Biomedical engineering student named a Marshall scholar

David Terraso
Institute Communications and Public Affairs

Ambika Bumb knows firsthand about the importance of technology in medicine. As an intern at GE Healthcare last summer, she helped her team diagnose and repair a problem that caused new blood pressure monitors at Children’s Hospital of Philadelphia to take more than 10 minutes to get a reading—a time that could mean the difference between life and death in an emergency room.

The experience reinforced Bumb’s commitment to developing life-saving medical technologies. She’ll continue to chase her dream next fall at Oxford where she’ll pursue a Ph.D. in medical engineering as a recipient of a 2005 Marshall Scholarship. “Being at Georgia Tech has changed what my future is going to be. It’s offered me so many opportunities and the President’s Scholarship gave me the opportunity to be at Tech,” she said.

While at Tech, Bumb has worked with associate professor Gang Rao on developing nanomolecular beacon tracking devices to map the territory a technology-intensive operation.

A microgenerator produces useful amounts of electricity by spinning a small magnet above a mesh of coils fabricated on a chip, such as the ones seen here.

Registrar announces retirement

Michael Hagearty
Institute Communications and Public Affairs

After 23 years at Georgia Tech and 36 years in the University System of Georgia, Jo McIver has announced her decision to retire as registrar at the end of May 2005. Whether they know it or not, students place a great deal of trust in their registrar, since that office is responsible for maintaining the official academic record for students at Tech. It is precisely that trust that her colleagues pointed to when discussing her leadership.

“The position of registrar has always required a person of the utmost integrity who has an unwavering commitment to upholding Georgia Tech’s high academic standards,” said Bob McMath, vice provost for Undergraduate Studies and Academic Affairs. “It has also come to require someone who could envision new ways of doing things and could manage a technology-intensive operation. On both counts, Jo has won the admiration and trust of the Georgia Tech community.

Throughout the whole time I have been in this position, I have relied on Jo’s good judgment, her problem-solving skills and her unfailing good nature a dime. When coupled with a similarly sized gas-fueled microturbine engine, the system has the potential to deliver more energy and last 10 times longer than a conventional battery.

Developed by doctoral candidate Sauparna Das and Jeffrey Lang in the Department of Electrical and Computer Engineering, the microgenerator produces useful amounts of electricity by spinning a small magnet above a mesh of coils fabricated on a chip. The microelectromechanical system (MEMS), was developed in close collaboration with Professor Mark Allen in the School of Electrical and Computer Engineering.

The advancement is key in incorporating microengines into products, possibly replacing conventional batteries in certain electronics.

“This is an important step in the development of MEMS-based micro-power systems,” Allen said.

The device’s magnet spins at 100,000 revolutions per minute (rpm)

Smaller, with 10 times the life of lithium ions

Massachusetts Institute of Technology (MIT).

While work has been underway for several years on various microengine concepts, Georgia Tech’s generator has now demonstrated the ability to produce the wattage necessary to power an electronic device, Arnold said.

“With the new microengines we developed in collaboration with Professor Mark Allen in the School of Electrical and Computer Engineering, we have demonstrated a new class of systems that can be used to power electronic devices in a much more efficient way than traditional batteries,” Arnold said.
GTRI aids in home test for rare genetic disorder

T.J. Becker
Research News

Home-testing kits have made it easier for diabetics and hyper- tension patients to track their conditions, but such self-monitoring hasn’t been possible for people with phenylketonuria (PKU). Georgia Tech researchers and an Atlanta startup company hope to change that by introducing the first home-testing device for PKU patients.

PKU is a genetic metabolic disorder in which the body lacks a particular liver enzyme. Inattention leads to excessive amounts of phenylalanine in the bloodstream, which is toxic to brain tissue and the central nervous system. If untreated in newborns, PKU can cause brain damage and mental retardation.

There is no drug that can cure PKU. It can only be treated through diet, but frequent testing can be costly and inconvenient. Similarly, because PKU is considered an “orphan disease” — one that affects a small sector of the population — large pharmaceutical companies haven’t pursued a home test for the disease.

Richard Shunnarah, president of Atlanta-based MetGen Inc., approached Jeff Stittele, chief scientist at the Georgia Tech Research Institute (GTRI) for assistance in developing a prototype.

“Very little has happened,” Shunnarah said, “but real-time feed- back on blood levels will make a significa- nt impact on the lives of PKU patients.”

McVier, cont’d from page 1

humer,” he added. “I will miss her greatly.”

When she assumed directorship nearly five years ago, McVier said she wanted to improve the level of technical sophistication for managing and delivering information to faculty, staff and students. The Banner System was initiated as a means of automating student registration for the campus, but also allowed users to perform various administrative tasks, such as schedule modification and viewing.

“The use of the Banner system, we have moved a lot of our functions on the Web,” she said. “I think the thing I’m most proud of is our Web site, because I feel it’s very useful and it’s complete.”

Complete, but not necessarily finished. Students and staff can expect future enhancements to the site, which include an online student advisement system known as Curriculum, Advisement and Program Planning (CAPP) and an imaging archive, which will digitize a student’s history — from application to final grades — at Tech. The ultimate goal, she said, is a truly paperless office.

This kind of attention to service is a big reason why McVier was so suc- cessful, according to Vice President for Enrollment Services Deborah Smith.

“She is very forward-thinking and always interested in trying new things,” Smith said. “Most of all, she is always focused on the best interest of the students.”

McVier joined the Registrar’s Office as senior associate registrar in 1981, a period when Tech used punch cards to register for classes. She was promoted to registrar in 2000.

Before coming to Tech, McVier worked for Augusta State University, Clayon College and State University, and Georgia State University. At Tech, McVier serves the Academic Faculty on curriculum committees for under- graduates and graduates, as well as the Student Regulations Committee and the Student Academic and Financial Affairs Committee.

Smith and McMath will convene a search committee later this month to locate a successor.

WWW.WHISTLE.GATECH.EDU
Academic Senate briefed on faculty handbook, master plan

Michael Hagerty
Institute Communications
and Public Affairs

A cumbersome manual is finally getting a makeover.

At last week’s fall meeting of the Academic Senate, Ron Bohlander, chair of the Statutes Committee, reported on the status of the format revision to the faculty handbook.

His committee has been looking at ways to improve the manual, which has been criticized for its excessive section numbering and limited readability on the Web.

The solution, he said, lies in restructuring the text and using content management tools to publish the handbook electronically in a way that responds to security concerns.

The committee is preparing a draft for review by the Executive Board and administration, he said, and hopes to seek general faculty approval by the spring.

OIT offers new, user-friendly personal firewall software

Central support to review and respond to security incidents

Anyone on campus who has been annoyed by “chatty” or troublesome personal firewall software will appreciate the RealSecure Desktop software now available from the Office of Information Technology (OIT).

RealSecure Desktop, a product of Internet Security Systems, is replacing ZoneAlarm as the supported personal firewall for Georgia Tech desktop computers. OIT is operating the central console for RealSecure Desktop users at Georgia Tech. Through the console, OIT will manage the application’s firewall policies, collect security event data and automate the distribution of updates.

The centralized administration of RealSecure Desktop can reduce the number of warnings that pop up on desktop computers, freeing users from having to manage the application themselves.

Personal firewalls protect desktop computers from Internet threats by providing intrusion detection and prevention. RealSecure Desktop is effective with minimal effort on the part of the end user because the application can be managed from a central console by the IT staff.

The default version of the software is available for download from OIT’s software distribution site. This version is compatible with the Institute’s administrative software applications. In the future, campus units will have the option of setting up their own consoles and building departmental versions of the software.

IN BRIEF:

Prominent Tech alumnus and benefactor dies

William E. “Bill” Moore, has left a vast legacy to Georgia Tech.

Moore died on November 21 at his home in Woodside, California. He served on the Georgia Tech Advisory Board, the Centennial Campaign Council, and the Fifth Tech Reunion Committee for the Class of 1938. He was a past president of the Georgia Tech Alumni Club of Northern California.

In the early 1990s, Moore’s contribution of $5 million to Tech resulted in the construction of the Bill Moore Student Success Center, which houses the Offices of Undergraduate Admission, Student Financial Aid, Career Services and the President’s Scholarship Program.

Moore also provided the funding for what would ultimately be named the Bill Moore Tennis Center. As a student, Georgia Tech offered him a partial athletic scholarship; as team captain, Moore led the tennis team to a Southeastern Conference Tennis Championship. After graduating, Moore served in the Pacific Theater during World War II, then returned home to co-found Kelly-Moore Paint Co.

CoC expands Ph.D. program

The College of Computing has announced a new Ph.D. program in Human-Centered Computing (HCC).

While attracting the best and brightest from around the world, the new degree meets the nation’s industrial and societal needs for education and research in humanizing computer technology.

The focus of the HCC program is not on computer technology, but rather how computers affect lives. The degree draws from several areas of concentration — multimedia and digital media studies, human factors, ergonomics, assistive technologies, industrial design, cognitive science, sociology and public policy — opening the possibility for new discoveries in underlying issues of science, engineering, art and design.

The HCC committee, chaired by Professors Jim Foley and Nancy Nersessian, developed the doctoral program with a strong interdisciplinary orientation. “The HCC Ph.D. is yet another step toward broadening the CoC’s intellectual base,” said Foley. Nersessian agrees. “We see this as a step in fulfilling and further articulating our vision to extend the boundaries of computing,” she said.

For more information about the HCC program, visit www.cc.gatech.edu/hcc.

Calling secret Santas

The Library and Information Center is collecting educational gifts during the holiday season for the residents of the Atlanta Children’s Center, a day shelter for homeless children. Suggestions include adult and children books, building and stacking toys, puzzles, arts and crafts supplies, back packs and school supplies, or videos with educational themes.

Items can be placed in the library’s donation boxes, located in the rotunda. Donations will be accepted through December 17. For additional information contact Karen Manning at 894-4523 or Jackie Boyd at 894-4521.

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Dec. 9
The American Museum of Papermaking hosts an opening reception for its two newest installations — “Lift: Recent Works by Ashley Oll” and “Paper Comes to Georgia” — from 5 - 7 p.m. For further details, visit www.ipst.edu/amp.

Dec. 18
The Ferst Center welcomes jazz pianist George Winston for an 8 p.m. performance. For tickets, call 894-9600 or visit www.ferstcenter.org.

Miscellaneous

Dec. 7
The Georgia Tech Faculty Women’s Club hosts its annual wine and cheese party for all faculty and guests from 5 - 7 p.m. in the Global Learning and Conference Center Atrium.

Dec. 10
Deadline for students to submit a President’s Undergraduate Research Award (PURA) application for spring semester. For more information, visit www.undergradresearch.gatech.edu/institute-wide.htm.

Dec. 11
Fall commencement will be divided into two ceremonies, with undergraduates at 9 a.m. and graduates at 3 p.m. For more information, visit www.gatech.edu/commencement.

Dec. 13
A Fidelity Investments retirement counselor will be conducting confidential consultations. To schedule an appointment, e-mail trey.s.higgins@fmr.com or call 404-239-7055.

Dec. 15
The VOICE Initiative invites you to learn more about how you can play a role in ending sexual violence at Georgia Tech. A one-hour orientation will be held at noon. To sign up, e-mail ann.frazier@health.gatech.edu or call 894-9980.

Dec. 27 - Jan. 3
Campus closed for the holidays.

Jan. 10
Spring semester begins.

Ongoing

Techmasters — Tech’s chapter of Toastmaster’s International — meets every Thursday at 7:30 a.m. in room 102 of MRE. For more information, visit www.techmasters.gatech.edu.

Campus Recreation Center

Holiday hours*
Dec. 6 - 10 — normal hours
Dec. 11 - 12 — closed
Dec. 13 - 17 — 6 a.m. - 7:30 p.m.
Dec. 18 - 19 — closed
Dec. 20 - 23 — 6 a.m. - 7:30 p.m.
Dec. 24 — 6 a.m. - 1:30 p.m.
Dec. 25 - Jan. 3 — closed
Jan. 4 - 7 — 6 a.m. - 7:30 p.m.
Jan. 8 — 10 — 9 a.m.
Jan. 9 — noon - midnight
Jan. 10 — resume normal hours

*This information is being relayed, due to an error in last week’s issue.

Classifieds

Autos

1990 Ford Aerostar 7-passenger mini-van, automatic, a/c, cassette radio. Well-maintained, all records, runs great, interior and exterior in excellent condition. $2,000 OBO. E-mail mattylin@bellsouth.net or 678-836-0895.

1993 Mazda MX-3 Limited Edition, 5 speed, V-6, sunroof, leather interior. Interior and exterior in good condition, needs minor mechanical work. $2,000 OBO. E-mail mattylin@bellsouth.net or 678-836-0895.

1993 Mazda Protege, good daily, dependable driver. $1,500 OBO. Email shoba.king@coe.gatech.edu or call 404-372-7697.

1997 Convertible Pontiac Sunfire. Red and black, brand new rebuilt engine, good body condition, good tires and brakes. Very well maintained by owner. $6,500, negotiable. E-mail cher@catae.org.

1999 Mitsubishi Mirage, green, 42K miles, excellent condition, impeccably maintained. $3,800 OBO. Call Maria at 404-572-7697.

Computers

Sun USB keyboard (Type 6). Part number 320-1273, includes wristrest, $15. E-mail crong@cc.gatech.edu.

Sony laptop w/bag and accessories, $400. HP iPAQ Pocket PC h1945, $225; Nokia 3590 T-Moblie phone and accessories, $60; HP CD Writer 8200 series, $50; Iomega ZIP Drive, $40. All items negotiable. Call: 770-472-2530.

Furniture

Sofa, $250; chair/ottoman, $150; table, $40; microware, $20; lamps, $25; 35-inch Sony Trinitron KV55VS5 with matching stand, $550. Matching media cabinets, $100/ea. Octagonal brass and glass coffee/end tables, $75. Call 404-385-1696 or e-mail bob.schultz@gti.gatech.edu.

Contemporary glass-topped dining room table with 4 chairs (steel-framed with brushed, stainless steel curved backs and light-gray micro-fiber cushions) $750 OBO. Furniture is 2.5 years old, looks brand new. E-mail jc4506@bellsouth.net or call 894-9862 for pictures.

Real Estate/Roommates

Cozy home in perfect Decatur location — 3BR/1.5BA, LR, large eat-in kitchen, deck and huge front and back yards. Recently restored, new appliances. May consider lease/buy arrangement. Call George, 404-353-0759 or e-mail lhillinger@kc.com.

1BR/1BA condo in Midtown. Low upgrades. Association dues, gym, pool, covered parking, security, storage. Unit $169,500. Call 404-893-2395 or e-mail igetstuff@hotmail.com for pictures.

2BR/1BA home less than 10 minutes from Tech. 1BR floors, screened porch, fenced back yard, 2-car carport. Kitchen redone. Quiet neighborhood. $1,050/mo. Call 404-352-1959 or e-mail suzanne.lik@gtri.gatech.edu.

Rent-to-own 3BR/2BA home in Roswell. The house has hardwood floors, new appliances, a huge deck, huge bonus room, large 3/4-acre lot, open kitchen and plenty of space. $1,95/month or $169,900. Call 678-656-6992 or e-mail paul.miceli@gti.gatech.edu.

1BR/1BA apartment for rent on North Druid Hills. Gated entrance, 800 sq. feet, all electric, garage. The lease is for 4.5 months available mid-December 2004/ flexible in dates. $679/month + utilities. E-mail mustafa.alshogran@mse.gatech.edu or call 404-343-3652.

Cozy 3BA/2BA ranch home for sale by owner in Douglasville. Fenced yard,1,250 sq. ft., patio, vaulted ceilings, security system. Ideal starter home or investment. $89,900. Call 678-641-9442.

Luxurious Midtown apartment for rent. 1BR/1BA in the Mayfair Renaissance with upgrades. View of Piedmont Park. Available furnished or non. Short-term leases possible. $1,200/month. Call 404-271-4266 or e-mail lindsay.prater@oit.gatech.edu.

3BR/2BA house for rent. 1 mile from Emory and CDC. $1,300/month + utilities. Detached garage, W/D, renovated kitchen, daylight basement, screened porch. Call 404-978-6068.

Sports/Fitness/Recreation

Kickboxing/stand-up punching bag, $25. Olympic weights (310 lbs.) w/bench, $100. E-mail bob.lang@police.gatech.edu.

Peugeot racing bicycle, $125. Call 385-7696 or e-mail bob.schultz@gti.gatech.edu.

Miscellaneous

Beautiful 9-foot Fraser Fir Christmas tree. Will bring to campus. Paid $350, sell for $225. Photos upon request. Used for 2 years. Looked smaller in the store! Call 894-4888 or e-mail becky.itzgibbons@arch.gatech.edu.

Free black female and orange male cats (siblings, approx. 5 years old). Excellent health, affectionate, fixed and de-clawed. Call 770 845-1821.

1981 Kawasaki RZ-440 LTD. Carbs recently rebuilt, new battery, $400 OBO. E-mail lowellc@mail.com or call 770-355-4966 with questions.

Home audio equipment for sale after upgrade: Sony STR-D725 A/V receiver, $75; Sony CDFCE255 5-disc CD changer, $50; Yamaha YST-SW40 subwoofer, $50. All for $150. Includes remotes/manuals. E-mail eric.logan@cc.gatech.edu.

The classifieds are a free service provided to members of the faculty and staff. To submit an ad, email the text to editor@icpa.gatech.edu. Due to the volume of submissions, it may take several weeks for ads to appear in print.

Facility and staff with spring events should e-mail them to editor@icpa.gatech.edu as soon as they are finalized. Submissions within two weeks of the scheduled date will be listed as space allows.