AAAS taps six Tech faculty

Michael Hagearty
Institute Communications and Public Affairs

A diverse group of faculty have been recognized for their professional contributions by the world’s largest scientific society.

Last week, the American Association for the Advancement of Science (AAAS) named six Georgia Tech faculty among the 276 newly appointed AAAS fellows, bringing the total number of Tech faculty who have been awarded this distinction to 38.

Election as a fellow is an honor bestowed upon AAAS members by their peers. AAAS Steering Groups hold sway over nominations in 24 academic categories. Each of Tech’s faculty member were tapped from a different section: Bozeman from Societal Impacts of Science and Engineering; Foley from Information, Computing and Communications; Gole from Chemistry; Liotta from Industrial Science and Technology; Pearson from Social, Economic and Political Science; and Webster from Atmospheric and Hydroospheric Sciences. (Official citations, below).

Each year, AAAS elevates individuals to the rank of Fellow in recognition of their efforts toward advancing science applications that are deemed scientifically or socially distinguished. New fellows will be presented with an official certificate and a rosette pin at the Fellows Forum during the 2006 AAAS Annual Meeting in St. Louis.

For more information...
American Association for the Advancement of Science
www.aaas.org

2005 AAAS Fellows

Public Policy Regents’ Professor Barry Bozeman, for distinguished contributions to scholarship, teaching and mentoring in science and technology policy, particularly for research in evaluating the societal implications of research.

Computing Professor James Foley, for early contributions to the fields of computer graphics and user interfaces.

Physics Professor James Gole, for fundamental studies at the interface of chemistry, physics, and materials science in high-temperature molecules, laser spectroscopy, sensors, porous silicon and nanotechnology.

Chemistry Regents’ Professor, Vice Provost for Research and Dean of Graduate Studies Charles Liotta, for distinguished contributions to the field of physical organic chemistry and for outstanding leadership and vision in enhancing academic and industrial research partnerships.

History, Technology and Society Professor and Chair Willie Pearson Jr., for distinguished contributions to the scholarship of diversity in science and for promotion of broadened participation of underrepresented populations in the sciences.

Earth and Atmospheric Sciences and Civil and Environmental Engineering Professor Peter Webster, for outstanding scientific discoveries of the coupled ocean-atmosphere system and for superior scientific and organizational leadership of international field campaigns.

Summer session opened to incoming freshmen

Rashida Syed
Institute Communications and Public Affairs

While many graduating high school seniors will be enjoying their last summer before college with vacations or working summer jobs, 200 incoming freshmen will be making the most of their time in a different way — by enrolling early at Georgia Tech.

A number of departments on campus, including Undergraduate Studies and Academic Affairs, Enrollment Services, Student Affairs, Admissions, Housing and the Registrar’s office are now zeroing in on the details of a program that will allow freshmen to begin taking core classes and living in residence halls one semester earlier than they would have normally.

According to Vice Provost of Undergraduate Studies and Academic Affairs Andy Smith, this is an opportunity that will serve two different types of students well.

“We want to be able to have freshmen who would like to start early come in in the summer and be ready for the fall. So they might come in, for example, if they are a student who is accepted to Georgia Tech, but maybe they are on the lower end of the acceptance scale. These students could come in and take a pre-calculus class, or they could take one or two classes that would give them a head start on what they would need during the regular year. Also, it would allow the very good students to come in and take a class and get started early.”

The criteria for admittance into the program is still being finalized, but Smith says some students may be asked to participate in the program as a condition of acceptance, and some will be able to volunteer for the program.

The final list of courses that will be open is still being developed, but most will be offered in Ivan Allen College and the College of Sciences, who have agreed to offer the short summer sessions. Each of the courses offered in this program will be blocked so freshmen are guaranteed to get in.

One class being planned is a bridge chemistry class, which will allow freshmen to participate in lectures during the summer and continue the class during the fall semester with laboratories — giving the students an extra seven weeks to start on what they would need during the class during the fall semester.

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American Association for the Advancement of Science
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Homecoming 2005: A Nightmare on Techwood Drive

A student’s garb doesn’t survive the slip-and-slide portion of last week’s Halloween costume contest, one of several competitions between student groups that took place as part of Homecoming Week festivities. After being judged by a panel of three staff members, each entrant took two turns along the slippery track, earning additional points for distance and style.

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The number of students graduating and retained annually by University System of Georgia (USG) institutions soon will take on even greater significance, as part of a proposed change in the way the state’s public colleges and universities are funded.

The new “performance-based funding model” was announced during the Board of Regents’ October meeting as part of the System’s response to Gov. Sonny Perdue’s change to all state agencies to increase accountability.

In the presentation to the regents, Senior Vice Chancellor for Academics and Fiscal Affairs Daniel Papp and Vice Chancellor for Fiscal Affairs William Bowes outlined the principles, process and method by which a divide between nations is wide, according to a new study by researchers in the College of Management.

“Mergers and acquisitions involving firms from countries with dissimilar cultures, on average, do better than those between firms from countries with similar cultures,” write Georgia Tech professors Rajesh Chakrabarti and Narayayan Jayaraman and doctoral student Swastika Nukherjee in the study “Mars-Venus Marriages: Culture and Cross-Border M&A.”

According to the study, which examined 405 cross-border mergers and acquisitions from 1991 to 2000 involving acquiring companies from 34 countries and target firms in 37 countries, greater cultural disparity can be beneficial due to:

- lower likelihood of acquisitions motivated by hubris;
- greater autonomy granted to acquired firms in distant cultural locations;
- better screening, contracting, and due-diligence during the deal-making process; and
- diverse organizational strengths leading to performance-enhancing synergies.

Mergers and acquisitions rarely deliver their promised benefits, often resulting in long-term underperformance. But researchers found that greater cultural disparity between merging firms seems to lessen detrimental effects.

Despite their risks, mergers and acquisitions are becoming increasingly common events as a result of rapid globalization. American companies conducted nearly $4 trillion worth of acquisitions between 1998 and 2000 — more than in the previous 50 years combined. Twenty percent of those acquisitions were cross-border.

The researchers point to General Electric’s acquisition of the Hungarian light-bulb maker Tungsram in 1989 as an example of a cross-border merger fraught with difficulty.

Individualism and individual responsibility defined GE’s culture but not that of Tungsram, reportedly drawing out the latter’s assimilation by several years. Problems also plagued the merger of Michigan-based Uppjohn and Sweden’s Pharmacia B in 1995, with the former firm used to a more hierarchical structure. Their differences appear to have stemmed not only from corporate-level practices, but also from national cultural traits, the researchers note.

“While corporate culture may be extremely difficult to measure, there exist widely accepted metrics of national culture,” they say. “It is important to reiterate that we focus on national culture as opposed to corporate culture in our study.”

The study measured national cultural disparities across language, religion and corporate governance systems, but also widely accepted measures developed by Geert Hofstede in his landmark book on international management, “Culture’s Consequences: International Differences in Work-Related Values.” Hofstede’s measures include power distance (the degree of inequality between people in a country), individualism (the extent to which society emphasizes individual achievements over collective ones), masculinity (how much society reinforce the traditional model of male power in the workplace) and uncertainty avoidance (societal attitudes toward ambiguity and unstructured situations).

In the study sample, Australia and the United States proved to have the most similar cultures, while New Zealand and Malaysia had the most disparate. The study also found evidence that acquisitions go better when acquiring companies are from countries with stronger corporate-governance systems than the target firms.
Computing partnership creates sign language tutor

Jay Weak
College of Computing

Researchers in the College of Computing at Georgia Tech have developed technology, in partnership with the Atlanta Area School for the Deaf (AASD), to help hearing-impaired children improve their language development. The CopyCat project is an instructive computer game that uses a virtual sign language tutor to augment the classroom experience for hearing-impaired children.

Funded in part by the National Science Foundation and the U.S. Department of Education’s National Institute on Disability and Rehabilitation Research, CopyCat enables hearing-impaired children to interact with and sign to on-screen characters, while improving their communication skills. Results from fourth and fifth grade students at AASD already suggest CopyCat is a powerful tool for enhancing the communication skills of hearing-impaired children.

“By encouraging deaf children to practice signing in complete thoughts and ideas, this project has proved to be a great use of computing technology,” says Thad Starner, an assistant professor in the College of Computing. “Early childhood is a critical period for language acquisition, and exposure to language is key to linguistic development. However, since 90 percent of deaf children are born to hearing parents who do not know or have low levels of proficiency in sign language, a hearing-impaired child’s only exposure to sign language is often at school. In addition, American Sign Language (ASL) is a distinct language from English, involving a significantly different grammar and lexicon. This limited exposure slows the pace of their linguistic development.

“The effects of late linguistic development for hearing-impaired children can lead to a lifetime of difficulty, hindering their ability to communicate with people, including their own family members, on a daily basis,” said Harley Hamilton, education technology specialist at AASD. “While using CopyCat, the children display noticeable increases in enthusiasm, focus and fluent signing. The CopyCat interface was designed by doctoral candidates Seungyon Lee and Valerie Henderson in collaboration with Hamilton, while Starner, postdoctoral fellow Raching-Hyun Park and doctoral student Helene Brashare refined the sign language recognition system. Using a video camera and wrist-mounted sensors, the user and the character of the game, Iris, the cat, communicate with ASL. The game is designed with a limited, age-appropriate phrase set. For example, the child will sign to Iris, ‘you go play balloon.’ If the child signs poorly, Iris looks puzzled, and the child is encouraged to attempt the phrase again. If the child signs clearly, Iris frolics and plays with a red balloon.

If the child cannot remember the correct phrase to direct Iris, she can click on a button bearing the picture of the object with which she would like Iris to play. The system shows a short video with a teacher demonstrating the correct ASL phrase. The child can then mimic the teacher to communicate with Iris. In the current game, there are eight phrases per level, and the child must correctly sign each phrase before moving on to the next level.

Doctoral candidate Seungyon Lee demonstrates the CopyCat program, a pilot project developed in coordination with the Atlanta Area School for the Deaf.

IN BRIEF:

Open enrollment closes this week

Benefit-eligible employees must complete any changes to their 2006 benefits options before Friday, Nov. 4. No action is required unless you wish to change your benefit coverage and/or enroll in a flexible spending account (FSA). Sign in to TechWorks and click on the “Access Open Enrollment” link to enter the Open Enrollment system and submit 2006 benefit elections. For more information, visit www.techworks.gatech.edu.

Dept. of Energy grant partners

Clark Atlanta, Tech

On Oct. 20, U.S. Senators Saxby Chambliss and Johnny Isakson announced a $375,000 grant from the U.S. Department of Energy to Clark Atlanta University and Georgia Tech to establish a collaborative nuclear engineering program. The partnership will provide new opportunities in nuclear science and engineering for undergraduate students at Clark Atlanta University.

The grant, awarded over three years through a competitive peer review process, will help Clark Atlanta establish an undergraduate minor in nuclear engineering. It will also allow several outstanding Clark Atlanta students to enroll in the master’s and doctoral programs at Georgia Tech.

Tech rated among ‘fittest’ colleges

Men’s Fitness magazine and the Princeton Review have ranked Georgia Tech as the 14th fittest college in America. The ranking is based on Princeton Review’s 18-question survey of the fitness and dietary habits of college students across the country. The survey tallied information on the students’ height and weight, how much weight they had gained since college, amount of exercise, fast food consumption, as well as the colleges’ fitness requirements and general promotion of physical activity.

Food drive

Institute Partnerships will launch its Annual Food Drive beginning Nov. 1 until Dec. 16. Canned goods, dry goods and other non-perishables will be welcome contributions to the English Avenue Community Resource Center. Donations can be made at the Wardlaw Center, or call 894-5187 to arrange a pick up.

Men’s basketball tickets sold out

For the second straight year, the Georgia Tech basketball season is a complete sellout as Tech has sold the entire allotment of season tickets for the 16-game home slate at Alexander Memorial Coliseum. Following an exhibition game against Augusta State on Nov. 6, Tech opens the regular season with a Nov. 18 home game against UNC Asheville as Paul Hewitt’s Yellow Jackets look to earn their third straight NCAA Tournament berth.

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Summer, cont’d from page 1

complete freshman chemistry.

Registrar Reta Pikowsky is now forming an administrative committee that will iron out the details relating to admission, registration, curricula, financial aid, housing and more. The committee will be made up of members from each of the offices and departments that will be involved.

Now that the summer session for freshmen has been decided upon, Pilowsky is anxious to keep the ball rolling.

“The sooner we meet, the better. We want to make sure we invite everybody who will be impacted, because we want to make sure we ask all the right questions, and that we’re ready to go and all the pieces of the puzzle are in place,” she said.

Freshman in the program will live in residence halls and will be required to participate in the Freshman Experience program. And Smith promises all the services that would be offered to them in the fall — dining, tutoring, advising and GT 1000 — will be available during the summer session.

I hope we make some moves that will increase the success of our freshman students,” Smith said. “I believe that having a summer session that freshmen can attend actually serves to give them a head start and allow them to be more successful than in the past.”
Volunteer Group, held at noon in room 102A of the Microsystems Research Center. He will discuss "Microfabricated Electromechanical Valves for Miniaturized Fluidic Systems — Nanowire Alignment and Miniature Gas Chromatographs." To register, e-mail paul.turgeon@mmrc.gatech.edu or call Diana Palma at 894-1541.

Nov. 8
The Materials Council Seminar Series continues with M.I.T. Professor Mounir Bawendi on "Semiconductor Nanocrystals: Science and Applications," at 3 p.m. in room 185, Love Building.

Nov. 9
GT ADVANCE and the Center for the Study of Women, Science, and Technology present "Advice from Successful GT Women," a cross-college lunch and panel discussion, at noon in the Student Center Collons. Lunch is provided. To attend, e-mail angela.shartar@oars.gatech.edu.

Nov. 10
The annual Gegenheimer Lecture on Innovation will be delivered by University of Toronto Professor James DeLaurentis, who will speak about "Development of a Full-Scale Flapping Wing Aircraft," at 5:30 p.m. in the Van Leer Auditorium.

Nov. 11
The Ferst Center welcomes singer and artist Laurie Anderson for an 8 p.m. performance. For tickets and information, visit www.ferstcenter.org or call 894-9600.

Nov. 15
The Materials Council Seminar Series continues with University of Texas at Dallas Professor Bruce Gnaed on "Materials and Processes for Flexible Electronics," at 3 p.m. in room 185, Love Building.

Faculty/Staff Development

Nov. 17
The Center for the Enhancement of Teaching and Learning’s Faculty Development Series continues with “Enhancing Teaching throughout the Faculty Career at Georgia Tech," at 11 a.m. in the Library’s Wilby Room. Lunch is provided to those who register by e-mail to clint.lyle@celt.gatech.edu.

Miscellaneous

Nov. 2-3
A representative from TIAA-CREF will be on campus to conduct one-on-one financial counseling sessions. To schedule an appointment, call 800-842-2003 or visit www.tiaa-cref.org/moc.

Nov. 14 - Dec. 19
The annual Georgia Tech Best Practices Challenge begins. Applications will be accepted from Nov. 14 until Dec. 19. For more information, call 894-2249 or visit www.orgdev.gatech.edu/bp or call 894-1065.

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MISCELLANEOUS

Baby clothes for sale. Boys, mostly 18-24 mos. For pictures and prices, go to www.coa.gatech.edu/jc.

Truck bed tool box. Fits small Ford truck. Practically new and in excellent condition. Originally paid more than $200; sell for $100. Call Carol York at 894-8040.


Nike F110 with zoom lens and case. Like new, $180. Nike F5 with 50mm lens, $210. Many other photo items also for sale. E-mail jim.cook@gti.gatech.edu or call 894-2455.

Free yellow jacket next removal, to be used for research at Georgia Tech. Call 365-6311 or e-mail mg2289@mail.gatech.edu.