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WHISTLE

FACULTY/STAFF NEWSPAPER

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The Georgia Institute of Technology

Senate, General Faculty endorse Honors Program

Dan Treadaway Institute Communications and Public Affairs

proposed undergraduate Honors Program picked up a key endorsement last week from the Academic Senate and the General Faculty Assembly.

Following a presentation at their Sept. 13 joint meeting from Honors Program Committee Co-chairs Greg Nobles (History, Technology and Society) and Randall Engle (Psychology), the groups voted to endorse the Committee's proposal.

In his presentation, Nobles characterized the Honors Program as an Institute-wide incubator for intellectual inquiry and engagement. "The committee envisions the Honors Program as an inquiry-based approach to education with an emphasis on intellectual self-direction," said Nobles. "Other areas of emphasis would be interdisciplinary coursework, involvement in community service projects, and more intensive faculty-student interaction."

One strategy Nobles mentioned for increasing faculty-student interaction is establishing a series of colloquia based on common reading around a specific topic. "This would be a less structured environment that would create a different feel from what we have in place now," he said.

Nobles said the Committee's goal is to have the Honors Program begin next fall with about 100 students.

Core goals of the Honors Program

- Employ an inquiry-based approach to learning that engages issues of a broad
- Challenge students to understand and apply a broad range of materials from different disciplines.
- Direct involvement with professional, governmental and advocacy organizations from the local to national and international contexts.
- Facilitate formal and informal intellectual and social interaction with leading faculty members from all six colleges.

After their presentation, Nobles and Engle were asked about the Honors Program's relationship to the President's Scholarship Program (PSP) and whether the two might wind up competing for students. "We see the Honors Program as a cooperative, compatible program with the PSP, not as a competitor," said Nobles, who went on to explain that the Honors Program will offer experiences and benefits that will be distinct from those offered by the PSP.

Export control regulations

Following the Honors Program discussion, Pamela Rary of the Office of Legal Affairs gave a presentation on the increasing impact of export control regulations on Tech's academic and research programs. Rary said that in the aftermath of the 9/11 attacks, federal regulations have restricted the flow of information and materials that are vital to the academic and research enterprises of higher education in the United States.

"Since 9/11, export controls are increasingly used as anti-terrorism tools, are increasingly focused on universities and on enforcement, and are increasingly focused on life sciences and biological materials," Rary said. "It's also very important to remember that export licenses are required prior to providing foreign nationals with access to controlled technologies or materials."

Rary explained that the U.S. government restricts the release of the following to foreign nationals in the United States and abroad through export regulation and embargoes critical technologies, technical data, equipment, chemical or biological materials, and other materials, information and services.

The government is considering proposed changes in export control regulations that could have an even greater impact on universities. One such change includes expanding the scope of inquiry into the backgrounds of foreign nationals to take into account all the nationalities they have ever maintained and requiring employers to obtain export licenses based on country of origin regardless of an individual's most recent

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Administration touts Quality Enhancement Plan



During an informational session held last week along the Skiles Walkway, Associate Provost for Institutional Development Jack Lohmann explained the two facets of Tech's Quality Enhancement Plan. Developed as part of the accreditation process, the goal of the five-year plan is to increase the percentage of undergraduates with research and international experience.

"I think we've come up with the national standard," he said. "As I travel and give talks and presentations on what we're doing, it is very clear that no one else is doing anything like this."

Rising sea temperatures correspond with rise in the most violent storms

David Terraso Institute Communications and Public Affairs

he number of Category 4 and 5 hurricanes worldwide has nearly doubled over the past 35 years, even though the total number of hurricanes has dropped since the 1990s, according to a study by researchers at Georgia Tech and the National Center for Atmospheric Research (NCAR). The shift occurred as global sea surface temperatures have increased over the same period. The research will appear in the Sept. 16 issue of the journal Science.

Peter Webster, a professor in the School of Earth and Atmospheric Sciences, along with NCAR's Greg Holland, Professor Judith Curry and Senior Research Scientist Hai-Ru Chang, studied the number, duration and intensity of hurricanes (also known as typhoons or tropical cyclones) that have occurred worldwide from 1970 to 2004.

"What we found was rather astonishing," said Webster. "In the 1970s, there was an average of about 10 Category 4 and 5 hurricanes per year globally. Since 1990, the number of Category 4 and 5 hurricanes has almost doubled, averaging 18 per year globally."

Using the Saffir-Simpson Hurricane Scale, Category 4 storms have sustained winds from 131 to 155 miles per hour and predict significant structural failure, erosion and flooding. Category 5 systems, such as Hurricane Katrina at its peak over the Gulf of Mexico, feature winds of 156 mph or more and predict storm surges in excess of 19 feet.

"Category 4 and 5 storms are also making up a larger share of the total number of hurricanes," said Curry, chair of the School of Earth and Atmospheric Sciences and co-author of the study. "Category 4 and 5 hurricanes made up about 20 percent of

Storms continued, page 2

"We need a new generation of thinking at the planning, architectural and engineering levels of facility design. Currently, planning is based on the relatively simple square boxes we used to build. We set budgets by multiplying a building's square footage by an average cost per square foot established by past projects."

—John Mullin, associate vice president and chief information officer for the Office of Information
Technology, on incorporating emerging technologies (and its associated costs) into the design of new academic facilities.
(College Planning and Management)

New military concept vehicle developed at GTRI

concept vehicle designed to illustrate potential technology options for improving survivability and mobility in future military combat vehicles was shown publicly for the first time at a military technology meeting held last week in Virginia.

The concept vehicle, known as the ULTRA AP (Armored Patrol), was built to help the U.S. military evaluate multiple science and technology options — including ballistic and mine protection — that could benefit future vehicle design. The concept vehicle combines proven vehicle technologies with advanced materials and engineering concepts.

Research and development for the ULTRA AP has been conducted by the Georgia Tech Research Institute (GTRI), which led a unique team of research engineers from both GTRI and the automotive industry. The research has been sponsored by the Office of Naval Research (ONR).

"By bringing together experienced commercial vehicle designers with experts in advanced materials and cutting-edge engineering, we are providing a test bed for evaluating technologies that can help the military develop true 'leap-ahead' concepts," said David Parekh, GTRI's deputy



The project's goal was to develop a vehicle with design and technology enhancements for increased survivability and mobility for future vehicles.

director. "By including persons with high-performance automotive engineering and NASCAR expertise as part of our team, we were able to root this advanced concepts project in real-world vehicle design."

The ULTRA AP emphasizes highoutput diesel power combined with advanced armor and a fully modern chassis. The design matches the best of modern commercial automotive technology with racing experience, explained Gary Caille, a GTRI principal research engineer.

The design team made improvements in key areas of survivability and safety.

The ULTRA AP will feature novel design concepts and research advances in lightweight and cost-effective armor to maximize capability and protection. The new armor was designed at GTRI in partnership with the School of Materials Science and Engineering. The vehicle also incorporates a "blast bucket" designed to provide ballistic, blast and enhanced roll-over protection.

In addition, the use of on-board computers to integrate steering, suspension and brakes provides an unparalleled level of mobility and safety, Caille added.

The ULTRA AP project is linked directly to "e-safety," an emerging automotive concept that combines computers and advanced technologies to make driving safer, McLellan noted. In e-safety, night driving systems and stability control add security, while radar systems — already available in Europe — actually slow vehicles automatically under certain conditions.

For more information...

Georgia Tech Research Institute www.gtri.gatech.edu



WHISTLE

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Georgia Tech is a unit of the University System of Georgia.

Storms, cont'd from page 1

all hurricanes in the 1970s, but over the last decade they account for about 35 percent of these storms."

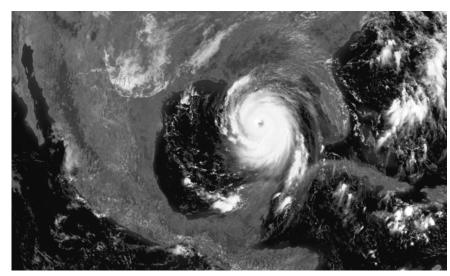
The largest increases in the number of intense hurricanes occurred in the North Pacific, Southwest Pacific and the North and South Indian Oceans, with slightly smaller increases in the North Atlantic Ocean.

All this is happening as sea-surface temperatures are rising across the globe — anywhere from around one-half to one degree Fahrenheit, depending on the region, for hurricane seasons since the 1970s.

"Our work is consistent with the concept that there is a relationship between increasing sea surface temperature and hurricane intensity," said Webster. "However, it's not a simple relationship. In fact, it's difficult to explain why the total number of hurricanes and their longevity has decreased during the last decade, when sea surface temperatures have risen the most."

A study published in July in the journal Nature came to a similar conclusion. Focusing on North Atlantic and North Pacific hurricanes, MIT Professor Kerry Emanuel found an increase in their duration and power, although it used a different measurement to determine a storm's power.

But whether all of this is due to human-induced global warming is still uncertain. "We need a longer data record of hurricane statistics, and we need to understand more about the role hurricanes play in regulating the heat balance and circulation in the



Warm ocean water acts as a fuel source in the development of hurricanes. New research reinforces a link between ocean surface temperature and storm intensity.

atmosphere and oceans," Webster said.

"Basic physical reasoning and climate model simulations and projections motivated this study," said Jay Fein, director of NSF's climate and large-scale dynamics program, which funded the research. "These results will stimulate further research into the complex natural and anthropogenic processes influencing these tropical cyclone trends and characteristics."

Webster is currently attempting to determine the basic role of hurricanes in the climate of the planet. "The thing they do more than anything is cool the oceans by evaporating the water and then redistributing the oceans' tropical heat to higher latitudes.

"But we don't know a lot about how evaporation from the oceans' surface works when the winds get up to around 100 miles per hour, as they do in hurricanes," he said, adding that this physical understanding will be crucial to connecting trends in hurricane intensity to overall climate change.

"If we can understand why the world sees about 85 named storms a year and not, for example, 200 or 25, then we might be able to say that what we're seeing is consistent with what we'd expect in a global warming scenario. Without this understanding, a forecast of the number and intensity of tropical storms in a future warmer world would be merely statistical extrapolation."

Tech takes annual charitable campaign online

Michael Hagearty Institute Communications and Public Affairs

y moving its operations online, Georgia Tech is implementing a major change in how it manages donations to the annual statewide charitable campaign.

According to Carolyn Schneider, who serves as Tech's campus coordinator for the campaign, the move will provide greater security and privacy for donors.

"The TechWorks program means fewer hands and eyes are involved," she said. "We hope this will encourage more individuals to participate at all levels."

The new system eliminates the CHARITABLE need for departmental coordinators. CAMPAIGN Schneider was deeply appreciative for their past assistance, but said the administrative and cost savings of moving online were substan-

"The cost of running the campaign is being cut 50 percent," she said. "We'll have a shorter campaign period, and we think this effort will streamline the process."

Employees who used TechWorks to modify benefits information during last year's open enrollment will be familiar with the format.

Beginning next month, pledges to the Charitable Campaign can be entered in the Employee Self-Service module.

Individuals who prefer to make a donation by cash or check may still do so. Through TechWorks, the employee may print a pledge card and deliver it personally.

Created in 1982 by the state General Assembly, the program enables government employees to make financial contributions

> that benefit charities operating within Georgia. Individuals can designate which charity benefits from their largesse through a one-time donation or a pre-tax payroll deduction. TechWorks also includes an option for the donor to designate a contribution

in memory of another. Because they do not link with TechWorks, three departments — the Athletic Association, Alumni Association and Georgia Tech Foundation — will participate in the campaign as

in year's past. Schneider said both she and Jennifer Collins would be available to make departmental presentations on the changes. In addition, anyone with questions can visit their booth during the annual benefits fair, on Oct. 19 in the Student Center

Computing renames two divisions

The College of Computing has renamed both its Core Computing Division (CCD) and Interface Computing Division (ICD) to better reflect the focus of both. CCD has officially been changed to the Computing Science and Systems Division (CSS), and ICD is now the Interactive and Intelligent Computing Division (IIC).

Professor Ellen Zegura will serve as CSS chair and will lead the division in defining and developing new computing paradigms grounded in computing theory and validated by system construction. Professor Aaron Bobick, will occupy the IIC chair, developing a discipline focused on the interactions between computing and the external world.

Campus directory changes now through TechWorks

The online and printed campus directories provide contact information for members of the Georgia Tech community. Each year, the Office of Human Resources (OHR) has traditionally mailed letters to individuals listed in the printed directory, asking them to review their information and submit any changes to OHR by the publishing deadline for the next directory. Beginning this year, the directory update process will be administered onine via

Employee Self-Service has been updated to include three new functions which allow you to view and update more of your personal information. These new features will be available in the Personal Information section of Employee Self-Service to allow individuals to update information for the online directory at their discretion.

The 2006 Campus Directory will be printed based on information recorded as of Sept. 19. Changes made after this date will be reflected in the online directory but are not guaranteed to be included in the printed directory.

For more information, visit

www.techworks.gatech.edu.

TEAMBUZZ Service Day

The 2005 TEAMBuzz Community Service Day will take place Saturday, October 8. Individual Registration will begin Sept. 19 through Oct. 2. Visit **www.teambuzz.org** for more information about important dates and times, service projects and contact information.

Information fair highlights research, international opportunity

Matt Nagel

Institute Communications and Public Affairs

tudents interested in the International Plan and undergraduate research opportunities gathered along Skiles Walkway and lawn for an informational fair last week. The fair was a promotional event to help kick off the programs that are the result of more than two years of work as part of the Quality Enhancement Plan.

Georgia Tech's current goal is to have 100 students enrolled in the International Plan by the end of this school year. Over the next five years, the goal is to have 50 percent of the student body participating in an international experience by the time they graduate. Associate Provost for Institutional Development Jack Lohmann believes the International Plan will help set Georgia Tech apart from its peers.

"There are only three universities that have

about a third of their students involved in some sort of international experience (Cornell University, Stanford University and Georgia Tech)," said Lohmann. "If we hit our goal of 50 percent of our students graduating with an international experience, we're going to be leaps and bounds above everyone else."

The International Plan calls for students to complete a combination of studying abroad, working abroad and foreign language proficiency. Graduates receive a special designation on their diploma and transcript. Tech hopes to have 300 students enrolled in the International Plan within five years.

During his remarks, President Wayne Clough said, "I think the exciting thing about both of these programs is that they can be shaped around the students' majors, but they tend to push the students out of those majors into something bigger."

Senate, cont'd from page 1

citizenship or residency status.

Rary also advised faculty members traveling abroad to be cautious even with activities as seemingly innocent as taking a laptop along with them, as the laptop in question might have data or software that is prohibited from being taken out of the country.

For sponsored research activities that could fall under export control regulations, Rary said the project's principal investigator should complete an export questionnaire, and the contracting officer should contact the Office of Legal Affairs to determine whether an export license is required. For foreign personnel and visitors, the individual should contact the Office of Human Resources, which in turn contacts Legal Affairs and Homeland Security regarding employment of foreign nationals or visitors. The hiring department must complete an export questionnaire.

Rary said the Office of Sponsored Programs will offer additional training in these areas this

fall, and Georgia Tech's procedures are being reviewed to determine regulatory requirements related to travel, access to specialized equipment and issues unique to Tech campuses outside the country.

Other business

The Senate approved a proposal from the Graduate Curriculum Committee to initiate a dual master's degree in Electrical and Computer Engineering with Shanghai Jiao Tong University in China. Bill Green, chair of the Graduate Curriculum Committee, said the university has about 40,000 students and its academic focus is very similar to Georgia Tech's. He said that faculty members will rotate to the university for specific teaching assignments and that no infrastructure investments are required on Tech's part.

For more information..

Faculty governance

www.facultysenate.gatech.edu

A breakdown of students enrolling at Tech in the wake of Hurricane Katrina

Undergraduates:

Delgado Community College	1
Dillard University	2
Loyola University New Orleans	2
Holy Cross University	2
Tulane University	30
University of New Orleans	6
Xavier University	2

Graduate:

Tulane University	10
University of New Orleans	3

CAMPUS EVENTS

Art & Culture

Sept. 23-25

Let's Try This! presents the Black Box Improv Festival, at 8 p.m. in the DramaTech Theater. For more information, visit **www.dramatech.org**.

Closing

The Hewitt Collection of African-American Art will be on display through Sept. 30 in the galleries of the Ferst Center for the Arts, Tuesday - Saturday from 10 a.m. - 6 p.m. and Sundays from noon - 6 p.m. The galleries are closed on Mondays. Admission is free. For more information, visit **www.ferstcenter.org**.

Brown Bags/Conferences/Lectures

Sept. 22

The GVU Center hosts a lunchtime lecture with Assistant Professor Tucker Balch on "How A.I. and Multi-robot Systems Research Will Accelerate Our Understanding of Social Animal Behavior," at noon in room 132, TSRB. For more information, call 894-4488 or e-mail gvu-info@gvu.gatech.edu.

Sept. 27

The Library and Information Center's Tuesday Talk Faculty Lecture Series welcomes School of Literature, Communications and Culture Assistant Professor Lisa Yaszek, on "Not Lost in Space: Science and Technology as Women's Work in Postwar Science Fiction," at 2 p.m. in the Library's Wilby Room.

Sept. 27

The Georgia Tech Information Security Center (GTISC) Distinguished Lecture Series welcomes Anthony Rutkowski, vice president for Regulatory Affairs at VeriSign, on "An Emerging Ecosystem for Security and Critical Infrastructure Protection of Public Next Generation Networks," at 3 p.m. in the Technology Square Research Building.

Sept. 27

The Materials Council's Institute Wide Seminar Series continues with Associate Professor Shuming Nie on "Bioconjugated Nanomaterials for Molecular Imaging, Profiling and Drug Targeting," at 3 p.m. in room 299, Love Building.

Sept. 28

The C.J. "Pete" Silas Symposium on Ethics and Leadership will be given by Thomas Connelly Jr., chief science and technology officer for DuPont, on "Core Values and DuPont's Third Century," at 4 p.m. in room L1255, ES&T Building. For more information, contact Dennis Hess at 894-5922.

Sept. 28

The College of Management's IMPACT Speaker Series welcomes Sherese Johnson, president and CEO of Efficio, at 4:30 p.m. in the LeCraw Auditorium.

Sept. 29

The Office of Organizational Development hosts a free brown bag on "Survival Spanish," at 11:30 a.m. in room 308, Savant Building. For more information, visit www.orgdev.gatech.edu/training.

Sept. 30

The School of Mechanical Engineering Woodruff Colloquia Series continues with Aline Cotel, professor in the Department of Civil and Environmental Engineering at the University of Michigan, on "Recent Developments in Stratified Turbulence," at 11 a.m. in room 4211, MRDC. For more information, call 894-6838 or e-mail minami.yoda@me.gatech.edu.

Faculty/Staff Development

Sept. 22

The Center for the Enhancement of Teaching and Learning (CETL) hosts a discussion of the book "What the Best College Teachers Do," in the Library's Homer Rice Center at 11 a.m. Registration is required, either at www.cetl.gatech.edu or through e-mail to clint.lyle@cetl.gatech.edu. Lunch will be provided.

Miscellaneous

Sept. 21

The Georgia Tech Faculty Women's Club hosts an 11 a.m. open house. Lunch will be served. For more information, visit **www.gtfwc.gatech.edu** or call 404-627-7427.

Oct. 5-6

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

C L A S S I F I E D S

AUTOMOBILES

1989 Honda Accord DX coupe. White, automatic, PS, PL. Good campus car w/great gas mileage. Call 678-432-6571.

1995 Mazda MPV van, 3 Liter, \$2,200 solid. Call 770-364-9718.

FURNITURE

Girl's bedroom set: 2 twin beds with headboard and footboard, dresser with mirror, chest of drawers, desk with hutch. Off-white color with stenciling on headboards and desk. \$600 for everything. Call 385-8772.

Ultra-modern royal blue and gold ultrasuede sofa with silver metal legs, never used, \$350. Mahogany plantation chair with footstool, \$300. Call 404-229-1583 or e-mail najahsfashions@yahoo.com.

Girl's bedroom suite: twin white poster bed, 5-drawer chest, double dresser with vertical mirror. Only 1 year old from Rooms To Go Kids. Bedspread, pillow shams, curtains included. \$1,400. Call 770-757-3911.

REAL ESTATE/ROOMMATES

4BR/2BA home for rent in Avondale Estates. Includes fireplace, hardwoods, large, fenced backyard, 2-car garage and basement. \$1,700/month. Call Lisa at 404-299-1153 or e-mail shaw1932@bellsouth.net.

2BR/1BA house for sale in East Atlanta. Fixer-upper w/hardwood

floors, fireplace, fenced-in back yard in a quiet area (Stokeswood Avenue), walking distance of the East Atlanta Village. Call 404-755-6602, ext. 205.

2BR/1BA duplex in Grant Park, hardwood floors, ceiling fans, central heat/air, laundry room, off-street parking and large back yard. \$775/month. E-mail karen.sharpe@oit.gatech.edu or call 40894-5788.

Housemate wanted to share luxury penthouse condo in Midtown/Ansley. \$775/month. See www.prism.gatech.edu/~hk28/condo. Call 404-717-6406 or e-mail hk28@mail.gatech.edu.

4BR/2BA house on beautiful Lake Avondale, 8 miles from downtown Atlanta. LR, DR, secluded office/hobby room, 2-car garage, eat-in kitchen, mudroom/laundry, large lot. \$450,000. Call Angie, 404-299-5259.

2BR/2.5 BA condo in Cross Creek, 10 minutes from downtown. Hardwoods on main, seagrass carpeting on upper level. Adjacent to clubhouse and golf course. \$169,900. Call 770-732-1545 or e-mail paulvolle@earthlink.net.

3BR/2.5 BA home in Dallas, Ga. Built 2002, spacious island kitchen w/adjoining dining room. Upstairs laundry. 2-car garage. Fenced back yard. Lease \$1,100/month or buy for \$140,000. Call 404-694-0901.

Female roommate needed to share 3BR/2BA home in Northlake/Tucker.

Nice yard, garage and extra storage. No smoking. \$595/month, plus utilities. 30 minutes to Tech. Call 894-0240 or e-mail mary.morder@coa.gatech.edu.

5BR/3.5BA new town home in Midtown. 2-car garage, gated community. Hardwood floor, granite countertop, private backyard. Premium park front lot. 5 minutes to Tech. \$312,400. Call 404-433-7305.

3BR/1.5BA condo in Marietta near I-75 and Delk Rd. Hardwood floors, new HVAC, updated kitchen, bath and extra storage. 15 minutes to Tech. Reduced to \$99,700. E-mail ss334@mail.gatech.edu or call 678-302-5369.

Sports/Fitness/Recreation

1993 Mastercraft Pro Star 190 silver anniversary edition ski boat. Immaculate, original owner, black/platinum, custom-made Bimini top and full cover, always garaged. \$20,000 OBO. Call 770-423-0608 or e-mail lavon.harper@ipst.gatech.edu.

Star Trac V spinning bike. Never used, won in contest. Exactly as found at homegymcentral.com/star_trac_v_bike.html. Retails for \$900, asking \$750 OBO. E-mail ann.schmierer@ibb.gatech.edu.

1989 Sears Gamefisher fishing boat, 14-foot aluminum v-hull with 15hp Evinrude engine, 2 swivel seats, trailer, \$1,500 complete. E-mail david.zurn@gtri.gatech.edu.

MISCELLANEOUS

54-year-old electric blues guitarist looking for a singer to form hobby band. Experience isn't necessary as long as you love the Blues and can sing. Call Ed, 894-3160.

Graco Open-Top Swing in excellent condition. Two-speed, along with a one-hand, flip-up tray. Multi-position recline. Includes a detachable mobile with three soft toys. \$35. Call 678-232-1095.

Fisher Price Infant-to-Toddler rocker in excellent condition. Converts from infant seat to toddler rocker with three developmental toys. Includes switch for vibration on/off. \$15. Call 678-232-1095.

Wanted: carpool partner(s). To/from Indian Hills in east Cobb. I leave early, stay late. Call Les Saunders 894-4801.

27-inch Sanyo color TV. Good condition. Paid \$200, selling for \$100. Phone 770-862-0660.

Landau men's long, white lab coat, size 40 tall with goggles, both for \$30. Call 678-570-6798.

E-mail ads to editor@icpa.gatech.edu.