOCUS, said, "FOCUS and other programs help foster an environment of inclusion and respect on campus and make it clear that Tech values diversity as an important aspect of campus life." Haley said, "Georgia Tech continues to encourage and achieve diversity in the academic setting."

In addition, Tech has a solid relationship with the historically black institutions that comprise the Atlanta University Center. Approximately 100 African-American students are currently enrolled in a joint-degree program where students obtain an undergraduate degree in liberal arts from the Atlanta University Center then move on to obtain an undergraduate degree in engineering from Tech. Other Tech programs that have been successful at attracting and supporting African-American students are:

- SURE (The Summer Undergraduate Research in Engineering/Science Program) — a 10-week summer research program. Students are recruited on a nationwide basis and paired with a faculty member and a graduate student mentor to undertake research projects;
- FACES (Facilitating Academic Careers in Engineering and Sciences) — a collaborative effort of Tech’s Colleges of Engineering and Sciences and Morehouse College to increase the number of African-Americans receiving doctoral degrees and encourage them to become faculty members; and
- The Georgia Tech Chapter of the National Society of Black Engineers — an organization that seeks to increase the number of culturally responsible black engineers who excel academically, succeed professionally and positively impact the community.

The research findings will be used to help the Navy develop powerful, reliable railguns that would like to have, can be used not only for guns, but also in electromagnetic launchers for satellites or the sliding of maglev vehicles," he said.

Steven Danyluk and Richard Cowan will head the Georgia Tech-based program to study the effects of electromagnetic propulsion.

WebCheck allows users to process an electronic check over the Web through Oscar Registration. Payments post immediately and process from the individual’s checking account. It has a much lower processing cost for Tech than credit cards and is free for the user.

The convenience charge partially covers the costs of maintaining the secure Internet site as well as the administrative costs of processing transactions. The charge will only be incurred by students who choose to pay tuition and fees via credit card over the Web. Students were notified by e-mail prior to the service going live. Georgia Tech Bursar Carol Payne said that complete information about the service charges was also placed on her departmental Web site, and that multiple notices are part of the registration process.

Last year, more than half of Tech students paid their tuition and fees using credit cards. Colleges and universities across the country are facing the same challenges regarding the high costs associated with accepting credit cards, and many schools have stopped accepting credit card payments for tuition and fees altogether. Some of the universities that have dropped credit card payments have implemented deferred payment plans, which are not currently an option in the state of Georgia.

"The Institute considered dropping this payment option," Hercik said, "but recognized that many students and their families appreciate the convenience of using a credit card online and the ability to take advantage of bonus points, rebates or mileage rewards."

This reduction in administrative cost resulting from WebCheck and the convenience charge will direct more funds toward academic programs," he continued, "and enable Tech to remain a great educational value."

Can humans manipulate the rate of one of nature’s most basic and slowest processes, evolution? A study by J. Todd Streelman, an assistant professor in the School of Biology, suggests that humans may have sped up the evolutionary clock for one species of fish.

Cichlid fish are well known to biologists for their rapid rate of evolution. While it takes many animals thousands of years to form new species, the cichlids of Africa’s Lake Malawi are estimated to have formed 1,000 new species in only 500,000 years, lightning speed in evolutionary terms.

In the 1960s a fish exporter may have unwittingly set the stage for evolutionary explosion when he introduced individuals of the species Cynotilapia afra to Mitande Point on the lake’s Thumbi West Island. As of 1983, the species hadn’t budded from Mitande Point. But when Streelman went to the island in 2001, they found the fish had evolved into two genetically distinct varieties in less than 20 years. The study appears in the August 13 edition of Molecular Ecology.

"This is a great example of human-induced evolution in action," said Streelman. "It adds to a growing list of cases, including introduced salmon, flies and plants, where human disturbance has set the stage for contemporary evolution on scales we’ve not witnessed before."

WebCheck, cont’d from page 1

Research, cont’d from page 1

physics, materials science, electrical engineering and mechanical engineering.

The program has received a $5 million, five-year grant to begin research to understand what materials, lubricants and designs are needed to reduce the damage caused by electromagnetic propulsion, specifically in a railgun -- a gun with the potential to be more powerful than existing guns that use electrical engineering and supporting African-American students are:

- SURE (The Summer Undergraduate Research in Engineering/Science Program) -- a 10-week summer research program. Students are recruited on a nationwide basis and paired with a faculty member and a graduate student mentor to undertake research projects;
- FACES (Facilitating Academic Careers in Engineering and Sciences) -- a collaborative effort of Tech’s Colleges of Engineering and Sciences and Morehouse College to increase the number of African-Americans receiving doctoral degrees and encourage them to become faculty members; and
- The Georgia Tech Chapter of the National Society of Black Engineers -- an organization that seeks to increase the number of culturally responsible black engineers who excel academically, succeed professionally and positively impact the community.

The research was released as a two-part series spotlighting undergraduate and graduate statistics. Graduate and professional degree statistics appear in the July 29 edition of Black Issues. Undergraduate statistics were released in the magazine’s June 3 edition.

STEVEN DANYLUK AND RICHARD COWAN WILL HEAD THE GEORGIA TECH-BASED PROGRAM TO STUDY THE EFFECTS OF ELECTROMAGNETIC PROPULSION.

Employee self-service to HR information

The Office of Human Resources and Enterprise Information Systems have announced the launch of Employee Self-Service, a Web-based application that will allow faculty, staff and student employees to view, and in some cases update, their own HR information.

For example, employees can now view and print their pay stubs, W-2 and W-4 tax data, and employee benefits information. Other features include the ability to electronically submit changes to personal information, direct deposit accounts and voluntary deductions. The service will also be expanded in the fall to support an online Employee Benefits Open Enrollment process.

Employees may visit techworks.gatech.edu to review their information and explore the available options. Call Kara Tillman at 385-2460 or e-mail techworks.assist@gatech.edu for further information.
**Campus Events**

**Arts & Culture**

**Aug. 27**
Under the Couch hosts a comedy open mic and benefits to raise funds and awareness for the T-Book, the online student survival guide at Georgia Tech. For details or sign-up information, visit [www.drdilicious.com/opensmic.html](http://www.drdilicious.com/opensmic.html).

**Brown Bags/Conferences/Lectures**

**Aug. 17**
The Office of Organizational Development hosts a free luncheon brown bag with Georgia Tech Living Kitchen, Nov. 2002. Paid $550, sell for $200. Call 404-636-2203 or e-mail jameis garner@regist.gatech.edu.

Kenmore washer and dryer. Approximately 10 years old, good condition. $250 for both or $125 each. Kenmore refrigerator, approx. 10 years old, $100 OBO. Call 894-1622 or e-mail belinda.harding@dev.gatech.edu.

White, brand new GE stove, dishwasher and refrigerator. All 3 for $1,200. E-mail annette.laddis@gti.gatech.edu or call 404-4445.

**Classifieds**

**Appliances**

1968 Cutlass Special. Black, 8-cylinder, one owner, very good condition, pictures available. E-mail gall.greene@mgf.gatech.edu or call 894-8713.

1983 Porsche 928S. Red on black, 140K miles. Great shape. Asking $10,000. Call 770-533-6438 or e-mail tony.gilmer@oit.gatech.edu.

2BR/2BA condo for rent at 10th and State Streets. New appliances, washer/dryer, cable ready, assigned parking, available Aug. 1. Association fee, parking and water included for $1,390/month. E-mail qip7@bellsouth.net or call 678-575-8316.


2BR/3.5BA home for sale by owner. Walk to Chamblee High School. House includes LR, DR, eat-in kitchen, den, patio, fenced yard. $264,500. Call 385-2421 or e-mail chris.thompson@ccimc.gatech.edu.

2BR/1.5BA in Marietta. Pool/tennis, twenty minutes to GT. Convenient to Cumberland Mall, good school district. 882,900, seller pays closing costs. Lease option available. Call James at 404-275-2061.

Rental renovated 2BR/2BA house near Emory. 20 minutes to Tech. hardwood floors, large dining room with bay window, fenced yard, 1-car garage plus carport. PMA #905313, asking $238,500. Call Peggy, 404-285-2652.

1BR downtown corporate unit for condo for $105,000. Fully furnished. All utilities paid with association fee. PMA #980344. Contact Mark Camp, 404-786-5400.

Large 2BR/1BA apartment in Buckhead/Midtown. Hardwood floors, washer/dryer included, high-speed wireless internet. $925/month. Call Amy at 404-966-3912 or e-mail penzamy@excite.com.

1BR furnished, loft-style condo. New building, 24-hr. concierge. Indoor parking. Walk to Tech. $1,300/mo. Call 404-894-6820.

1BR garden apartment in Inman Park, free of change in exchange for 20 hours child-care/wk. beginning in August. New kitchen & bath, offset-street parking, private deck. Usually rents for $775/month. Call 404-656-1784 or e-mail ruthhaw@meindingspring.com.

1BR apartment, located near Turner Field. Easy access to I-75 & I-20 or MARTA. $850/month, $150 non-refundable deposit required. Call 216-0615 or e-mail catherine@seffmadoss.com.


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**Miscellaneous**

18R/2BR/2.5BA duplex in Brookhaven. Kitchen w/gas stove, ceiling fans, blinds on all windows. Walking distance to NORTA local park and shopping. $1,150/month. Call 404-255-0280 or e-mail kenmitch@comcast.net.

2BR/2.5 BA home in the Lost Mountain/Powder Springs/Dallas area. 2-car garage, large backyard, fully landscaped, swim/ tennis community. Lease $1,250/month or $1,050. Call 678-471-7991 or e-mail ashmac.konde@dgti.gatech.edu.

1BR/1BA Buckhead apartment for rent with fireplace, washer/dryer, pool, wooded view, covered secure parking, $900 per month. Call 770-533-6438 or e-mail tony.gilmer@oit.gatech.edu.


1BR garden apartment in Inman Park, free of change in exchange for 20 hours child-care/wk. beginning in August. New kitchen & bath, offset-street parking, private deck. Usually rents for $775/month. Call 404-656-1784 or e-mail ruthhaw@meindingspring.com.

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**Spas/Petals/Relaxation**

Child’s golf set: 3 woods, 4 irons, nice Wilson bag. Suitable for ages 6-9. $25. E-mail john.dones@coe.gatech.edu.

**Brown Bags/Conferences/Lectures**

**Aug. 17**
The Georgia Statewide Minority Business Development Center, part of Georgia Tech’s Economic Development Institute, will hold an open house from 4-7 p.m. at its office in the EDI Building. For more information, visit [www.georgiambdc.org](http://www.georgiambdc.org).

**Aug. 18**
Registration for Fall Options begins, with discounts for faculty and staff. For a list of available classes, visit [www.fun.gatech.edu/FallOptions](http://www.fun.gatech.edu/FallOptions).

**Note: Beginning August 23, The Whistle resumes its regular, weekly schedule.**